GSM / GPRS Protocol Stack

Test Specification

MMG - MM & GPRS

Confidential

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Date: 24 April 2003
Document No.: 8443.401.01.043
File: MMG.DOC

Table of Contents

0 DOCUMENT CONTROL 16

0.1 Document History 16

0.2 References 17

0.3 Abbreviations 21

0.4 Terms 23

1 OVERVIEW 23

1.1 GRR (RLC/MAC) – Radio Link Control/Medium Access Control 24

1.2 LLC – Logical Link Control 24

1.3 GMM – GPRS Mobility Management 24

1.4 SM – Session Management 24

1.5 SNDCP - Subnetwork Dependant Convergence Protocol 25

1.6 GACI – GPRS Application Control Interface 25

1.7 USART - Universal Synchronous Asynchronous Receiver Transmitter Driver 25

1.8 TOM – Tunnelling of Messages 25

2 PARAMETERS 26

3 TEST CASES 67

3.1 Internal Routing 67

3.1.1 MMG0001: Configure internal routing and PCO view 67

3.2 Registration 69

3.2.1 MMG0021: Registration without SIM card 69

3.2.2 MMG0022: Mobile station is synchronous to a Cell 70

3.2.3 MMG0023: SIM inserted - initiate cell selection 71

3.2.4 MMG0024: Successful conclusion of cell selection - cell with same LAI 73

3.2.5 MMG0025: SIM inserted - Search for specific network (no LUP) 74

3.2.6 MMG0026: SIM inserted - Search for specific network (with LUP) 76

3.2.7 MMG0027: Mobile station is synchronous to a Cell (reestablish allowed in cell) 80

3.2.8 MMG0028: Updated, IMSI Attach, TMSI reallocation 81

3.2.9 MMG0029: Updated, LAC change, periodic, LAC change back 85

3.2.10 MMG0030: SIM inserted - normal update after cell selection, TMSI REALLOC ... 87

3.2.11 MMG0031: SIM inserted - normal update after cell selection, LUP ACCEPT 90

3.2.12 MMG0032: LUP REJECT after TMSI REALLOC CMD in NOT UPDATED 92

3.2.13 MMG0033: SIM inserted - normal update, TMSI REALLOC, Radio link failure 94

3.2.14 MMG0034: TMSI REALLOC in state MM LUP REJECTED 96

3.3 Connection Establishment 101

3.3.1 MMG0041: Establish request prior to existing RR Connection 101

3.3.2 MMG0042: Mobile terminated MM Connection 102
3.3.3 MMG0043: Acknowledgement of MM Connection 103
3.3.4 MMG0044: Identity Request in State 5 104
3.3.5 MMG0045: RR-MM Synchronization 105
3.3.6 MMG0046: MTC interleaved by MOC in state MM_WAIT_FOR_NW_CMD 106
3.3.7 MMG0047: Data Transfer from Mobile Station in State 6 108
3.3.8 MMG0048: Data Transfer in both directions in State 6 109
3.3.9 MMG0049: Random Access Failed, internal auto redial 110
3.3.10 MMG0050: Initiation of CCBS call back 112
3.3.11 MMG0051: Initiation of CCBS call back, out of ti 114
3.3.12 MMG0052: CM_SERV_REJ (Illegal ME) 116
3.3.13 MMG0053: CM_SERV_REJ (IMSI unknown in VLR) 118
3.3.14 MMG0055: RR_ESTABLISH_IND in state MM_WAIT_FOR_RR_CONN_MM 120
3.3.15 MMG0056: RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM 121
3.3.16 MMG0057: ABORT (Illegal ME) 122
3.3.17 MMG0058: ABORT (Network Failure) 124
3.4 Emergency Call 126
3.4.1 MMG0060: Emergency Call after AT+CFUN=2 126
3.4.2 MMG0061: Emergency Call in Idle State 19.2 129
3.4.3 MMG0062: RR Release followed by Call Establishment Request 131
3.4.4 MMG0063: Emergency Call in Idle State 19.4 132
3.4.5 MMG0064: Reestablishment during EC (Emergency Call) 134
3.4.6 MMG0065: Emergency Call in State 19.3 136
3.4.7 MMG0066: Calls after power cycle with SIM Remove (CS_POW_OFF) 138
3.4.8 MMG0067: Calls after power cycle without SIM Remove (CS_SOFT_OFF) 141
3.5 Connection Release 144
3.5.1 MMG0081: Release of Connection via MS 144
3.5.2 MMG0082: MMCC_REL_REQ in State 14 145
3.5.3 MMG0083: Release of Connection via BS 146
3.5.4 MMG0084: Clash case in MM_WAIT_FOR_ADD_MM_CONN (I), success 147
3.5.5 MMG0085: Clash case in MM_WAIT_FOR_ADD_MM_CONN (I), failure 149
3.5.6 MMG0086: Clash case in MM_WAIT_FOR_ADD_MM_CONN (II), success 151
3.5.7 MMG0087: Clash case in MM_WAIT_FOR_ADD_MM_CONN (II), failure 154
3.5.8 MMG0088: Expiry of T3230 for 2nd requested MM connection 157
3.5.9 MMG0089: Clash of MO/MT SMS, RR_ESTABLISH_IND 160
3.5.10 MMG0090: Clash of MO/MT SMS, RR_RELEASE_IND, MT okay 162

3.5.11 MMG0091: Clash of MO/MT SMS, RR_RELEASE_IND, MT not okay 164
3.5.12 MMG0092: Clash case in MM_CONN_ACTIVE, CM_SERV_REJ, success..... 166
3.5.13 MMG0093: MM_CONN_ACTIVE, CM_SERV_REJ, no clash, no repeat 169
3.6 Location Updating 171
3.6.1 MMG0101: MS in new Location Area 171
3.6.2 MMG0102: New LAI with Periodic Updating 172
3.6.3 MMG0103: Access classes barred in State 13..... 173
3.6.4 MMG0104: Random access delayed in State 13..... 174
3.6.5 MMG0105: Successful Location Updating 175
3.6.6 MMG0106: Location Accept without Mobile Identity 178
3.6.7 MMG0107: Connection request stored until Location Updating complete..... 180
3.6.8 MMG0108: Location Updating Reject (PLMN not allowed)..... 183
3.6.9 MMG0109: Change of Area in Update Status U3 185
3.6.10 MMG0110: Location Updating Reject (LAI roaming not allowed)..... 188
3.6.11 MMG0111: New Location Area Code in Update Status U3 190
3.6.12 MMG0112: Normal Location Updating rejected four times..... 193
3.6.13 MMG0113: Re-attempt after time-out Location updating timer 199
3.6.14 MMG0114: Re-attempt after fieldstrength jump..... 202
3.6.15 MMG0115: MS in new Location Area (TEST SIM inserted)..... 206
3.6.16 MMG0116: Location Updating Reject (PLMN not allowed), not HPLMN 207
3.6.17 MMG0117: Location Updating Reject (PLMN not allowed), mode AUTO 210
3.6.18 MMG0118: Location Updating Reject (IMSI unknown in HLR), mode AUTO..... 217
3.6.19 MMG0120: Receive LUP rejects with cause #11, 6 forbidden PLMNs total now 222
3.6.20 MMG0121: Non-forbidden PLMN offered in limited service..... 226
3.6.21 MMG0122: Manual selection forb. PLMN, success 230
3.6.22 MMG0123: Loss of service, non forb. PLMN offered in automatic mode, success235
3.6.23 MMG0124: Location Accept with empty Mobile Identity 240
3.6.24 MMG0125: Location Updating triggered by Normal Call in Idle State 19.2 242
3.6.25 MMG0126: Location Updating triggered by Normal Call in Idle State 19.2 244
3.6.26 MMG0127: Normal update after switch on after arrival at airport, 4 * #17..... 247
3.6.27 MMG0128: Updating continues on different PLMN after 4 * network failure..... 255
3.7 Identity Request 258
3.7.1 MMG0135: Identity Request during Location Updating 258
3.7.2 MMG0136: Identity Request during MTC 260
3.8 Authentication 261
3.8.1 MMG0141: Authentication Request 261

3.8.2 MMG0142: Authentication Response ... 262
3.8.3 MMG0143: Authentication Request in State 6 ... 263
3.8.4 MMG0144: Authentication Reject in State 3 ... 266
3.8.5 MMG0145: Authentication Reject and SIM Removal in State 3 ... 268
3.8.6 MMG0146: Authentication Request in State 5 ... 270
3.8.7 MMG0147: Response to Authentication Request in State 5 ... 272
3.8.8 MMG0148: Authentication Reject in State 5 ... 273
3.8.9 MMG0149: Authentication Reject during request for a second connection ... 275
3.8.10 MMG0150: Authentication in State 9 ... 279
3.8.11 MMG0151: Response to Authentication Request in State 9 ... 280
3.8.12 MMG0152: Authentication Reject in State 9 ... 281
3.8.13 MMG0153: Registration request following authorization failure ... 283
3.8.14 MMG0154: LUP Rej following AUTHENTICATION RESPONSE in State 3 ... 285
3.8.15 MMG0155: LUP with MM INFORMATION - I ... 287
3.8.16 MMG0156: LUP with MM INFORMATION - II ... 289
3.9 Net Request ... 291
3.9.1 MMG0161: Net Request in State 19.4 ... 291
3.9.2 MMG0162: RR_ABORT_IND in State 19 ... 292
3.10 TMSI Reallocation ... 293
3.10.1 MMG0181: TMSI Reallocation in State 5 ... 293
3.11 Deregistration ... 295
3.11.1 MMG0201: MMGMM_NREG_REQ in State 3 ... 295
3.11.2 MMG0202: MMGMM_NREG_REQ in Upate Status U1 ... 297
3.11.3 MMG0203: Authentication Reject and Power off in State 6 ... 298
3.11.4 MMG0204: Power Off in State 10 ... 299
3.11.5 MMG0205: Power Off in State 14 ... 301
3.11.6 MMG0206: Power Off in State 18 ... 302
3.11.7 MMG0207: Power Off Remove in State 19 ... 303
3.11.8 MMG0208: Switch on after soft power off, IMSI ATTACH needed ... 304
3.12 Registration (REG_MS_OFF, no SIM Card) ... 306
3.12.1 MMG0300: Registration ... 306
3.12.2 MMG0301: Deregistration ... 307
3.12.3 MMG0302: SIM Insertion ... 308
3.12.4 MMG0352: PLMN Available Request ... 309
3.13 Registration (REG_NO_SERVICE, no SIM Card) ... 310
3.13.1 MMG0303: Registration ... 310

3.13.2 MMG0304: Deregistration 311
3.13.3 MMG0305: SIM Insertion 312
3.13.4 MMG0306: RR failure (No Service) 313
3.13.5 MMG0307: MM Success (Limited Service) 314
3.13.6 MMG0353: PLMN Available Request 315
3.14 Registration (REG_LIMITED_SERVICE, no SIM Card) 316
3.14.1 MMG0308: Registration 316
3.14.2 MMG0309: Deregistration 317
3.14.3 MMG0310: SIM Insertion 318
3.14.4 MMG0311: RR failure (No Service) 319
3.14.5 MMG0312: MM Success (Limited Service) 320
3.14.6 MMG0354: PLMN Available Request 321
3.15 Registration (REG_MS_OFF, with SIM card) 322
3.15.1 MMG0313: Registration 322
3.15.2 MMG0314: PLMN Mode Change 324
3.15.3 MMG0315: Deregistration (Power Off) 326
3.15.4 MMG0316: Deregistration (SIM invalid) 327
3.15.5 MMG0317: SIM Removal 328
3.15.6 MMG0351: PLMN Available Request 329
3.16 Registration (REG_NO_SERVICE, with SIM card, automatic mode) 330
3.16.1 MMG0318: Registration 330
3.16.2 MMG0319: PLMN Mode Change 332
3.16.3 MMG0320: Deregistration (Power Off) 334
3.16.4 MMG0321: Deregistration (SIM invalid) 335
3.16.5 MMG0322: SIM Removal 336
3.16.6 MMG0323: RR failure (No Service) 337
3.16.7 MMG0324: RR failure (Limited Service, no further PLMNs) 338
3.16.8 MMG0325: RR failure (Limited Service, further PLMNs available) 339
3.16.9 MMG0326: MM Success 340
3.16.10 MMG0327: MM Failure 341
3.16.11 MMG0328: MM Authentication Failure 348
3.16.12 MMG0355: PLMN Available Request 352
3.16.13 MMG0358: PLMN Selection successful 355
3.16.14 MMG0359: PLMN Selection unsuccessful 357
3.16.15 MMG0364: PLMN Available List to MMI 359
3.16.16 MMG0365: PLMN Selection successful (manual Mode) 361

3.16.17 MMG0366: PLMN Selection unsuccessful (Manual Mode) 363
3.17 Registration (REG_LIMITED_SERVICE, with SIM card, automatic mode) 365
3.17.1 MMG0329: Registration 365
3.17.2 MMG0330: PLMN Mode Change 367
3.17.3 MMG0331: Deregistration (Power Off) 369
3.17.4 MMG0332: Deregistration (SIM invalid) 370
3.17.5 MMG0333: SIM Removal 371
3.17.6 MMG0334: RR failure (No Service) 373
3.17.7 MMG0335: RR failure (Limited Service, no further PLMNs) 374
3.17.8 MMG0336: RR failure (Limited Service, further PLMNs available) 375
3.17.9 MMG0337: MM Success 377
3.17.10 MMG0338: MM Failure 378
3.17.11 MMG0339: MM Authentication Failure 385
3.17.12 MMG0356: PLMN Available Request 389
3.17.13 MMG0360: PLMN Selection successful 393
3.17.14 MMG0361: PLMN Selection unsuccessful 395
3.18 Registration (REG_FULL_SERVICE, with SIM card, automatic mode) 397
3.18.1 MMG0340: Registration 397
3.18.2 MMG0341: PLMN Mode Change 399
3.18.3 MMG0342: Deregistration (Power Off) 401
3.18.4 MMG0343: Deregistration (SIM invalid) 402
3.18.5 MMG0344: SIM Removal 404
3.18.6 MMG0345: RR failure (No Service) 406
3.18.7 MMG0346: RR failure (Limited Service, no further PLMNs) 407
3.18.8 MMG0347: RR failure (Limited Service, further PLMNs available) 408
3.18.9 MMG0348: MM Success 410
3.18.10 MMG0349: MM Failure 413
3.18.11 MMG0350: MM Authentication Failure 419
3.18.12 MMG0357: PLMN Available Request 423
3.18.13 MMG0362: PLMN Selection successful 425
3.18.14 MMG0363: PLMN Selection unsuccessful 426
3.19 MM Idle Mode Behaviour (Normal Service) 428
3.19.1 MMG0400: Normal Service, new cell, same location area 428
3.19.2 MMG0401: Normal Service, new cell, new location area 429
3.19.3 MMG0402: Normal Service, new cell, new PLMN identification 430
3.19.4 MMG0403: Updated, IMSI Attach 431

3.19.5 MMG0404: Normal Service, Timeout T3211, LUP Reject Cause #17 433
3.19.6 MMG0405: Normal Service, Timeout T3211, LUP Reject Cause, 2.-4. attempt... 435
3.19.7 MMG0406: Updated, Periodic LUP 439
3.19.8 MMG0407: Normal Service, Timeout T3211, LUP Reject Cause #17 441
3.19.9 MMG0408: Normal Service, Timeout T3211, LUP Reject Cause, 2.-4. attempt... 443
3.19.10 MMG0409: Normal Service, Timeout T3211, RR Release before end of proc 447
3.19.11 MMG0410: Normal Service, T3211, RR Release before end of proc, 2.-4. attempt 449
3.19.12 MMG0411: Normal Service, T3211, RR Release before end of proc 452
3.19.13 MMG0412: Normal Service, T3211, RR Release before end of proc, 2.-4. attempt 454
3.19.14 MMG0413: Normal Service, T3211, Timeout T3210 457
3.19.15 MMG0414: Normal Service, T3211, Timeout T3210, 2.-4. attempt..... 459
3.19.16 MMG0415: Normal Service, T3211, Timeout T3210 462
3.19.17 MMG0416: Normal Service, T3211, Timeout T3210, 2.-4. attempt..... 464
3.19.18 MMG0417: Normal Service, T3211, RR connection failure 467
3.19.19 MMG0418: Normal Service, T3211, RR Connection Failure, 2.-4. attempt 469
3.19.20 MMG0419: Normal Service, T3211, RR Connection Failure 472
3.19.21 MMG0420: Normal Service, T3211, RR Connection Failure, 2.-4. attempt 474
3.19.22 MMG0421: Normal Service, T3211, Random Access Failure 477
3.19.23 MMG0422: Normal Service, T3211, Random Access Failure, 2.-4. attempt.... 479
3.19.24 MMG0423: Normal Service, T3211, Random Access Failure 483
3.19.25 MMG0424: Normal Service, T3211, Random Access Failure, 2.-4. attempt.... 485
3.19.26 MMG0425: Random access delayed 489
3.19.27 MMG0426: Random access barred..... 491
3.19.28 MMG0427: Not Updated in Current LA, Start Normal Location Updating 493
3.19.29 MMG0600: Normal Service, T3211, Anite Behaviour 495
3.20 MM Idle Mode Behaviour (Attempt to Update)..... 500
3.20.1 MMG0428: Attempt to Update, Timeout T3211, LUP Reject Cause #17 500
3.20.2 MMG0429: Attempt to update, Timeout T3211, LUP Reject Cause, 2.-4. attempt502
3.20.3 MMG0430: Not Updated, Periodic LUP..... 507
3.20.4 MMG0431: Periodic not updated, Timeout T3211, LUP Reject Cause #17 508
3.20.5 MMG0432: Attempt to Udpate, Normal, T3211, RR Release before end of proc 514
3.20.6 MMG0433: Periodic, Attempt to Update, T3211, RR Release before end of proc518
3.20.7 MMG0434: Attempt to Udpate, Normal, T3211, Timeout T3210 523
3.20.8 MMG0435: Periodic, Attempt to Update, T3211, Timeout T3210 527
3.20.9 MMG0436: Attempt to Update, Normal, T3211, RR connection failure..... 533

3.20.10 MMG0437: Periodic, Attempt to Update, T3211, RR Connection Failure 537
3.20.11 MMG0438: Attempt to Update, Normal, T3211, RR connection failure..... 542
3.20.12 MMG0439: Periodic, Attempt to Update, T3211, Random Access Failure 547
3.20.13 MMG0440: Random access delayed 554
3.20.14 MMG0441: Random access barred..... 556
3.20.15 MMG0442: Normal Service, IMSI Detach, Power OFF, Est Cnf..... 558
3.20.16 MMG0443: Normal Service, IMSI Detach, Power OFF, Rel Ind 560
3.20.17 MMG0444: Normal Service, IMSI Detach, Power OFF, Radio Link Failure ... 562
3.20.18 MMG0446: Normal Service, IMSI Detach, SIM Remove by SIM, Est Cnf..... 564
3.20.19 MMG0447: Normal Service, IMSI Detach, SIM Remove by SIM, Rel Ind 566
3.20.20 MMG0448: Normal Service, IMSI Detach, SIM Remove, Radio Link Failure . 568
3.20.21 MMG0450: Normal Service, IMSI Detach, SIM Remove by MMI, Est Cnf 570
3.20.22 MMG0451: Normal Service, IMSI Detach, SIM Remove by MMI, Rel Ind..... 572
3.20.23 MMG0452: Normal Service, IMSI Detach, SIM Remove by MMI, Radio Link Fail 574
3.20.24 MMG0454: IMSI Attach and CM Connection Establishment..... 576
3.20.25 MMG0455: Connection Active, IMSI Detach, Power OFF, Timeout T3220 579
3.20.26 MMG0456: Connection Active, IMSI Detach, Power OFF, Rel Ind 581
3.20.27 MMG0457: Connection Active, IMSI Detach, Power OFF, Radio Link Failure 583
3.20.28 MMG0458: Active, IMSI Detach, SIM Remove by SIM, Rel Ind 585
3.20.29 MMG0459: Active, IMSI Detach, SIM Remove by SIM, Radio Link Fail 587
3.20.30 MMG0460: Active, IMSI Detach, SIM Remove by SIM, T3220 Timeout 589
3.20.31 MMG0461: Active, IMSI Detach, SIM Remove by MMI, Rel Ind..... 591
3.20.32 MMG0462: Active, IMSI Detach, SIM Remove by MMI, Radio Link Fail 593
3.20.33 MMG0463: Active, IMSI Detach, SIM Remove by MMI, T3220 Timeout..... 595
3.20.34 MMG0464: Attempt to update, change of location area identification 597
3.20.35 MMG0465: Attempt to update, change of cell, random access failure 598
3.20.36 MMG0466: Attempt to update, change of cell, RR connection failure 599
3.20.37 MMG0467: Attempt to update, change of cell, Release before end of proc .. 600
3.20.38 MMG0468: Attempt to update, change of cell, Release before end of proc .. 601
3.20.39 MMG0469: Attempt to update, change of cell, Location Updating Request .. 605
3.20.40 MMG0470: Attempt to update, change of cell, Location updating reject 606
3.20.41 MMG0471: Attempt to Update, IMSI Detach, Power OFF..... 611
3.20.42 MMG0472: Attempt to Update, IMSI Detach, SIM Remove by SIM..... 612
3.20.43 MMG0473: Attempt to Update, IMSI Detach, SIM Remove by MMI 613
3.20.44 MMG0474: Attempt to update, Emergency Call..... 614
3.20.45 MMG0475: Attempt to update, CM connection request (I) 616

3.20.46 MMG0476: Attempt to update, CM connection request (II) 619
3.20.47 MMG0477: Attempt to update, CM connection request (III) 624
3.20.48 MMG0478: Attempt to update, CM connection request (IV) 627
3.21 MM Idle Mode Behaviour (Limited Service) 630
3.21.1 MMG0479: Limited Service State 630
3.21.2 MMG0480: Limited, not perform Periodic LUP 632
3.21.3 MMG0481: Limited, IMSI Detach, Power OFF 633
3.21.4 MMG0482: Limited, IMSI Detach, SIM Remove by SIM 634
3.21.5 MMG0483: Limited, IMSI Detach, SIM Remove by MMI 635
3.21.6 MMG0484: Limited, Call attempts, Emergency Calls 636
3.21.7 MMG0485: Limited, new cell, new LA, but only limited service 641
3.21.8 MMG0487: Limited, new location area, full service 642
3.21.9 MMG0488: Limited Service, LUP Reject Cause #17 643
3.21.10 MMG0489: Limited Service, Location updating accept 645
3.21.11 MMG0490: Limited Service, Mobile terminated Connection 648
3.22 MM Idle Mode Behaviour (No IMSI Service) 649
3.22.1 MMG0491: No IMSI State 649
3.22.2 MMG0492: No Imsi, not perform Periodic LUP 651
3.22.3 MMG0493: No IMSI, IMSI Detach, Power OFF 652
3.22.4 MMG0494: No IMSI, Call attempts, Emergency Calls 653
3.22.5 MMG0495: No IMSI, new cell, new LA, but only limited service 658
3.23 MM Idle Mode Behaviour (No Cell available) 659
3.23.1 MMG0497: No Cell available indication from Normal Service 659
3.23.2 MMG0498: No Cell available, same cell 660
3.23.3 MMG0499: No Cell available, same location area 661
3.23.4 MMG0500: No IMSI, IMSI Detach, Power OFF 662
3.23.5 MMG0501: No Cell available, IMSI Detach, SIM Remove by SIM 663
3.23.6 MMG0502: No Cell available, IMSI Detach, SIM Remove by MMI 664
3.23.7 MMG0503: No cell available, Call attempts by upper layer 665
3.23.8 MMG0504: No cell available, new cell, new LA, but only limited service 667
3.23.9 MMG0506: No Cell available, new cell, new location area, full service 668
3.24 Additional registration testcases 669
3.24.1 MMG0520: MM needs IMSI ATTACH after switch on. Cell temporary barred 669
3.24.2 MMG0521: MM needs IMSI ATTACH after switch on. Cell temporary barred 672
3.24.3 MMG0522: MM doesn't find LPLMN, needs NORMAL UPDATE, cell barred 676
3.24.4 MMG0523: MM doesn't find LPLMN, needs NORMAL UPDATE, cell barred 679

3.24.5 MMG0524: MM needs IMSI ATTACH after switch on. Cell temporary barred 683
3.24.6 MMG0525: MM needs IMSI ATTACH after switch on in tunnel 687
3.24.7 MMG0526: MM IDLE updated, T3212 running, manual network search I 690
3.24.8 MMG0527: MM IDLE updated, T3212 running, manual network search II 694
3.25 Network search 698
3.25.1 MMG0530: Aborted manual NW srch in MM_IDLE_ATTEMPT_TO_UPDATE 698
3.25.2 MMG0531: MM_IDLE_ATTEMPT_TO_UPDATE, MO call 700
3.25.3 MMG0532: MM_PLMN_SEARCH_NORMAL_SERVICE, MO call 703
3.25.4 MMG0533: Manual NW search in MM_IDLE_ATTEMPT_TO_UPDATE 706
3.26 Behaviour due to SAT activity 709
3.26.1 MMG0601: SIM insert indication by SAT .- IMSI change, detach/attach 709
3.26.2 MMG0602: SIM insert indication by SAT - IMSI change, detach/attach, manual 715
3.26.3 MMG0603: SIM insert indication by SAT - IMSI change, automatic mode 723
3.26.4 MMG0604: SIM insert indication by SAT - IMSI change, manual mode 727
3.26.5 MMG0605: SIM insert indication by SAT - no IMSI change, RR notification 731
3.26.6 MMG0606: SIM inserted - File update by SAT 732
3.26.7 MMG0607: SIM inserted - File update by SAT 733
3.26.8 MMG0608: File update by SAT, RR notification 734
3.27 Switching service modes back and forth 736
3.27.1 MMG0620: SIM inserted - Deregistered -> Deregistered 736
3.27.2 MMG0621: SIM inserted - Deregistered -> Limited 736
3.27.3 MMG0622: SIM inserted - Deregistered -> Full (automatic mode) 737
3.27.4 MMG0623: SIM inserted - Deregistered -> Full (manual mode) 739
3.27.5 MMG0624: SIM inserted - Limited -> Deregistered 740
3.27.6 MMG0625: SIM inserted - Limited -> Limited 741
3.27.7 MMG0626: SIM inserted - Limited -> Full (automatic mode) 742
3.27.8 MMG0627: SIM inserted - Limited -> Full (manual mode) 743
3.27.9 MMG0628: SIM inserted - Full (automatic mode) -> Deregistered 745
3.27.10 MMG0629: SIM inserted - Full (automatic mode) -> Limited 745
3.27.11 MMG0630: SIM inserted - Full (automatic mode) -> Full (automatic mode) ... 747
3.27.12 MMG0631: SIM inserted - Full (automatic mode) -> Full (manual mode) 748
3.27.13 MMG0632: SIM inserted - Full (manual mode) -> Deregistered 750
3.27.14 MMG0633: SIM inserted - Full (manual mode) -> Limited 750
3.27.15 MMG0634: SIM inserted - Full (manual mode) -> Full (automatic mode) 752
3.27.16 MMG0635: SIM inserted - Full (manual mode) -> Full (manual mode) 753
3.28 Network search by MMI test cases 756

3.28.1 MMG0650: Network search during location updating procedure 756
3.28.2 MMG0651: Network search interrupts MM_WAIT_FOR_RR_ACTIVE 763
3.28.3 MMG0652: Search for a more preferred PLMN - preamble test 766
3.28.4 MMG0653: Registered on HPLMN, no search for PLMNs expected 770
3.28.5 MMG0654: Search for a more preferred PLMN, better PLMN found..... 771
3.28.6 MMG0655: Search for a more preferred PLMN, no better PLMN found..... 773
3.28.7 MMG0656: Search for a more preferred PLMN, problems 774
3.28.8 MMG0657: Search for a more preferred PLMN, MMI search also (I)..... 777
3.28.9 MMG0658: Search for a more preferred PLMN, MMI search also (II)..... 779
3.28.10 MMG0659: Search for a more preferred PLMN and T3212 - preamble test ... 782
3.28.11 MMG0660: Interworking of T3212 and T_HPLMN, no better PLMN..... 786
3.28.12 MMG0661: Interworking of T3212 and T_HPLMN, HPLMN found 787
3.29 Engineering mode..... 791
3.29.1 MMG0670: EM-Identity Request during Location Updating 791
3.29.2 MMG0671: EM-Authentication Request 792
3.30 GPRS related registration 794
3.30.1 MMG1000: Activation of MS as class A, BC, BG, CG mobile..... 794
3.30.2 MMG1001: Positive outcome of MMGMM_REG_REQ, no SIM 794
3.30.3 MMG1002: Negative outcome of MMGMM_REG_REQ..... 795
3.30.4 MMG1003: SIM inserted, GMM requests RR activation..... 796
3.30.5 MMG1004: Full Service in GSM, no ATTACH needed 797
3.30.6 MMG1005: IMSI ATTACH LUP needed after cell selection 798
3.30.7 MMG1006: Negative outcome of MMGMM_REG_REQ with SIM - limited..... 799
3.30.8 MMG1007: Negative outcome of MMGMM_REG_REQ with SIM - no cell 799
3.30.9 MMG1008: SIM inserted, call active, GMM requests RR activation..... 800
3.30.10 MMG1009: GMM requires update on the cell, periodic 801
3.30.11 MMG1010: GMM requires update on the cell, MM is updated, no periodic ... 804
3.30.12 MMG1011: GMM requires update on the cell, attach or periodic..... 805
3.30.13 MMG1012: Update on the cell required, attach, non-imm. success..... 807
3.30.14 MMG1013: Unsuccessfull remote controlled periodic location update..... 811
3.30.15 MMG1014: CM service request in IDLE ATTEMPT TO UPDATE, I 815
3.30.16 MMG1015: CM service request in IDLE ATTEMPT TO UPDATE, II 819
3.30.17 MMG1016: Call attempt causing LUP with follow on proceed 823
3.30.18 MMG1017: Emergency call with GPRS, ATTEMPT TO UPDATE..... 827
3.30.19 MMG1018: Emergency setup required while waiting for GMM update 830
3.30.20 MMG1019: Expiry of T3212 in ATTEMPTING TO UPDATE state 834

3.30.21 MMG1020: Successfull combined attach 834
3.30.22 MMG1021: Unsuccessful combined attach 836
3.30.23 MMG1022: Unsuccessful combined attach, fieldstrength jump, T_REG 837
3.30.24 MMG1023: T3212 not causing updating 839
3.30.25 MMG1024: T3212 running after MM's own location updating procedure 840
3.30.26 MMG1025: T3212 started after MMGMM_START_T3212_REQ I 842
3.30.27 MMG1026: T3212 started after MMGMM_START_T3212_REQ II 846
3.30.28 MMG1027: Unsuccessful combined attach 849
3.30.29 MMG1028: Unsuccessful combined attach, IMSI unknown in HLR 849
3.30.30 MMG1029: Update on the cell required, periodic, non-imm. success 850
3.30.31 MMG1030: Update on the cell required, periodic, non-imm. success 854
3.30.32 MMG1031: T3212 running after MM's own location updating procedure 857
3.30.33 MMG1032: No action after successful combined attach 860
3.30.34 MMG1033: Unsuccessful combined attach, normal updating follows 860
3.30.35 MMG1035: MM receives #14 from GMM, NW list exists, NW mode II 868
3.30.36 MMG1036: MM receives #14 from GMM, class CG, NW list exists 873
3.30.37 MMG1037: MM has #14 forbidden list, class BG 876
3.30.38 MMG1038: MM has #14 forbidden list, class CG 878
3.30.39 MMG1040: User requires different network manually 880
3.30.40 MMG1050: Normal updating with cell reselection 885
3.30.41 MMG1051: Normal updating with cell reselection 891
3.30.42 MMG1053: SIM inserted, GMM requests RR activation 893
3.30.43 MMG1054: Full Service in GSM, no ATTACH needed 895
3.30.44 MMG1055: T3212 change in full service mode 897
3.30.45 MMG1056: T3212 change in full service mode 897
3.30.46 MMG1060: IMSI ATTACH, MM_WAIT_FOR_RR_CONN_LUP 898
3.30.47 MMG1061: IMSI ATTACH, MM_LUP_INITIATED 900
3.30.48 MMG1062: IMSI ATTACH, MM_LUP_REJECTED 900
3.30.49 MMG1063: IMSI ATTACH, MM_WAIT_FOR_NW_CMD 901
3.30.50 MMG1064: IMSI ATTACH, MM_IDLE_NORMAL_SERVICE (T3211) 902
3.31 GPRS related deregistration 903
3.31.1 MMG1100: NREG_REQ in IDLE mode (SIM remove, no further action) 903
3.31.2 MMG1101: NREG_REQ in IDLE mode (Off, no further action) 903
3.31.3 MMG1102: NREG_REQ in IDLE mode (SIM remove, no IMSI DETACH) 904
3.31.4 MMG1103: NREG_REQ in IDLE mode (SIM remove, no IMSI DETACH) 905
3.31.5 MMG1104: NREG_REQ in IDLE mode, GPRS authentication failed 906

3.31.6 MMG1148: Network search after #2 by GPRS 907
3.31.7 MMG1149: Network search after #8 by GPRS 908
3.31.8 MMG1150: NREG_REQ in IDLE mode, cause #2, cause #8 909
3.31.9 MMG1151: NREG_REQ in IDLE mode, cause #17 (network failure) 910
3.31.10 MMG1152: NREG_REQ in IDLE mode after AUTH FAIL req from GMM 910
3.31.11 MMG1153: Remote controlled detach without SIM remove/switch off I 911
3.31.12 MMG1154: Remote controlled detach without SIM remove/switch off II 912
3.31.13 MMG1155: Remote controlled detach without SIM remove/switch off III 913
3.31.14 MMG1156: Remote controlled detach without SIM remove/switch off IV 914
3.31.15 MMG1160: MM Connection before deregistration, preliminary test 915
3.31.16 MMG1161: Remote controlled detach without SIM remove/switch off V 916
3.31.17 MMG1162: Remote controlled detach without SIM remove/switch off VI 918
3.31.18 MMG1163: Remote controlled detach without SIM remove/switch off VII 919
3.31.19 MMG1164: Remote controlled detach without SIM remove/switch off VIII 920
3.31.20 MMG1165: Remote controlled detach without SIM remove/switch off VIII 921
3.31.21 MMG1166: Soft switch off after remote controlled IMSI DETACH 923
3.31.22 MMG1170: Switch on after MMI requested deregistration, IMSI ATTACH, I ... 923
3.32 GPRS related CM service 926
3.32.1 MMG1200: MM wants to establish a RR connection for CM, GPRS is active 926
3.32.2 MMG1201: MM allowed to establish a call for CM, RR releases 927
3.32.3 MMG1202: MM allowed to establish a call for CM, RR aborts 928
3.32.4 MMG1203: MM wants to establish a RR connection for CM, GPRS is active 929
3.32.5 MMG1204: MM performs two MOCs in a row after combined attach 929
3.32.6 MMG1205: MM receives RR_RELEASE_IND in IDLE state 932
3.32.7 MMG1206: RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM 933
3.32.8 MMG1207: RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM 934
3.32.9 MMG1208: Clash of establishment MO/MT in case of SMS 935
3.32.10 MMG1210: MM receives MT in IDLE mode 937
3.32.11 MMG1211: Interworking of cell selection in new LA and MO call 939
3.32.12 MMG1212: MM performs a MOC and enters MM_CONN_ACTIVE 944
3.33 Cell selection/reselection in RR, normal updating 946
3.33.1 MMG1300: New location area in full service condition 946
3.33.2 MMG1301: Back to old updated area after random access failure 946
3.33.3 MMG1302: RR reselects another cell in same location area during update 948
3.33.4 MMG1303: Third location area in the middle of the procedure 951
3.33.5 MMG1304: Back to old updated area after T3211 started 952

3.34 SIM removal while GPRS active 954
3.34.1 MMG1400: SIM removal while CM connected requested / CM connected 954
3.34.2 MMG1401: SIM removal while CM connected, IMSI DETACH..... 956
3.34.3 MMG1410: SIM removal IMSI ATTACH, non-Idle..... 958
3.34.4 MMG1411: SIM removal IMSI ATTACH, MM_WAIT_FOR_NW_CMD 959
3.34.5 MMG1412: SIM removal IMSI ATTACH, MM_IDLE_NORMAL_SERVICE..... 961
3.34.6 MMG1413: Interworking of IMSI ATTACH, Call and SIM removal..... 963
3.34.7 MMG1414: Interworking of Normal Update, Emergency Call and SIM removal 966

0 Document Control

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0.1 Document History

Document Id.	Date	Author	Remarks
6147.403.97.100	09-Jul-97	Stefan Lemke et al	Initial as GSM only test document
8443.401.01.001	27-Oct-00	Harald Mommer et. al.	Copied document for MMGMM SAP, GPRS enabled
8443.401.01.002	09-Mar-01	HM	Fixed T3212 configuration, SAT testcases
8443.401.01.003	27-Mar-01	HM	Revised some testcases after protocol change
8443.401.01.004	02-May-01	HM	Revised some testcases after protocol change
8443.401.01.005	07-May-01	HM	Added some GPRS testcases after stack change
8443.401.01.006	20-Jun-01	HM	Fixed document after SAP change
8443.401.01.007	25-Jun-01	HM	Integrated all remaining MM.DOC additions
8443.401.01.008	03-Jul-01	HM	Runs with TAP2 without TAP_VERSION=OLD switch
8443.401.01.009	06-Aug-01	HM	Added some testcases after protocol stack change
8443.401.01.010	16-Aug-01	HM	Changed existing testcases for 3-digit-MNC
8443.401.01.011	02-Nov-01	HM	Fixed some broken testcases after G23 changes
8443.401.01.012	29-Nov-01	HM	Fixed some broken testcases after G23 changes
8443.401.01.013	7-Dec-01	HM	Adapted testcases for MMGMM SAPI changes
8443.401.01.014	11-Dec-01	HM	Added testcases for stored MMGMM_NET_REQ
8443.401.01.015	04-Jan-02	HM	Revised MMG1302
8443.401.01.016	16-Jan-02	HM	Revised, imm. fs indication if only IMSI ATTACH
8443.401.01.017	18-Jan-02	HM	Revised, MMGMM_TMSI_IND when TMSI changes

8443.401.01.018	23-Jan-02	HM	Revised, TMSI REALLOC now implicitely updates
8443.401.01.019	29-Jan-02	HM	Revised after addition of cid into some primitives
8443.401.01.020	06-Feb-02	HM	Revised after increasing size of forbidden PLMN list
8443.401.01.021	07-Feb-02	HM	Testcases for 03.22 clause 4.4.4 enhancement
8443.401.01.022	18-Feb-02	HM	Testcase MMG1033 to test part of 11.10 44.2.1.2.8, testcases MMG0155, MMG0156 reworked/added.
8443.401.01.023	27-Feb-02	OT	Testcases for Engineering mode added (MMG0660-1)
8443.401.01.024	09-Apr-02	HM	Merged with GPRS 1.3.2
8443.401.01.025a	16-May-02	HM	Made document compilable again after changes
8443.401.01.025b	16-May-02	HM	reg. primitives have resumption field now
8443.401.01.025c	16-May-02	HM	MMGMM_CM_RELEASE_IND in IDLE etc. (MMG1205, MMG1035-MMG1038)
8443.401.01.026	22-May-02	HM	Classmark 3 always indicated in classmark 2
8443.401.01.027	11-Jun-02	HM	Added MMG1211
8443.401.01.028	27-Jul-02	HM	MMG0028, MMG0060 added.
8443.401.01.029	05-Aug-02	HM	Changed classmark 2 to reflect PS changes.
8443.401.01.030	07-Aug-02	HM	Cause concept, 2nd attempt.
8443.401.01.031	12-Aug-02	HM	Adaptions for PPLMN search.
8443.401.01.032	27-Sep-02	HM	RC update => all CM services OK MMG1015, MMG1016, MMG1211 updated
8443.401.01.033	05-Nov-02	HM	Testcase #1301 and PS fixed
8443.401.01.034	20-Nov-02	HM	MMG0056 updated, MMG1206, MMG1207 new
8443.401.01.035	21-Nov-02	HM	Fixed MMG0155x, MMREG SAP change necessary
8443.401.01.036	06-Jan-03	HM	Testcase #1056 added after PS fix
8443.401.01.037	11-Jan-03	HM	Testcase #106X, #1212, #14xx added after PS fix
8443.401.01.038	27-Jan-03	HM	Merge from 1.3.3 to g23m completed
8443.401.01.039	03-Feb-03	HM	#0182 removed, #0181 revised, #003x new
8443.401.01.040	06-Feb-03	HM	#1050, #1051 new
8443.401.01.041	27-Feb-03	HM	#0046 new (Issue #8925)
8443.401.01.042	11-Mar-03	HM	#0048 fixed, #0084-#0088 new (Issue #8707)
8443.401.01.043	24-Apr-03	HM	#0089-#0093, #1208 new (Issue #9838) This is the final version of the document.

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[40] Service Access Point MNSS
6147.102.96.100; Condat AG

[41] Service Access Point MNSMS
6147.103.96.100; Condat AG

[42] Service Access Point MMCC
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[43] Service Access Point MMSS
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[44] Service Access Point MMSMS
6147.106.97.100; Condat AG

[45] Service Access Point RR
6147.107.97.100; Condat AG

[46] Service Access Point SIM
6147.108.97.100; Condat AG

[47] Service Access Point MPH
6147.109.96.100; Condat AG

[48] Service Access Point DL
6147.110.96.100; Condat AG

[49] Service Access Point MDL
6147.111.96.100; Condat AG

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[84] Technical Documentation CCD
6147.706.97.100; Condat AG

0.3 Abbreviations

AGCH Access Grant Channel

BCCH Broadcast Control Channel
BS Base Station
BSIC Base Station Identification Code

CBCH Cell Broadcast Channel
CBQ Cell Bar Qualify
CC Call Control
CCCH Common Control Channel
CCD Condat Coder Decoder
CKSN Ciphering Key Sequence Number
C/R Command / Response
C1 Path Loss Criterion
C2 Reselection Criterion

DCCH Dedicated Control Channel
DISC Disconnect Frame
DL Data Link Layer
DM Disconnected Mode Frame

EA	Extension Bit Address Field
EL	Extension Bit Length Field
EMMI	Electrical Man Machine Interface
F	Final Bit
FACCH	Fast Associated Control Channel
FHO	Forced Handover
GP	Guard Period
GSM	Global System for Mobile Communication
HPLMN	Home Public Land Mobile Network
I	Information Frame
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
Kc	Authentication Key
L	Length Indicator
LAI	Location Area Information
LPD	Link Protocol Discriminator
M	More Data Bit
MCC	Mobile Country Code
MM	Mobility Management
MMI	Man Machine Interface
MNC	Mobile Network Code
MS	Mobile Station
NCC	National Colour Code
NECI	New Establishment Causes included
N(R)	Receive Number
N(S)	Send Number
OTD	Observed Time Difference
P	Poll Bit
PCH	Paging Channel
PDU	Protocol Description Unit
P/F	Poll / Final Bit
PL	Physical Layer
PLMN	Public Land Mobile Network
RACH	Random Access Channel
REJ	Reject Frame
RNR	Receive Not Ready Frame
RR	Radio Resource Management
RR	Receive Ready Frame
RTD	Real Time Difference
SABM	Set Asynchronous Balanced Mode
SACCH	Slow Associated Control Channel
SAP	Service Access Point
SAPI	Service Access Point Identifier
SDCCH	Slow Dedicated Control Channel
SIM	Subscriber Identity Module
SMS	Short Message Service
SMSCB	Short Message Service Cell Broadcast
SS	Supplementary Services

TCH	Traffic Channel
TCH/F	Traffic Channel Full Rate
TCH/H	Traffic Channel Half Rate
TDMA	Time Division Multiple Access
TMSI	Temporary Mobile Subscriber Identity
UA	Unnumbered Acknowledgement Frame
UI	Unnumbered Information Frame
VPLMN	Visiting Public Land Mobile Network
V(A)	Acknowledgement State Variable
V(R)	Receive State Variable
V(S)	Send State Variable

0.4 Terms

Entity:	Program which executes the functions of a layer
Message:	A message is a data unit which is transferred between the entities of the same layer (peer-to-peer) of the mobile and infrastructure side. Message is used as a synonym to protocol data unit (PDU). A message may contain several information elements.
Primitive:	A primitive is a data unit which is transferred between layers on one component (mobile station or infrastructure). The primitive has an operation code which identifies the primitive and its parameters.
Service Access Point:	A Service Access Point is a data interface between two layers on one component (mobile station or infrastructure).

1 Overview

The Protocol Stacks are used to define the functionality of the GSM protocols for interfaces. The GSM specifications are normative when used to describe the functionality of interfaces, but the stacks and the subdivision of protocol layers does not imply or restrict any implementation.

The protocol stack for GPRS consists of several entities. Each entity has one ore more service access points, over which the entity provides a service for the upper entity.

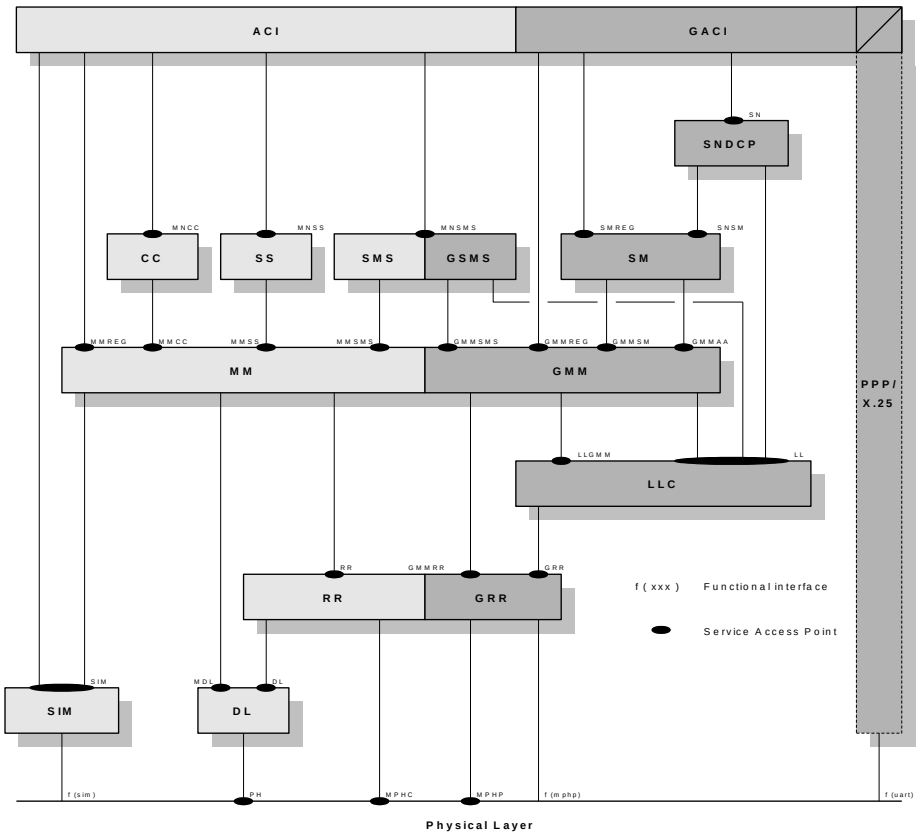


Figure 1-1: Architecture of the GSM/GPRS protocol stack

The information units passed via the SAPs are called primitives and consists of an operation code and several parameters. See the Users Guide for details.

The entities of the GPRS protocol stack are:

1.1 GRR (RLC/MAC) – Radio Link Control/Medium Access Control

This layer contains two functions: The Radio Link Control function provides a radio-solution-dependent reliable link. The Medium Access Control function controls the access signalling (request and grant) procedures for the radio channel, and the mapping of LLC frames onto the GSM physical channel.

1.2 LLC – Logical Link Control

The LLC entity provides multiple highly reliable logical links for asynchronous data transfer between the MS and the network. It supports variable-length information frames, acknowledged and unacknowledged data transfer, flow and sequence control, error detection and recovery, notification of unrecoverable errors, user identity confidentiality, and ciphering of user and signaling data.

1.3 GMM – GPRS Mobility Management

The GMM entity provides procedures for the mobility of the MS, such as informing the network of its present location, and user identity confidentiality. It manages the GMM context (attach, detach, routing area updating), supports security functions such as authentication of user and MS, controls ciphering of data, and initiates the response to paging messages.

1.4 SM – Session Management

The main function of the session management (SM) is to support PDP context handling of the user terminal. Session Management activates, modifies and deletes the contexts for packet data protocols (PDP). Session Management services are provided at the SMREG-SAP and the SNSM-SAP for anonymous and non-anonymous access. The non-anonymous and anonymous access procedures for PDP context activation and PDP context deactivation are available at the SMREG-SAP. In addition there exists a PDP context modification for non-anonymous PDP contexts.

1.5 SNDCP - Subnetwork Dependant Convergence Protocol

SNDCP carries out all functions related to transfer of Network layer Protocol Data Units (N-PDUs) over GPRS in a transparent way. SNDCP helps to improve channel efficiency by means of compression techniques. The set of protocol entities above SNDCP consists of commonly used network protocols. They all use the same SNDCP entity, which then performs multiplexing of data coming from different sources to be sent using the service provided by the LLC layer.

1.6 GACI – GPRS Application Control Interface

The GACI is the GPRS extension of the ACI. It is specified in GSM 07.07 and 07.60. It is responsible for processing of the GPRS related AT Commands to setup, activate and deactivate the PDP context parameter. It also provides functionality for the interworking between GMM/SM/SNDCP and a packet oriented protocol like PPP.

1.7 USART - Universal Synchronous Asynchronous Receiver Transmitter Driver

The USART is a hardware component that facilitates a connection between the mobile station and terminal equipment (e.g. a PC). This interface uses some of the circuits described in V.24.

The data exchange provided by this unit is serial and asynchronous (synchronous communication is not in the scope of this document). A driver that uses interrupts to manage a circular buffer for the sending and receiving direction is necessary in order to use this component in the GPRS. The driver has to be able to perform flow control.

1.8 TOM – Tunnelling of Messages

The TOM entity is present if and only if HS136 is supported (the feature flag FF_HS136 is enabled).

The main function of TOM is to tunnel non-GSM signalling messages between the MS and the SGSN. The only non-GSM signalling which is currently supported by TOM is for the EGPRS-136 system (according to TIA/EIA-136-376). Data transfer in both uplink and downlink direction is possible. Two different priorities (high, low) of signalling data transfer are supported. TOM uses the unacknowledged mode of LLC and the acknowledged mode of GRR (RLC/MAC).

This document describes the tests for Mobility Management.

2 Parameters

```
FIELD (RXLEVEL_20)
        0x20, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDFIELD (RXLEVEL_20, 12)

FIELD (RXLEVEL_20_18)
        0x20, 0x18
ENDFIELD (RXLEVEL_20_18, 2)

FIELD (RXLEVEL_20_18_A)
        0x20, 0x18, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDFIELD (RXLEVEL_20_18_A, 12)

FIELD (RXLEVEL_20_18_16_14_12_10)
        0x20, 0x18, 0x16, 0x14, 0x12, 0x10
ENDFIELD (RXLEVEL_20_18_16_14_12_10, 6)

/* No forbidden PLMN found */
FIELD (FORB_PLMN_ID)
        0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
ENDFIELD (FORB_PLMN_ID, 12)

FIELD (FORB_PLMN_ID_F)
        0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
ENDFIELD (FORB_PLMN_ID_F, 12)

FIELD (LOC_UPD_ACCEPT_2)
        0x70, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x05, 0xf0, 0x12, 0x34, 0x56, 0x78
ENDFIELD (LOC_UPD_ACCEPT_2, 18)

FIELD (LOC_UPD_ACCEPT_3)
        0x78, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x05, 0xf0, 0x12, 0x34, 0x56, 0x78,
        0xA1
ENDFIELD (LOC_UPD_ACCEPT_3, 19)

FIELD (LOC_UPD_ACCEPT_4)
        0x50, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x00, 0xA1
ENDFIELD (LOC_UPD_ACCEPT_4, 14)

FIELD (LOC_UPD_ACCEPT_5)
        0x58, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x01, 0xF0,0xA1
ENDFIELD (LOC_UPD_ACCEPT_5, 15)

FIELD (LOC_UPD_ACCEPT_6)
        0x40, 0x00,
        0x00, 0x00,
```

```
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0xA1
ENDFIELD (LOC_UPD_ACCEPT_6, 12)

FIELD (LOC_UPD_ACCEPT_3_B)
        0x70, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x05, 0xf0, 0x12, 0x34, 0x56, 0x78
ENDFIELD (LOC_UPD_ACCEPT_3_B, 18)

FIELD (LOC_UPD_ACCEPT_4_B)
        0x48, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x00
ENDFIELD (LOC_UPD_ACCEPT_4_B, 13)

FIELD (LOC_UPD_ACCEPT_5_B)
        0x50, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02,
        0x17, 0x01, 0xF0
ENDFIELD (LOC_UPD_ACCEPT_5_B, 14)

FIELD (LOC_UPD_ACCEPT_6_B)
        0x38, 0x00,
        0x00, 0x00,
        0x05, 0x02, 0x21, 0xf3, 0x33, 0x00, 0x02
ENDFIELD (LOC_UPD_ACCEPT_6_B, 11)

FIELD (MM_INFORMATION_1) /* 13-Dec-98, 19:23:56, TZ UTC+00 */
        0x50, 0x00,
        0x00, 0x00,
        0x05, 0x32, 0x47, 0x89, 0x21, 0x31, 0x91, 0x32, 0x65, 0x40
ENDFIELD (MM_INFORMATION_1, 14)

DECLARATION (IE_FOLLOW_PROCEED)

DECLARATION (CHM_NOT_PRESENT)

DECLARATION (IMEI_DIGITS)
DECLARATION (IMSI_1233347114912)

DECLARATION (IMSI_001010123456789)
DECLARATION (INT_IMSI_001010123456789)
DECLARATION (PRI_IMSI_001010123456789)
DECLARATION (SIM_IMSI_001010123456789)
DECLARATION (MSG_IMSI_001010123456789)
DECLARATION (MIMSI_001010123456789)

DECLARATION (IMSI_001010011223344)
DECLARATION (INT_IMSI_001010011223344)
DECLARATION (PRI_IMSI_001010011223344)
DECLARATION (SIM_IMSI_001010011223344)
DECLARATION (MSG_IMSI_001010011223344)
DECLARATION (MIMSI_001010011223344)

DECLARATION (IMSI_001019876543210)
DECLARATION (INT_IMSI_001019876543210)
```

DECLARATION (PRI_IMSI_001019876543210)
DECLARATION (SIM_IMSI_001019876543210)
DECLARATION (MSG_IMSI_001019876543210)
DECLARATION (MIMSI_001019876543210)

DECLARATION (KC_DELETED_RR)
DECLARATION (KC_DELETED_SIM)
DECLARATION (KCV_DELETED)

DECLARATION (KC_ARRAY_EMPTY)
DECLARATION (KC_EMPTY)

DECLARATION (KC_VALUE_EMPTY)
DECLARATION (KC_11223344)
DECLARATION (MCC_123)
DECLARATION (MCC_NONE)
DECLARATION (MCC_NONE_0XFF)
DECLARATION (MIMSI_1233347114912)
DECLARATION (SRES_1)
DECLARATION (SRES_1_CODED)
DECLARATION (MNC_NONE)
DECLARATION (MNC_NONE_0XFF)
DECLARATION (MNC_31)
DECLARATION (MNC_32)
DECLARATION (MNC_33)
DECLARATION (MNC_33X)
DECLARATION (MNC_34)
DECLARATION (MNC_35)
DECLARATION (MNC_36)
DECLARATION (MNC_37)
DECLARATION (MNC_44)
DECLARATION (MSG_MNC_31)
DECLARATION (MSG_MNC_32)
DECLARATION (MSG_MNC_33)
DECLARATION (MSG_MNC_44)
DECLARATION (MSG_MNC_34)
DECLARATION (MSG_MNC_35)
DECLARATION (MSG_MNC_36)
DECLARATION (MSG_MNC_37)
DECLARATION (MSG_YEAR_98)
DECLARATION (MSG_MONTH_12)
DECLARATION (MSG_DAY_13)
DECLARATION (MSG_HOUR_19)
DECLARATION (MSG_MINUTE_23)
DECLARATION (MSG_SECOND_56)
DECLARATION (MSG_TIMEZONE_CET)
DECLARATION (RAND_1)
DECLARATION (TMSI_34125708)

DECLARATION (AUTH_RAND_1)
DECLARATION (CC_MESSAGE)
DECLARATION (CC_MESSAGE_RESPONSE)
DECLARATION (CC_MESSAGE_5)
DECLARATION (CC_MESSAGE_RESPONSE_5)
DECLARATION (SMS_MESSAGE_2)
DECLARATION (SMS_MESSAGE_RESPONSE_2)

DECLARATION (SMS_MESSAGE_5)
DECLARATION (SMS_MESSAGE_RESPONSE_5)
DECLARATION (CIPH_KEY_NUM_01)
DECLARATION (CIPH_KEY_NUM_04)
DECLARATION (CIPH_KEY_NUM_RES)
DECLARATION (IDENT_TYPE_IMEI)
DECLARATION (IDENT_TYPE_IMSI)

DECLARATION (LOC_AREA_ID_123_31_0002)
DECLARATION (LOC_AREA_ID_123_31_2147)
DECLARATION (LOC_AREA_ID_123_31_FEFF)
DECLARATION (LOC_AREA_ID_123_33_1)
DECLARATION (LOC_AREA_ID_123_33_2)
DECLARATION (LOC_AREA_ID_123_33_2147)
DECLARATION (LOC_AREA_ID_123_33_FEFF)
DECLARATION (LOC_AREA_ID_123_34_2147)
DECLARATION (LOC_AREA_ID_123_44_0002)
DECLARATION (LOC_AREA_ID_123_35_0002)
DECLARATION (LOC_AREA_ID_123_35_2147)
DECLARATION (LOC_AREA_ID_123_35_FEFF)

DECLARATION (LOC_UPD_TYPE_NORMAL)
DECLARATION (LOC_UPD_TYPE_NORMAL_FOL)
DECLARATION (LOC_UPD_TYPE_ATTACH)
DECLARATION (LOC_UPD_TYPE_PERIODIC)
DECLARATION (MOB_CLASS_1)
DECLARATION (MOB_CLASS_2)
DECLARATION (MOB_IDENT_IMEI)
DECLARATION (MOB_IDENT_IMSI)
DECLARATION (MOB_IDENT_TMSI)
DECLARATION (MOB_IDENT_NEW_TMSI)

DECLARATION (ACC_CTRL_ARRAY_2143)
DECLARATION (ACC_CTRL_2143)

DECLARATION (ACC_CTRL_ARRAY_4711)
DECLARATION (ACC_CTRL_4711)

DECLARATION (BCCH_INF_ARRAY_1)
DECLARATION (BCCH_INF_1)

DECLARATION (BCCH_INF_ARRAY_2)
DECLARATION (BCCH_INF_2)

DECLARATION (BCCH_INFO_NONE)
DECLARATION (BCCH_EMPTY_CHANNEL_LIST)
DECLARATION (BCCH_INFO_ECL)

DECLARATION (FORB_PLMN_ARRAY_NONE)
DECLARATION (FORB_PLMN_NONE)

DECLARATION (FORB_PLMN_ARRAY_123_32)
DECLARATION (FORB_PLMN_123_32)

DECLARATION (FORB_PLMN_ARRAY_34_35_36_37)
DECLARATION (FORB_PLMN_34_35_36_37)

DECLARATION (FORB_PLMN_ARRAY_35_36_37_44)
DECLARATION (FORB_PLMN_35_36_37_44)

```
DECLARATION (FORB_PLMN_ARRAY_36_37_44_32)
DECLARATION (FORB_PLMN_36_37_44_32)

DECLARATION (FORB_PLMN_ARRAY_35_36_37_32)
DECLARATION (FORB_PLMN_35_36_37_32)

DECLARATION (FORB_PLMN_ARRAY_FF_FF_44_FF)
DECLARATION (FORB_PLMN_FF_FF_44_FF)

DECLARATION (IMSI_ARRAY_1)
DECLARATION (IMSI_FIELD_1)
DECLARATION (KCV_11223344)
DECLARATION (KCV_EMPTY)

/*
 * Location information for the SIM
 */

DECLARATION (LOC_INFO_ARRAY_123_31_0002_34125708)
DECLARATION (LOC_INFO_123_31_0002_34125708)

DECLARATION (LOC_INFO_ARRAY_123_31_2147_34125708)
DECLARATION (LOC_INFO_123_31_2147_34125708)

DECLARATION (LOC_INFO_ARRAY_123_31_2147_FFFFFFFF)
DECLARATION (LOC_INFO_123_31_2147_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_33_FFFE_FFFFFFFF)
DECLARATION (LOC_INFO_123_33_FFFE_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_33_0001_34125708)
DECLARATION (LOC_INFO_123_33_0001_34125708)

DECLARATION (LOC_INFO_ARRAY_123_33_0002_FFFFFFFF)
DECLARATION (LOC_INFO_123_33_0002_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_33_0002_34125708)
DECLARATION (LOC_INFO_123_33_0002_34125708)

DECLARATION (LOC_INFO_ARRAY_123_33_0002_34125708_NU)
DECLARATION (LOC_INFO_123_33_0002_34125708_NU)

DECLARATION (LOC_INFO_ARRAY_123_33_2147_FFFFFFFF)
DECLARATION (LOC_INFO_123_33_2147_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_33_2147_34125708)
DECLARATION (LOC_INFO_123_33_2147_34125708)

DECLARATION (LOC_INFO_ARRAY_123_34_2147_34125708)
DECLARATION (LOC_INFO_123_34_2147_34125708)

DECLARATION (LOC_INFO_ARRAY_123_34_2147_FFFFFFFF)
DECLARATION (LOC_INFO_123_34_2147_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_44_0002_FFFFFFFF)
DECLARATION (LOC_INFO_123_44_0002_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_44_2147_34125708)
DECLARATION (LOC_INFO_123_44_2147_34125708)

DECLARATION (LOC_INFO_ARRAY_123_44_0002_34125708)
DECLARATION (LOC_INFO_123_44_0002_34125708)
```

DECLARATION (LOC_INFO_ARRAY_123_35_0002_34125708)
DECLARATION (LOC_INFO_123_35_0002_34125708)

DECLARATION (LOC_INFO_ARRAY_123_35_2147_34125708)
DECLARATION (LOC_INFO_123_35_2147_34125708)

DECLARATION (LOC_INFO_ARRAY_123_35_2147_FFFFFFFF)
DECLARATION (LOC_INFO_123_35_2147_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_123_35_FFFE_FFFFFFFF)
DECLARATION (LOC_INFO_123_35_FFFE_FFFFFFFF)

DECLARATION (LOC_INFO_ARRAY_PLMN_NOT_ALLOW)
DECLARATION (LOC_INFO_PLMN_NOT_ALLOW)

DECLARATION (LOC_INFO_ARRAY_PLMN_31_NOT_ALLOW)
DECLARATION (LOC_INFO_PLMN_31_NOT_ALLOW)

DECLARATION (LOC_INFO_ARRAY_UPDATED_LPLMN)
DECLARATION (LOC_INFO_UPDATED_LPLMN)

DECLARATION (LOC_INFO_ARRAY_NOT_UPD_LPLMN)
DECLARATION (LOC_INFO_NOT_UPD_LPLMN)

DECLARATION (MM_INFO_NONE)
DECLARATION (MM_INFO)
DECLARATION (MM_INFO_2)
DECLARATION (MM_INFO_ATT)
DECLARATION (MM_INFO_PER)
DECLARATION (MM_INFO_ATT_PER)
DECLARATION (MOB_ID_IMEI)
DECLARATION (MOB_ID_IMSI)
DECLARATION (MOB_ID_NEW_TMSI)
DECLARATION (MOB_ID_NO_ID)
DECLARATION (MS_CLASS_2)
DECLARATION (MS_CLASS_3_NOT_SET)

DECLARATION (OP_SIM_AUTO_LIMITEDSRCH_NS)
DECLARATION (OP_TEST_AUTO_NETSRCH_NS)
DECLARATION (OP_TEST_MAN_NETSRCH_FS)
DECLARATION (OP_MODE_NO_SIM_NO_SERV)
DECLARATION (OP_MODE_NO_SIM_NO_SERV_M)
DECLARATION (OP_MODE_NO_SIM_LIM_SERV)
DECLARATION (OP_SIM_AUTO_PLMNSRCH_NS)
DECLARATION (OP_SIM_MAN_NETSRCH_FS)
DECLARATION (OP_MODE_SIM_NO_SERV_M1)
DECLARATION (OP_SIM_AUTO_NETSRCH_NS)
DECLARATION (OP_SIM_AUTO_NETSRCH_LS)
DECLARATION (OP_SIM_AUTO_NETSRCH_FS)
DECLARATION (OP_SIM_AUTO_PLMNSRCH_LS)
DECLARATION (OP_SIM_AUTO_PLMNSRCH_FS)
DECLARATION (OP_SIM_MAN_PLMNSRCH_FS)
DECLARATION (OP_MODE_TEST_SIM)
DECLARATION (OP_TEST_MAN_PLMNSRCH_NS)
DECLARATION (OP_MODE_TEST_SIM_LIM_SERV)
DECLARATION (OP_MODE_TEST_SIM_NO_SERV)
DECLARATION (OP_TEST_MAN_NETSRCH_NS)
DECLARATION (OP_SIM_MAN_NETSRCH_NS)

DECLARATION (OP_SIM_MAN_PLMNSRCH_NS)
DECLARATION (OP_SIM_MAN_PLMNSRCH_LS)

DECLARATION (PLMN_123_31)
DECLARATION (PLMN_123_32)
DECLARATION (PLMN_123_33)
DECLARATION (PLMN_123_33X)
DECLARATION (PLMN_123_44)
DECLARATION (PLMN_123_34)
DECLARATION (PLMN_123_35)
DECLARATION (PLMN_123_36)
DECLARATION (PLMN_123_37)
DECLARATION (PLMN_NO_ID)
DECLARATION (PLMN_NO_ID_0XFF)
DECLARATION (PLMN_LIST_2_PLMN)
DECLARATION (PLMN_LIST_44_31)
DECLARATION (PLMN_LIST_2_PLMN_0XFF)
DECLARATION (PLMN_LIST_2_PLMN_F)
DECLARATION (PLMN_LIST_2_PLMN_F_0XFF)
DECLARATION(PLMN_LIST_34_35)
DECLARATION (PLMN_LIST_32_34_35_36_37_44)
DECLARATION (PLMN_LIST_32_34_35_36_37_44_31)
DECLARATION (PLMN_LIST_PLMN_123_31)
DECLARATION (PLMN_LIST_PLMN_123_33)
DECLARATION (PLMN_LIST_PLMN_123_44)
DECLARATION (PLMN_LIST_FORB)
DECLARATION (PLMN_LIST_PLMN_123_32_0XFF)

DECLARATION (PREF_PLMN_ARRAY_NONE)
DECLARATION (PREF_PLMN_NONE)

DECLARATION (PREF_PLMN_ARRAY_34_35_36_37)
DECLARATION (PREF_PLMN_34_35_36_37)

DECLARATION (CHM_SDCCH_SIGNALLING)
DECLARATION (PD_CC_AND_SAPI_0)
DECLARATION (FULL_NET_NAME)
DECLARATION (FULL_NAME)
DECLARATION (SHORT_NET_NAME)
DECLARATION (SHORT_NAME)
DECLARATION (NET_TEXT_A)
DECLARATION (NET_TZ)
DECLARATION (NTZ_CET)
DECLARATION (NET_TZ_AND_TIME_1)
DECLARATION (MSG_NET_TZ_AND_TIME_1)
DECLARATION (PLMN_SEL_NLPTT_PROX)
DECLARATION (EF_MSISDN)
DECLARATION (EF_PLMN_SEL)
DECLARATION (EF_PLMN_SEL_THPLMN_ACC)
DECLARATION (SIM_ACC_4711)
DECLARATION (SIM_THPLMN_FF)
DECLARATION(LAC_LIST_1)
DECLARATION(LAC_LIST_2)

```
/*
 * Simple ordinal numbers from zero to nine
 */
BYTE    BYTE_0                  0
BYTE    BYTE_1                  1
BYTE    BYTE_2                  2
BYTE    BYTE_3                  3
BYTE    BYTE_4                  4
BYTE    BYTE_5                  5
BYTE    BYTE_6                  6
BYTE    BYTE_7                  7
BYTE    BYTE_8                  8
BYTE    BYTE_9                  9

BYTE    NO_PLMN_FOUND           0
BYTE    ONE_PLMN_FOUND          1
BYTE    TWO_PLMN_FOUND          2

/*
 * accc (Access control)
 */
SHORT   ACC_2143        0x2143
SHORT   ACC_4711        0x4711
SHORT   ACC_CLASS_0000          0x0000

/*
 *  bcc (base station colour code)
 */
BYTE    BCC_0   0x00

/*
 * cid (Cell identity)
 */
SHORT   CELL_ID_0002    0x0002
SHORT   CELL_ID_0045    0x0045
SHORT   CELL_ID_1122    0x1122
SHORT   CELL_ID_1123    0x1123

/*
 * cksn
 */
BYTE    CKSN_NO_KEY     0x07
BYTE    CKSN_01                 0x01
BYTE    CKSN_04                 0x04

/*
 * lac (Location area code)
 */
SHORT   LAC_0001        0x0001
SHORT   LAC_0002        0x0002
SHORT   LAC_2147        0x2147
SHORT   LAC_FEFF        0xFFFE

/*
 * lut (Location updating type)
 */
BYTE    LUT_NORMAL      0x00
```

```
BYTE    LUT_PERIODIC    0x01
BYTE    LUT_ATTACH      0x02

/*
 * ncc (National colour code)
 */
BYTE    NCC_3   0x03

/*
 * Reject cause
 */
BYTE    RC_RETRY_UPON_NEW_CELL      0x32 /* 0x30 - 0x3f -> 0x30 */

/*
 *  thplmn (HPLMN time))
 */
BYTE    THPLMN_01       0x01

BYTE    THPLMN_FF       0xFF
BEGINARRAY (SIM_THPLMN_FF, 1)
        0xFF
ENDARRAY
BYTE    LENGTH_THPLMN           0x01

/*
 * ti (Transaction identifier)
 */
BYTE    TI_0    0x00
BYTE    TI_1    0x01
BYTE    TI_2    0x02
BYTE    TI_3    0x03
BYTE    TI_4    0x04
BYTE    TI_5    0x05
BYTE    TI_6    0x06

BYTE    TI_8    0x08
BYTE    TI_9    0x09
BYTE    TI_10   0x0A
BYTE    TI_11   0x0B
BYTE    TI_12   0x0C
BYTE    TI_13   0x0D
BYTE    TI_14   0x0E


/*
 * TMSI (Temporary Mobile Subscriber Identity)
 */
BYTE    TMSI_34125708_ULONG     0x34125708
BYTE    TMSI_INVALID_ULONG      0xFFFFFFFF

/*
 * T3212 Periodic Time
 */
BYTE    T3212_6_MIN     1
BYTE    T3212_6_MIN_MS 360000
BYTE    T3212_50_SEK_MS         50000
```

```
/*
 * Definitions for MM INFORMATION
 */
BYTE    YEAR_98         98
BYTE    MONTH_12        12
BYTE    DAY_13          13
BYTE    HOUR_19         19
BYTE    MINUTE_23       23
BYTE    SECOND_56       56
BYTE    TZ_CET          0x40
BYTE    CS_UCS2         0x00
BYTE    NUM_SPARE_0     0x00


/*
 * Definitions for EM
 */
LONG    Bitm_1                  0x1000
LONG    Bitm_2                  0x2000
BYTE    EM_ENTITY               0x04

/*
 * Definitions for SAT
 */
SHORT   FILE_CHG_1      0x01    /* Number of changed files */
SHORT   FILE_CHG_2      0x02
SHORT   FILE_CHG_3      0x03

BYTE    OFFSET_0        0x0000  /* Offset of data field */
BYTE    MAX_LEN_PREF_PLMN       (96)
BYTE    PLMN_SEL_LENGTH         0x06
BYTE    MAX_LENGTH_ACC          2
BYTE    LENGTH_ACC              2

BEGINARRAY (PLMN_SEL_NLPTT_PROX, 6)
        0x02, 0xF4, 0x80,
        0x02, 0xF6, 0x10
ENDARRAY

BEGINARRAY (EF_MSISDN, 2)
        0x40, 0x6f
ENDARRAY

BEGINARRAY (EF_PLMN_SEL, 2)
        0x30, 0x6f
ENDARRAY

BEGINARRAY (EF_PLMN_SEL_THPLMN_ACC, 6)
        0x30, 0x6f,     /* PLMN selector */
        0x31, 0x6f,     /* HPLMN search period */
        0x78, 0x6f      /* Access control class */
ENDARRAY

BEGINARRAY (SIM_ACC_4711, 2)
        0x47, 0x11
ENDARRAY
```

```
/*
 * Channel Using Mode
 */
BEGIN_PSTRUCT ("chm", CHM_NOT_PRESENT)
        SET_COMP ("ch_type", 0xFF)          /* Value not defined in RR SAP definition */
        SET_COMP ("ch_mode", 0xFF)          /* Value not defined in RR SAP definition */
ENDSTRUCT

/*
 * imei (IMEI - Mobile identity)
 */
BEGINARRAY (IMEI_DIGITS, 15)
        0x01, 0x03, 0x05, 0x07, 0x09, 0x00, 0x02, 0x04,
        0x06, 0x08, 0x01, 0x01, 0x02, 0x02, 0x00
ENDARRAY

/*
 * imsi
 */
BEGINARRAY (IMSI_1233347114912, 16)
        0x01, 0x02, 0x03, 0x03, 0x03, 0x04, 0x07, 0x01,
        0x01, 0x04, 0x09, 0x01, 0x02, 0x0F, 0x0F, 0xFF
ENDARRAY

BEGINARRAY (MIMSI_1233347114912, 13)
        0x01, 0x02, 0x03, 0x03, 0x03, 0x04, 0x07, 0x01,
        0x01, 0x04, 0x09, 0x01, 0x02
ENDARRAY

/*
 * imsi "001010123456789" as of GSM 11.11 subclause 27.22.4.7.4.2
 */
BEGINARRAY (IMSI_001010123456789, 8)
        0x09, 0x10, 0x10, 0x10, 0x32, 0x54, 0x76, 0x98
ENDARRAY
BEGIN_PSTRUCT ("imsi_field", SIM_IMSI_001010123456789)
        SET_COMP ("c_field", 8)
        SET_COMP ("field", IMSI_001010123456789)
ENDSTRUCT
BEGINARRAY (INT_IMSI_001010123456789, 16)
        0x00, 0x00, 0x01, 0x00, 0x01,
        0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0xFF
ENDARRAY
BEGIN_PSTRUCT("imsi_struct", PRI_IMSI_001010123456789)
        SET_COMP ("v_mid",          V_MID_PRES)
        SET_COMP ("id_type",        TYPE_IMSI)
        SET_COMP ("id",   INT_IMSI_001010123456789)
        SKIP_COMP ("tmsi_dig")
ENDSTRUCT
BEGINARRAY (MIMSI_001010123456789, 15)
        0x00, 0x00, 0x01, 0x00, 0x01,
        0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09
ENDARRAY

BEGIN_MSTRUCT("follow_proceed", IE_FOLLOW_PROCEED)
ENDSTRUCT
```

```
BEGIN_MSTRUCT("mob_id", MSG_IMSI_001010123456789)
        SET_COMP ("ident_type",     ID_TYPE_IMSI)
        SET_COMP ("odd_even",       ODD)
        SET_COMP ("ident_dig",      MIMSI_001010123456789)
        SKIP_COMP ("tmsi")
        SKIP_COMP ("dmy")
ENDSTRUCT

/*
 * imsi "001 01 00 11223344" as of GSM 11.11 subclause 27.22.4.7.4.2
 */
BEGINARRAY (IMSI_001010011223344, 8)
        0x09, 0x10, 0x10, 0x00, 0x11, 0x22, 0x33, 0x44
ENDARRAY
BEGIN_PSTRUCT ("imsi_field", SIM_IMSI_001010011223344)
        SET_COMP ("c_field", 8)
        SET_COMP ("field", IMSI_001010011223344)
ENDSTRUCT
BEGINARRAY (INT_IMSI_001010011223344, 16)
        0x00, 0x00, 0x01, 0x00, 0x01,
        0x00, 0x00, 0x01, 0x01, 0x02, 0x02, 0x03, 0x03, 0x04, 0x04, 0xFF
ENDARRAY
BEGIN_PSTRUCT("imsi_struct", PRI_IMSI_001010011223344)
        SET_COMP ("v_mid",          V_MID_PRES)
        SET_COMP ("id_type",        TYPE_IMSI)
        SET_COMP ("id",   INT_IMSI_001010011223344)
        SKIP_COMP ("tmsi_dig")
ENDSTRUCT
BEGINARRAY (MIMSI_001010011223344, 15)
        0x00, 0x00, 0x01, 0x00, 0x01,
        0x00, 0x00, 0x01, 0x01, 0x02, 0x02, 0x03, 0x03, 0x04, 0x04
ENDARRAY
BEGIN_MSTRUCT("mob_id", MSG_IMSI_001010011223344)
        SET_COMP ("ident_type",     ID_TYPE_IMSI)
        SET_COMP ("odd_even",       ODD)
        SET_COMP ("ident_dig",      MIMSI_001010011223344)
        SKIP_COMP ("tmsi")
        SKIP_COMP ("dmy")
ENDSTRUCT

/*
 * imsi "001 01 9876543210" as of GSM 11.11 subclause 27.22.4.7.4.2
 */
BEGINARRAY (IMSI_001019876543210, 8)
        0x09, 0x10, 0x10, 0x89, 0x67, 0x45, 0x23, 0x01
ENDARRAY
BEGIN_PSTRUCT ("imsi_field", SIM_IMSI_001019876543210)
        SET_COMP ("c_field", 8)
        SET_COMP ("field", IMSI_001019876543210)
ENDSTRUCT
BEGINARRAY (INT_IMSI_001019876543210, 16)
        0x00, 0x00, 0x01, 0x00, 0x01,
        0x09, 0x08, 0x07, 0x06, 0x05, 0x04, 0x03, 0x02, 0x01, 0x00, 0xFF
ENDARRAY
BEGIN_PSTRUCT("imsi_struct", PRI_IMSI_001019876543210)
```

```
        SET_COMP ("v_mid",          V_MID_PRES)
        SET_COMP ("id_type",        TYPE_IMSI)
        SET_COMP ("id",   INT_IMSI_001019876543210)
        SKIP_COMP ("tmsi_dig")
ENDSTRUCT
BEGINARRAY (MIMSI_001019876543210, 15)
        0x00, 0x00, 0x01, 0x00, 0x01,
        0x09, 0x08, 0x07, 0x06, 0x05, 0x04, 0x03, 0x02, 0x01, 0x00, 0xFF
ENDARRAY
BEGIN_MSTRUCT("mob_id", MSG_IMSI_001019876543210)
        SET_COMP ("ident_type",     ID_TYPE_IMSI)
        SET_COMP ("odd_even",     ODD)
        SET_COMP ("ident_dig",      MIMSI_001019876543210)
        SKIP_COMP ("tmsi")
        SKIP_COMP ("dmy")
ENDSTRUCT

/*
 * sres (authentication parameter sres)
 */
BEGINARRAY (SRES_1, 4)
        0x01, 0x02, 0x03, 0x04
ENDARRAY
BEGINARRAY (SRES_1_CODED, 8)
        0x20, 0x00, 0x00, 0x00, 0x01, 0x02, 0x03, 0x04
ENDARRAY

/*
 *  tmsi
 */
BEGINARRAY (TMSI_34125708, 8)
        0x20, 0x00, 0x00, 0x00, 0x34, 0x12, 0x57, 0x08
ENDARRAY

/*
 * kc (KC value)
 */
BEGINARRAY (KC_DELETED_RR, 8)
        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (KC_DELETED_SIM, 8)
        0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF
ENDARRAY
BEGINARRAY (KC_11223344, 8)
        0x01, 0x01, 0x02, 0x02, 0x03, 0x03, 0x04, 0x04
ENDARRAY

/*
 *  mcc (Mobile country code)
 */
BEGINARRAY (MCC_NONE, 3)
        0x0F, 0x0F, 0x0F
ENDARRAY
BEGINARRAY (MCC_NONE_0XFF, 3)
        0xFF, 0xFF, 0xFF
ENDARRAY
```

```
BEGINARRAY (MCC_123, 3)
        0x01, 0x02, 0x03
ENDARRAY

/*
* mnc (Mobile network code)
*/
BEGINARRAY (MNC_NONE, 3)
        0x0F, 0x0F, 0x0F
ENDARRAY
BEGINARRAY (MNC_NONE_0XFF, 3)
        0xFF, 0xFF, 0xFF
ENDARRAY
BEGINARRAY (MNC_31, 3)
        0x03, 0x01, 0x0F
ENDARRAY
BEGINARRAY (MNC_32, 3)
        0x03, 0x02, 0x0F
ENDARRAY
BEGINARRAY (MNC_33, 3)
         0x03, 0x03, 0x0F
ENDARRAY
BEGINARRAY (MNC_33X, 3)
         0x03, 0x03, 0x04
ENDARRAY
BEGINARRAY (MNC_34, 3)
        0x03, 0x04, 0x0F
ENDARRAY
BEGINARRAY (MNC_44, 3)
        0x04, 0x04, 0x0F
ENDARRAY
BEGINARRAY (MNC_35, 3)
        0x03, 0x05, 0x0F
ENDARRAY
BEGINARRAY (MNC_36, 3)
        0x03, 0x06, 0x0F
ENDARRAY
BEGINARRAY (MNC_37, 3)
        0x03, 0x07, 0x0F
ENDARRAY
BEGINARRAY (MSG_MNC_31, 2)
        0x03, 0x01
ENDARRAY
BEGINARRAY (MSG_MNC_32, 2)
        0x03, 0x02
ENDARRAY
BEGINARRAY (MSG_MNC_33, 2)
         0x03, 0x03
ENDARRAY
BEGINARRAY (MSG_MNC_44, 2)
        0x04, 0x04
ENDARRAY
BEGINARRAY (MSG_MNC_34, 2)
         0x03, 0x04
ENDARRAY
```

```
BEGINARRAY (MSG_MNC_35, 2)
        0x03, 0x05
ENDARRAY
BEGINARRAY (MSG_MNC_36, 2)
        0x03, 0x06
ENDARRAY
BEGINARRAY (MSG_MNC_37, 2)
        0x03, 0x07
ENDARRAY

/*
 * Network time and time zone
 */

BEGINARRAY (MSG_YEAR_98, 2)
        0x09, 0x08          /* 1998 */
ENDARRAY

BEGINARRAY (MSG_MONTH_12, 2)
        0x01, 0x02          /* December */
ENDARRAY

BEGINARRAY (MSG_DAY_13, 2)
        0x01, 0x03
ENDARRAY

BEGINARRAY (MSG_HOUR_19, 2)
        0x01, 0x09
ENDARRAY

BEGINARRAY (MSG_MINUTE_23, 2)
        0x02, 0x03
ENDARRAY

BEGINARRAY (MSG_SECOND_56, 2)
        0x05, 0x06
ENDARRAY

/*
 * imsi_field (International mobile subscriber identity - GSM 11.11)
 */
BEGINARRAY (IMSI_ARRAY_1, 8)
        0x19, 0x32, 0x33, 0x74, 0x11, 0x94, 0x21, 0xFF
ENDARRAY

BEGIN_PSTRUCT("imsi_field", IMSI_FIELD_1)
        SET_COMP ("c_field",        0x08)
        SET_COMP ("field",          IMSI_ARRAY_1)
ENDSTRUCT

/*
 * loc_info (Location Info - GSM 11.11)
 */

BEGINARRAY (LOC_INFO_ARRAY_123_31_0002_34125708, 11)
        0x34, 0x12, 0x57, 0x08,             /* TMSI */
        0x21, 0xF3, 0x13, 0x00, 0x02,       /* LAI: MCC= 123, MNC=31, LAI=0002 */
        0x00,                               /* TMSI TIME */
        0x00                                /* Location update status */
ENDARRAY
```

```
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_31_0002_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_31_0002_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_31_2147_34125708, 11)
        0x34, 0x12, 0x57, 0x08,         /* TMSI */
        0x21, 0xF3, 0x13, 0x21, 0x47,   /* LAI: MCC= 123, MNC=31, LAI=2147 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_31_2147_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_31_2147_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_31_2147_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x13, 0x21, 0x47,   /* LAI: MCC= 123, MNC=31, LAI=2147 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_31_2147_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_31_2147_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_33_FFFE_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x33, 0xFF, 0xFE,   /* LAI: MCC=123, MNC=33, LAI=deleted */
        0x00,                           /* TMSI TIME */
        0x01                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_FFFE_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_FFFE_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_33_0001_34125708, 11)
        0x34, 0x12, 0x57, 0x08,         /* TMSI */
        0x21, 0xF3, 0x33, 0x00, 0x01,   /* LAI: MCC=123, MNC=33, LAI=0001 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_0001_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_0001_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_33_0002_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x33, 0x00, 0x02,   /* LAI: MCC=123, MNC=33, LAI=0002 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_0002_FFFFFFFF)
        SET_COMP ("c_loc", 11)
```

```
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_0002_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_33_0002_34125708, 11)
        0x34, 0x12, 0x57, 0x08,             /* TMSI */
        0x21, 0xF3, 0x33, 0x00, 0x02,       /* LAI: MCC=123, MNC=33, LAI=0002 */
        0x00,                               /* TMSI TIME */
        0x00                                /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_0002_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_0002_34125708)
ENDSTRUCT

/* Very special case: TMSI and not updated, normally not possible */
BEGINARRAY (LOC_INFO_ARRAY_123_33_0002_34125708_NU, 11)
        0x34, 0x12, 0x57, 0x08,             /* TMSI */
        0x21, 0xF3, 0x33, 0x00, 0x02,       /* LAI: MCC=123, MNC=33, LAI=FFFE */
        0x00,                               /* TMSI TIME */
        0x01                                /* Location update status == "NOT UPDATED" */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_0002_34125708_NU)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_0002_34125708_NU)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_33_2147_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,             /* TMSI */
        0x21, 0xF3, 0x33,0x21, 0x47,        /* LAI: MCC=123, MNC=33, LAI=2147 */
        0x00,                               /* TMSI TIME */
        0x00                                /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_2147_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_2147_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_33_2147_34125708, 11)
        0x34, 0x12, 0x57, 0x08,             /* TMSI */
        0x21, 0xF3, 0x33, 0x21, 0x47,       /* LAI: MCC=123, MNC=33, LAI=2147 */
        0x00,                               /* TMSI TIME */
        0x00                                /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_33_2147_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_33_2147_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_34_2147_34125708, 11)
        0x34, 0x12, 0x57, 0x08,             /* TMSI */
        0x21, 0xF3, 0x43, 0x21, 0x47,       /* LAI: MCC=123, MNC=34, LAI=2147 */
        0x00,                               /* TMSI TIME */
        0x00                                /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_34_2147_34125708)
        SET_COMP ("c_loc", 11)
```

```
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_34_2147_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_34_2147_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x43, 0x21, 0x47,   /* LAI: MCC=123, MNC=34, LAI=2147 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_34_2147_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_34_2147_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_44_0002_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x44, 0x00, 0x02,   /* LAI: MCC=123, MNC=44, LAI=0002 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_44_0002_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_44_0002_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_44_0002_34125708, 11)
        0x34, 0x12, 0x57, 0x08,         /* TMSI */
        0x21, 0xF3, 0x44, 0x00, 0x02,   /* LAI: MCC=123, MNC=44, LAI=0002 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_44_0002_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_44_0002_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_44_2147_34125708, 11)
        0x34, 0x12, 0x57, 0x08,         /* TMSI */
        0x21, 0xF3, 0x44, 0x21, 0x47,   /* LAI: MCC=123, MNC=44, LAI=2147 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_44_2147_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_44_2147_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_35_0002_34125708, 11)
        0x34, 0x12, 0x57, 0x08,         /* TMSI */
        0x21, 0xF3, 0x53, 0x00, 0x02,   /* LAI: MCC= 123, MNC=35, LAI=0002 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_35_0002_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_35_0002_34125708)
ENDSTRUCT
```

```
BEGINARRAY (LOC_INFO_ARRAY_123_35_2147_34125708, 11)
        0x34, 0x12, 0x57, 0x08,         /* TMSI */
        0x21, 0xF3, 0x53, 0x21, 0x47,   /* LAI: MCC= 123, MNC=35, LAI=2147 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_35_2147_34125708)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_35_2147_34125708)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_35_2147_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x53, 0x21, 0x47,   /* LAI: MCC= 123, MNC=35, LAI=2147 */
        0x00,                           /* TMSI TIME */
        0x00                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_35_2147_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_35_2147_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_123_35_FFFE_FFFFFFFF, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x53, 0xFF, 0xFE,   /* LAI: MCC= 123, MNC=35, LAI=FFFE */
        0x00,                           /* TMSI TIME */
        0x03                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_123_35_FFFE_FFFFFFFF)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc",  LOC_INFO_ARRAY_123_35_FFFE_FFFFFFFF)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_PLMN_NOT_ALLOW, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x33, 0xFF, 0xFE,   /* LAI: MCC=123, MNC=33, LAI=deleted */
        0x00,                           /* TMSI TIME */
        0x03                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_PLMN_NOT_ALLOW)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc", LOC_INFO_ARRAY_PLMN_NOT_ALLOW)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_PLMN_31_NOT_ALLOW, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
        0x21, 0xF3, 0x13, 0xFF, 0xFE,   /* LAI: MCC=123, MNC=31, LAI=deleted */
        0x00,                           /* TMSI TIME */
        0x03                            /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_PLMN_31_NOT_ALLOW)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc", LOC_INFO_ARRAY_PLMN_31_NOT_ALLOW)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_UPDATED_LPLMN, 11)
        0xFF, 0xFF, 0xFF, 0xFF,         /* TMSI */
```

```
        0x21, 0xF3, 0x13, 0x21, 0x47,       /* LAI: MNC=123, MCC=31, LAI=2147 */
        0x00,                               /* TMSI TIME */
        0x00                                /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_UPDATED_LPLMN)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc", LOC_INFO_ARRAY_UPDATED_LPLMN)
ENDSTRUCT

BEGINARRAY (LOC_INFO_ARRAY_NOT_UPD_LPLMN, 11)
        0xFF, 0xFF, 0xFF, 0xFF,             /* TMSI */
        0x21, 0xF3, 0x32, 0x00, 0x02,       /* LAI: MNC=123, MCC=32, LAI=0002 */
        0x00,                               /* TMSI TIME */
        0x01                                /* Location update status */
ENDARRAY
BEGIN_PSTRUCT ("loc_info", LOC_INFO_NOT_UPD_LPLMN)
        SET_COMP ("c_loc", 11)
        SET_COMP ("loc", LOC_INFO_ARRAY_NOT_UPD_LPLMN)
ENDSTRUCT

/*
 * pref_plmn (Preferred PLMNs, this list is empty here)
 */
BEGINARRAY (PREF_PLMN_ARRAY_NONE, 24)
        0xFF, 0xFF, 0xFF,           /* PLMN 1, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 2, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 3, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 4, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 5, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 6, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 7, EMPTY */
        0xFF, 0xFF, 0xFF /* PLMN 8, EMPTY */
ENDARRAY
BEGIN_PSTRUCT ("pref_plmn", PREF_PLMN_NONE)
        SET_COMP ("c_pref", 24)
        SET_COMP ("pref", PREF_PLMN_ARRAY_NONE)
ENDSTRUCT

/*
 * Preferred PLMNs
 */
BEGINARRAY (PREF_PLMN_ARRAY_34_35_36_37, 12)
        0x21, 0xF3, 0x43,  /* PLMN 1, MCC=123, MNC=34 */
        0x21, 0xF3, 0x53,  /* PLMN 2, MCC=123, MNC=35 */
        0x21, 0xF3, 0x63,  /* PLMN 3, MCC=123, MNC=36 */
        0x21, 0xF3, 0x73           /* PLMN 4, MCC=123, MNC=37 */
ENDARRAY
BEGIN_PSTRUCT ("pref_plmn", PREF_PLMN_34_35_36_37)
        SET_COMP ("c_pref", 12)
        SET_COMP ("pref", PREF_PLMN_ARRAY_34_35_36_37)
ENDSTRUCT

/*
 * forb_plmn (Forbidden PLMNs, as they are delivered by the SIM)
 */
BEGINARRAY (FORB_PLMN_ARRAY_NONE, 12)
```

```
        0xFF, 0xFF, 0xFF,           /* PLMN 1, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 2, EMPTY */
        0xFF, 0xFF, 0xFF,           /* PLMN 3, EMPTY */
        0xFF, 0xFF, 0xFF /* PLMN 4, EMPTY */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_NONE)
        SET_COMP ("c_forb",         12)
        SET_COMP ("forb",           FORB_PLMN_ARRAY_NONE)
ENDSTRUCT

BEGINARRAY (FORB_PLMN_ARRAY_123_32, 12)
        0x21, 0xF3, 0x23,  /* PLMN 1, MCC=123, MNC=32 */
        0xFF, 0xFF, 0xFF,                   /* PLMN 2, EMPTY */
        0xFF, 0xFF, 0xFF,                   /* PLMN 3, EMPTY */
        0xFF, 0xFF, 0xFF            /* PLMN 4, EMPTY */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_123_32)
        SET_COMP ("c_forb", 12)
        SET_COMP ("forb", FORB_PLMN_ARRAY_123_32)
ENDSTRUCT

BEGINARRAY (FORB_PLMN_ARRAY_34_35_36_37, 12)
        0x21, 0xF3, 0x43,  /* PLMN 1, MCC=123, MNC=34 */
        0x21, 0xF3, 0x53,  /* PLMN 2, MCC=123, MNC=35 */
        0x21, 0xF3, 0x63,  /* PLMN 3, MCC=123, MNC=36 */
        0x21, 0xF3, 0x73            /* PLMN 4, MCC=123, MNC=37 */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_34_35_36_37)
        SET_COMP ("c_forb", 12)
        SET_COMP ("forb", FORB_PLMN_ARRAY_34_35_36_37)
ENDSTRUCT

BEGINARRAY (FORB_PLMN_ARRAY_35_36_37_44, 12)
        0x21, 0xF3, 0x53,  /* PLMN 2, MCC=123, MNC=35 */
        0x21, 0xF3, 0x63,  /* PLMN 3, MCC=123, MNC=36 */
        0x21, 0xF3, 0x73,  /* PLMN 4, MCC=123, MNC=37 */
        0x21, 0xF3, 0x44            /* PLMN 1, MCC=123, MNC=44 */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_35_36_37_44)
        SET_COMP ("c_forb", 12)
        SET_COMP ("forb", FORB_PLMN_ARRAY_35_36_37_44)
ENDSTRUCT

BEGINARRAY (FORB_PLMN_ARRAY_36_37_44_32, 12)
        0x21, 0xF3, 0x63,  /* PLMN 3, MCC=123, MNC=36 */
        0x21, 0xF3, 0x73,  /* PLMN 4, MCC=123, MNC=37 */
        0x21, 0xF3, 0x44,  /* PLMN 1, MCC=123, MNC=44 */
        0x21, 0xF3, 0x23            /* PLMN 2, MCC=123, MNC=32 */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_36_37_44_32)
        SET_COMP ("c_forb", 12)
        SET_COMP ("forb", FORB_PLMN_ARRAY_36_37_44_32)
ENDSTRUCT

BEGINARRAY (FORB_PLMN_ARRAY_35_36_37_32, 12)
        0x21, 0xF3, 0x53,  /* PLMN 1, MCC=123, MNC=35 */
        0x21, 0xF3, 0x63,  /* PLMN 3, MCC=123, MNC=36 */
```

```
        0x21, 0xF3, 0x73,  /* PLMN 4, MCC=123, MNC=37 */
        0x21, 0xF3, 0x23        /* PLMN 2, MCC=123, MNC=32 */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_35_36_37_32)
        SET_COMP ("c_forb", 12)
        SET_COMP ("forb", FORB_PLMN_ARRAY_35_36_37_32)
ENDSTRUCT

BEGINARRAY (FORB_PLMN_ARRAY_FF_FF_44_FF, 12)
        0xFF, 0xFF, 0xFF,               /* PLMN 1, EMPTY */
        0xFF, 0xFF, 0xFF,               /* PLMN 2, EMPTY */
        0x21, 0xF3, 0x44,  /* PLMN 3, MCC=123, MNC=44 */
        0xFF, 0xFF, 0xFF        /* PLMN 4, EMPTY */
ENDARRAY
BEGIN_PSTRUCT ("forb_plmn", FORB_PLMN_FF_FF_44_FF)
        SET_COMP ("c_forb", 12)
        SET_COMP ("forb", FORB_PLMN_ARRAY_FF_FF_44_FF)
ENDSTRUCT

/*
 * acc_ctrl (Access control)
 */
BEGINARRAY (ACC_CTRL_ARRAY_2143, 2)
        0x21, 0x43
ENDARRAY
BEGIN_PSTRUCT ("acc_ctrl", ACC_CTRL_2143)
        SET_COMP ("c_acc",      0x02)
        SET_COMP ("acc",        ACC_CTRL_ARRAY_2143)
ENDSTRUCT

BEGINARRAY (ACC_CTRL_ARRAY_4711, 2)
        0x47, 0x11
ENDARRAY
BEGIN_PSTRUCT ("acc_ctrl", ACC_CTRL_4711)
        SET_COMP ("c_acc",      0x02)
        SET_COMP ("acc",        ACC_CTRL_ARRAY_4711)
ENDSTRUCT

/*
 * bcch_inf (BCCH information from SIM card)
 */
BEGINARRAY (BCCH_INF_ARRAY_1, 16)
        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_PSTRUCT ("bcch_inf", BCCH_INF_1)
        SET_COMP ("c_bcch", 16)
        SET_COMP ("bcch", BCCH_INF_ARRAY_1)
ENDSTRUCT

BEGINARRAY (BCCH_INF_ARRAY_2, 16)
        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_PSTRUCT ("bcch_inf", BCCH_INF_2)
        SET_COMP ("c_bcch", 16)
```

```
        SET_COMP ("bcch", BCCH_INF_ARRAY_2)
ENDSTRUCT

/*
 * rand (Authentication parameter RAND)
 */
BEGINARRAY (RAND_1, 16)
        0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08,
        0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F, 0x10
ENDARRAY


/*
 * CC Messages, ti originating side
 */
BEGINARRAY (CC_MESSAGE, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0x23,     /* TI=2, PD=3 (CC) */
        0x01      /* Alerting message type */
ENDARRAY

BEGINARRAY (CC_MESSAGE_5, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0x53,     /* TI=5, PD=3 (CC) */
        0x01      /* Alerting message type */
ENDARRAY

/*
 * CC Messages, ti responding side
 */
BEGINARRAY (CC_MESSAGE_RESPONSE, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0xA3,     /* TI=2, PD=3 (CC) */
        0x01      /* Alerting message type */
ENDARRAY

BEGINARRAY (CC_MESSAGE_RESPONSE_5, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0xD3,     /* TI=5, PD=3 (CC) */
        0x01      /* Alerting message type */
ENDARRAY

/*
 * SMS Messages, ti originating side
 */
BEGINARRAY (SMS_MESSAGE_2, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
```

```
        0x29,   /* TI=2, PD=9 (SMS) */
        0x01    /* Some garbage */
ENDARRAY

BEGINARRAY (SMS_MESSAGE_5, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0x59,   /* TI=5, PD=9 (SMS) */
        0x01    /* Some garbage */
ENDARRAY

/*
 * SMS Messages, ti responding side
 */
BEGINARRAY (SMS_MESSAGE_RESPONSE_2, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0xA9,   /* TI=2, PD=9 (SMS) */
        0x01    /* Some garbage */
ENDARRAY

BEGINARRAY (SMS_MESSAGE_RESPONSE_5, 9)
        0x10, 0x00,         /* length in bits */
        0x18, 0x00,         /* offset in bits */
        0x00, 0x00, 0x00,   /* not used */
        0xD9,   /* TI=5, PD=9 (SMS) */
        0x01    /* Some garbage */
ENDARRAY

BEGINARRAY (NET_TEXT_A, 20)
        0x00, 0x01,
        0x00, 0x02,
        0x00, 0x03,
        0x00, 0x04,
        0x00, 0x05,
        0x00, 0x06,
        0x00, 0x07,
        0x00, 0x08,
        0x00, 0x09,
        0x00, 0x0a
ENDARRAY

/*
 *  auth_rand (Ciphering key sequence number)
 */
BEGIN_MSTRUCT ("auth_rand", AUTH_RAND_1)
        SET_COMP ("rand",           RAND_1)
ENDSTRUCT

/*
 * ciph_key_num (Ciphering key sequence number)
 */
BEGIN_MSTRUCT ("ciph_key_num", CIPH_KEY_NUM_RES)
        SET_COMP ("key_seq",    CKSN_RES)
ENDSTRUCT
```

```
 BEGIN_MSTRUCT ("ciph_key_num", CIPH_KEY_NUM_01)
        SET_COMP ("key_seq",      CKSN_01)
ENDSTRUCT

BEGIN_MSTRUCT ("ciph_key_num", CIPH_KEY_NUM_04)
        SET_COMP ("key_seq",      CKSN_04)
ENDSTRUCT


/*
 * ident (identity type)
 */
BEGIN_MSTRUCT("ident", IDENT_TYPE_IMEI)
        SET_COMP ("ident_type",    ID_TYPE_IMEI)
ENDSTRUCT

BEGIN_MSTRUCT("ident", IDENT_TYPE_IMSI)
        SET_COMP ("ident_type",    ID_TYPE_IMSI)
ENDSTRUCT

/*
 * loc_upd_type(Location updating type)
 */
BEGIN_MSTRUCT ("loc_upd_type", LOC_UPD_TYPE_NORMAL)
        SET_COMP ("follow",        FOR_PENDING_NO)
        SET_COMP ("lut",           LUT_NORMAL)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_upd_type", LOC_UPD_TYPE_NORMAL_FOL)
        SET_COMP ("follow",        FOR_PENDING_YES)
        SET_COMP ("lut",           LUT_NORMAL)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_upd_type", LOC_UPD_TYPE_ATTACH)
        SET_COMP ("follow",        FOR_PENDING_NO)
        SET_COMP ("lut",           LUT_ATTACH)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_upd_type", LOC_UPD_TYPE_PERIODIC)
        SET_COMP ("follow",        FOR_PENDING_NO)
        SET_COMP ("lut",           LUT_PERIODIC)
ENDSTRUCT
/*
 * loc_area_ident (Location area identification)
 */
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_33_1)
        SET_COMP ("mcc",           MCC_123)
        SET_COMP ("mnc",           MSG_MNC_33)
        SET_COMP ("lac",           LAC_0001)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_33_2)
        SET_COMP ("mcc",           MCC_123)
        SET_COMP ("mnc",           MSG_MNC_33)
        SET_COMP ("lac",           LAC_0002)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_31_0002)
        SET_COMP ("mcc",           MCC_123)
        SET_COMP ("mnc",           MSG_MNC_31)
        SET_COMP ("lac",           LAC_0002)
```

```
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_31_2147)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_31)
        SET_COMP ("lac",        LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_31_FEFF)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_31)
        SET_COMP ("lac",        LAC_FEFF)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_33_2147)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_33)
        SET_COMP ("lac",        LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_33_FEFF)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_33)
        SET_COMP ("lac",        LAC_FEFF)
ENDSTRUCT

BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_34_2147)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_34)
        SET_COMP ("lac",        LAC_2147)
ENDSTRUCT

BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_44_0002)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_44)
        SET_COMP ("lac",        LAC_0002)
ENDSTRUCT

BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_35_0002)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_35)
        SET_COMP ("lac",        LAC_0002)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_35_2147)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_35)
        SET_COMP ("lac",        LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident", LOC_AREA_ID_123_35_FEFF)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MSG_MNC_35)
        SET_COMP ("lac",        LAC_FEFF)
ENDSTRUCT

/*
 * mob_ident (Mobile identity)
 */
BEGIN_MSTRUCT("mob_id", MOB_IDENT_IMSI)
        SET_COMP ("ident_type",     ID_TYPE_IMSI)
        SET_COMP ("odd_even",     ODD)
```

```
        SET_COMP ("ident_dig",      MIMSI_1233347114912)
        SKIP_COMP ("tmsi")
        SKIP_COMP ("dmy")
ENDSTRUCT
BEGIN_MSTRUCT("mob_id", MOB_IDENT_TMSI)
        SET_COMP ("ident_type",     ID_TYPE_TMSI)
        SET_COMP ("odd_even",       EVEN)
        SKIP_COMP ("ident_dig")
        SET_COMP ("tmsi", TMSI_34125708)
        SKIP_COMP ("dmy")
ENDSTRUCT
BEGIN_MSTRUCT("mob_id", MOB_IDENT_IMEI)
        SET_COMP ("ident_type",     ID_TYPE_IMEI)
        SET_COMP ("odd_even",       ODD)
        SET_COMP ("ident_dig",      IMEI_DIGITS)
        SKIP_COMP ("tmsi")
        SKIP_COMP ("dmy")
ENDSTRUCT

/*
 * mob_class_1 (Mobile station Classmark 1)
 */
BEGIN_MSTRUCT ("mob_class_1", MOB_CLASS_1)
        SET_COMP ("rev_lev",        PHASE_2)
        SET_COMP ("es_ind",         SUPPORTED)
        SET_COMP ("a5_1",           NOT_SUPPORTED) /* Means supported! */
        SET_COMP ("rf_pow_cap",     RF_CLASS_2)
ENDSTRUCT

/*
 * mob_class_2 (Mobile station Classmark 2)
 */
BEGIN_MSTRUCT ("mob_class_2", MOB_CLASS_2)
        SET_COMP ("rev_lev",        PHASE_2)
        SET_COMP ("es_ind",         SUPPORTED)
        SET_COMP ("a5_1",           NOT_SUPPORTED) /* Means supported! */
        SET_COMP ("rf_pow_cap",     RF_CLASS_2)
        SET_COMP ("ps",             NOT_SUPPORTED)
        SET_COMP ("ss_screen",      SS_SCREEN_PHASE_2)
        SET_COMP ("mt_pp_sms",      SUPPORTED)
        SET_COMP ("vbs",            NOT_SUPPORTED)
        SET_COMP ("vgcs",           NOT_SUPPORTED)
        SET_COMP ("egsm",           NOT_SUPPORTED)
        SET_COMP ("class3",         SUPPORTED)
        SET_COMP("lcsva",           NOT_SUPPORTED)
        SET_COMP("ucs2_treat",      SUPPORTED)
        SET_COMP("solsa",           NOT_SUPPORTED)
        SET_COMP("cmsp",            SUPPORTED)
        SET_COMP ("a5_3",           NOT_SUPPORTED)
        SET_COMP ("a5_2",           SUPPORTED)
ENDSTRUCT

BEGIN_MSTRUCT("pd_and_sapi", PD_CC_AND_SAPI_0)
        SET_COMP("sapi",            SAPI_0)
        SET_COMP("pd",   PD_CC)
ENDSTRUCT
```

```
/*
 * mob_id (Mobile identity)
 */
BEGIN_MSTRUCT("mob_id", MOB_IDENT_NEW_TMSI)
        SET_COMP ("ident_type",     ID_TYPE_TMSI)
        SKIP_COMP ("odd_even")
        SKIP_COMP ("ident_dig")
        SET_COMP ("tmsi",           TMSI_34125708)
        SKIP_COMP ("dmy")
ENDSTRUCT

BEGIN_MSTRUCT("full_net_name", FULL_NET_NAME)
        SET_COMP ("cs",  CS_UCS2)
        SET_COMP ("add_ci",         ADD_CI_NO)
        SET_COMP ("num_spare",    NUM_SPARE_0)
        SET_COMP ("text",           NET_TEXT_A)
ENDSTRUCT

BEGIN_MSTRUCT("short_net_name", SHORT_NET_NAME)
        SET_COMP ("cs",  CS_UCS2)
        SET_COMP ("add_ci",         ADD_CI_NO)
        SET_COMP ("num_spare",    NUM_SPARE_0)
        SET_COMP ("text",           NET_TEXT_A)
ENDSTRUCT

BEGIN_MSTRUCT("net_tz", NET_TZ)
        SET_COMP ("tz",             TZ_CET)
ENDSTRUCT

/*
 * bcch_info(BCCH information - RR)
 */
BEGIN_PSTRUCT("bcch_info", BCCH_INFO_NONE)
        SET_COMP ("v_bcch",       V_BCCH_NOT_PRES)
        SKIP_COMP ("bcch")
ENDSTRUCT

BEGINARRAY (BCCH_EMPTY_CHANNEL_LIST, 16)
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL,
        BCCH_CH_NOT_INCL
ENDARRAY
```

```
BEGIN_PSTRUCT("bcch_info", BCCH_INFO_ECL)
        SET_COMP ("v_bcch",         V_BCCH_PRES)
        SET_COMP ("bcch",           BCCH_EMPTY_CHANNEL_LIST)
ENDSTRUCT

/*
 * imei/imsi/tmsi (Mobile identity)
 */
BEGIN_PSTRUCT("imsi_struct", MOB_ID_NO_ID)
        SET_COMP ("v_mid",          V_MID_NOT_PRES)
        SET_COMP ("id_type",        TYPE_NO_ID)
        SKIP_COMP("id")
        SKIP_COMP ("tmsi_dig")
ENDSTRUCT

BEGIN_PSTRUCT("imsi_struct", MOB_ID_IMSI)
        SET_COMP ("v_mid",          V_MID_PRES)
        SET_COMP ("id_type",        TYPE_IMSI)
        SET_COMP ("id",   IMSI_1233347114912)
        SKIP_COMP ("tmsi_dig")
ENDSTRUCT

BEGIN_PSTRUCT("tmsi_struct", MOB_ID_NEW_TMSI)
        SET_COMP ("v_mid",          V_MID_PRES)
        SET_COMP ("id_type",        TYPE_TMSI)
        SKIP_COMP ("id")
        SET_COMP ("tmsi_dig",       TMSI_34125708_ULONG)
ENDSTRUCT

/*
 * kcv (Authentication key)
 */
BEGINARRAY (KC_ARRAY_EMPTY, 9)          /* SIM_MM_INSERT_IND */
        0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF,     /* Ciphering key */
        0x07                                                /* Ciphering key sequence number */
ENDARRAY
BEGIN_PSTRUCT ("kc_n", KC_EMPTY)        /* SIM_MM_INSERT_IND */
        SET_COMP ("c_kc",           9)
        SET_COMP ("kc",             KC_ARRAY_EMPTY)
ENDSTRUCT

BEGINARRAY (KC_VALUE_EMPTY, 8)
        0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF, 0xFF
ENDARRAY

BEGIN_PSTRUCT("kcv", KCV_11223344)
        SET_COMP ("v_kc",           V_KC_PRES)
        SET_COMP ("kc",  KC_11223344)
ENDSTRUCT

BEGIN_PSTRUCT("kcv", KCV_EMPTY)
        SET_COMP ("v_kc",           V_KC_PRES)
        SET_COMP("kc",   KC_VALUE_EMPTY)
ENDSTRUCT

BEGIN_PSTRUCT("kcv", KCV_DELETED)
        SET_COMP ("v_kc",           V_KC_NOT_PRES)
```

```
        SET_COMP("kc",   KC_DELETED_RR)
ENDSTRUCT

/*
 * mm_info (MM information)
 */
BEGIN_PSTRUCT("mm_info", MM_INFO_NONE)
        SET_COMP ("valid",          MM_INFO_NOT_PRES)
        SKIP_COMP ("la")
        SKIP_COMP ("att")
        SKIP_COMP ("re")
        SKIP_COMP ("band")
        SKIP_COMP ("ncc")
        SKIP_COMP ("bcc")
        SKIP_COMP ("t3212")
ENDSTRUCT
BEGIN_PSTRUCT("mm_info", MM_INFO)
        SET_COMP ("valid",          MM_INFO_PRES)
        SET_COMP ("la",   LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",  ATT_NOT_ALLOW)
        SET_COMP ("re",   RE_NOT_ALLOW)
        SKIP_COMP ("band")
        SET_COMP ("ncc",            NCC_3)
        SET_COMP ("bcc",            BCC_0)
        SET_COMP ("t3212",          T3212_NO_PRD_UPDAT)
ENDSTRUCT
BEGIN_PSTRUCT("mm_info", MM_INFO_2)
        SET_COMP ("valid",          MM_INFO_PRES)
        SET_COMP ("la",   LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",  ATT_NOT_ALLOW)
        SET_COMP ("re",   RE_ALLOW)
        SKIP_COMP ("band")
        SET_COMP ("ncc",            NCC_3)
        SET_COMP ("bcc",            BCC_0)
        SET_COMP ("t3212",          T3212_NO_PRD_UPDAT)
ENDSTRUCT

BEGIN_PSTRUCT("mm_info", MM_INFO_ATT)
        SET_COMP ("valid",          MM_INFO_PRES)
        SET_COMP ("la",   LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",  ATT_ALLOW)
        SET_COMP ("re",   RE_NOT_ALLOW)
        SKIP_COMP ("band")
        SET_COMP ("ncc",            NCC_3)
        SET_COMP ("bcc",            BCC_0)
        SET_COMP ("t3212",          T3212_NO_PRD_UPDAT)
ENDSTRUCT
BEGIN_PSTRUCT("mm_info", MM_INFO_PER)
        SET_COMP ("valid",          MM_INFO_PRES)
        SET_COMP ("la",   LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",  ATT_NOT_ALLOW)
        SET_COMP ("re",   RE_NOT_ALLOW)
        SKIP_COMP ("band")
        SET_COMP ("ncc",            NCC_3)
        SET_COMP ("bcc",            BCC_0)
```

```
        SET_COMP ("t3212",          T3212_6_MIN)
ENDSTRUCT
BEGIN_PSTRUCT("mm_info", MM_INFO_ATT_PER)
        SET_COMP ("valid",          MM_INFO_PRES)
        SET_COMP ("la",   LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",  ATT_ALLOW)
        SET_COMP ("re",   RE_NOT_ALLOW)
        SKIP_COMP ("band")
        SET_COMP ("ncc",            NCC_3)
        SET_COMP ("bcc",            BCC_0)
        SET_COMP ("t3212",          T3212_6_MIN)
ENDSTRUCT

BYTE    NORMAL_SIM_INS          0x00


/*
 * Hacks and other ugly things section >>>
 */

/* The following byte is documented in SIM.DOC as 0x01, to be corrected sometime... */
BYTE    TEST_SIM_INS    0x81

/* The following byte is used that way for the communication MM->MMREG, MM->MMGMM,
 * but nowhere defined this way... */

BYTE V_PLMN_NOT_PRES_0XFF    0xFF

/*
 * Hacks and other ugly things section <<<
 */

/*
 * Operation modes without SIM.
 */
BEGIN_PSTRUCT ("op", OP_MODE_NO_SIM_NO_SERV)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",    M_AUTO)
        SET_COMP ("sim_ins",        SIM_NO_INSRT)
        SET_COMP ("func",           FUNC_LIM_SERV_ST_SRCH)
        SET_COMP ("service",        NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_NO_SIM_LIM_SERV)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",    M_AUTO)
        SET_COMP ("sim_ins",        SIM_NO_INSRT)
        SET_COMP ("func",           FUNC_LIM_SERV_ST_SRCH)
        SET_COMP ("service",        LIMITED_SERVICE)
ENDSTRUCT
/* This could be avoided by protocol stack change, sent RR_SYNC_REQ(MODE) only
 * if SIM is logically present. */
BEGIN_PSTRUCT ("op", OP_MODE_NO_SIM_NO_SERV_M)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",    M_MAN)
        SET_COMP ("sim_ins",        SIM_NO_INSRT)
```

```
        SET_COMP ("func",       FUNC_LIM_SERV_ST_SRCH)
        SET_COMP ("service",    NO_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the normal SIM, Automatic Mode, Limited Service search
 */
/* This could be avoided by protocol stack change, sent RR_SYNC_REQ(MODE) only
 * if SIM is logically present. */
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_LIMITEDSRCH_NS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_LIM_SERV_ST_SRCH)
        SET_COMP ("service",    NO_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the normal SIM, Automatic Mode, PLMN search.
 */
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_PLMNSRCH_NS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_PLMN_SRCH)
        SET_COMP ("service",    NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_PLMNSRCH_LS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_PLMN_SRCH)
        SET_COMP ("service",    LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_PLMNSRCH_FS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_PLMN_SRCH)
        SET_COMP ("service",    FULL_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the normal SIM, Automatic Mode, MMI search.
 */
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_NETSRCH_NS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",    NO_SERVICE)
```

```
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_NETSRCH_LS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",    LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_AUTO_NETSRCH_FS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",    FULL_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the normal SIM, Manual Mode, Limited Service search
 */
/* Not applicable */

/*
 * Operation modes for the normal SIM, Manual Mode, Full Service search
*/
BEGIN_PSTRUCT ("op", OP_SIM_MAN_PLMNSRCH_NS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_MAN)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_PLMN_SRCH)
        SET_COMP ("service",    NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_MAN_PLMNSRCH_LS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_MAN)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_PLMN_SRCH)
        SET_COMP ("service",    LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_MAN_PLMNSRCH_FS)
        SET_COMP ("v_op",       V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_MAN)
        SET_COMP ("sim_ins",    SIM_INSRT)
        SET_COMP ("func",       FUNC_PLMN_SRCH)
        SET_COMP ("service",    FULL_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the normal SIM, Manual Mode, Network search by the MMI
 */
BEGIN_PSTRUCT ("op", OP_SIM_MAN_NETSRCH_NS)
        SET_COMP ("v_op",       V_OP_PRES)
```

```
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_MAN)
        SET_COMP ("sim_ins",        SIM_INSRT)
        SET_COMP ("func",           FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",        NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_SIM_MAN_NETSRCH_FS)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_MAN)
        SET_COMP ("sim_ins",        SIM_INSRT)
        SET_COMP ("func",           FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",        FULL_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_SIM_NO_SERV_M1)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_NO_AVAIL)
        SET_COMP ("m",   M_MAN)
        SET_COMP ("sim_ins",        SIM_INSRT)
        SKIP_COMP ("func")
        SET_COMP ("service",        NO_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the test SIM, Automatic Mode, PLMN search
 */
BEGIN_PSTRUCT ("op", OP_MODE_TEST_SIM_NO_SERV)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",        SIM_INSRT)
        SET_COMP ("func",           FUNC_PLMN_SRCH)
        SET_COMP ("service",        NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_TEST_SIM_LIM_SERV)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",        SIM_INSRT)
        SET_COMP ("func",           FUNC_PLMN_SRCH)
        SET_COMP ("service",        LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_TEST_SIM)
        SET_COMP ("v_op",           V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",   M_AUTO)
        SET_COMP ("sim_ins",        SIM_INSRT)
        SET_COMP ("func",           FUNC_PLMN_SRCH)
        SET_COMP ("service",        FULL_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the test SIM, Automatic Mode, Network search by MMI
 */
BEGIN_PSTRUCT ("op", OP_TEST_AUTO_NETSRCH_NS)
```

```
        SET_COMP ("v_op",          V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",    M_AUTO)
        SET_COMP ("sim_ins",       SIM_INSRT)
        SET_COMP ("func",          FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",       NO_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the test SIM, Manual Mode, Limited Service Search
 */
/* Not applicable */


/*
 * Operation modes for the test SIM, Manual Mode, PLMN Search
 */
BEGIN_PSTRUCT ("op", OP_TEST_MAN_PLMNSRCH_NS)
        SET_COMP ("v_op",          V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",    M_MAN)
        SET_COMP ("sim_ins",       SIM_INSRT)
        SET_COMP ("func",          FUNC_PLMN_SRCH)
        SET_COMP ("service",       NO_SERVICE)
ENDSTRUCT

/*
 * Operation modes for the test SIM, Manual Mode, network search by MMI
 */
BEGIN_PSTRUCT ("op", OP_TEST_MAN_NETSRCH_NS)
        SET_COMP ("v_op",          V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",    M_MAN)
        SET_COMP ("sim_ins",       SIM_INSRT)
        SET_COMP ("func",          FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",       NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_TEST_MAN_NETSRCH_FS)
        SET_COMP ("v_op",          V_OP_PRES)
        SET_COMP ("ts",   TS_AVAIL)
        SET_COMP ("m",    M_MAN)
        SET_COMP ("sim_ins",       SIM_INSRT)
        SET_COMP ("func",          FUNC_NET_SRCH_BY_MMI)
        SET_COMP ("service",       FULL_SERVICE)
ENDSTRUCT

/*
 * plmn (PLMN identification - RR)
 */
BEGIN_PSTRUCT ("plmn", PLMN_123_31)
        SET_COMP ("v_plmn",        V_PLMN_PRES)
        SET_COMP ("mcc",           MCC_123)
        SET_COMP ("mnc",           MNC_31)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_32)
        SET_COMP ("v_plmn",        V_PLMN_PRES)
```

```
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_32)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_33)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_33)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_33X)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_33X)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_34)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_34)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_35)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_35)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_36)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_36)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn", PLMN_123_37)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_37)
ENDSTRUCT

BEGIN_PSTRUCT ("plmn", PLMN_NO_ID)
        SET_COMP ("v_plmn",     V_PLMN_NOT_PRES)
        SET_COMP ("mcc",        MCC_NONE)
        SET_COMP ("mnc",        MNC_NONE)
ENDSTRUCT

BEGIN_PSTRUCT ("plmn", PLMN_NO_ID_0XFF)
        SET_COMP ("v_plmn",     V_PLMN_NOT_PRES_0XFF)
        SET_COMP ("mcc",        MCC_NONE_0XFF)
        SET_COMP ("mnc",        MNC_NONE_0XFF)
ENDSTRUCT

BEGIN_PSTRUCT ("plmn", PLMN_123_44)
        SET_COMP ("v_plmn",     V_PLMN_PRES)
        SET_COMP ("mcc",        MCC_123)
        SET_COMP ("mnc",        MNC_44)
ENDSTRUCT

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_2_PLMN, 12)
        PLMN_123_33,
        PLMN_123_31,
        PLMN_NO_ID,
```

```
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_34_35, 12)
        PLMN_123_34,
        PLMN_123_35,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_32_34_35_36_37_44, 12)
        PLMN_123_32,
        PLMN_123_34,
        PLMN_123_35,
        PLMN_123_36,
        PLMN_123_37,
        PLMN_123_44,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_32_34_35_36_37_44_31, 12)
        PLMN_123_32,
        PLMN_123_34,
        PLMN_123_35,
        PLMN_123_36,
        PLMN_123_37,
        PLMN_123_44,
        PLMN_123_31,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY
```

```
BEGIN_PSTRUCT_ARRAY (PLMN_LIST_44_31, 12)
        PLMN_123_44,
        PLMN_123_31,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_2_PLMN_0XFF, 12)
        PLMN_123_33,
        PLMN_123_31,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_2_PLMN_F, 12)
        PLMN_123_33,
        PLMN_123_32,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_2_PLMN_F_0XFF, 12)
        PLMN_123_33,
        PLMN_123_32,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
```

```
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_PLMN_123_31, 12)
        PLMN_123_31,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_PLMN_123_33, 12)
        PLMN_123_33,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_PLMN_123_44, 12)
        PLMN_123_44,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_FORB, 12)
        PLMN_123_32,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
```

```
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID,
        PLMN_NO_ID
ENDARRAY

BEGIN_PSTRUCT_ARRAY (PLMN_LIST_PLMN_123_32_0XFF, 12)
        PLMN_123_32,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF,
        PLMN_NO_ID_0XFF
ENDARRAY

BEGIN_PSTRUCT ("chm", CHM_SDCCH_SIGNALLING)
        SET_COMP ("ch_type",      CH_SDCCH)
        SET_COMP ("ch_mode",      CHM_SIG_ONLY)
ENDSTRUCT

BEGIN_PSTRUCT ("full_name", FULL_NAME)
        SET_COMP ("v_name",       TRUE)
        SET_COMP ("dcs",          CS_UCS2)
        SET_COMP("add_ci",        ADD_CI_NO)
        SET_COMP("num_spare",     NUM_SPARE_0)
        SET_COMP("text", NET_TEXT_A)
ENDSTRUCT

BEGIN_PSTRUCT ("short_name", SHORT_NAME)
        SET_COMP ("v_name",       TRUE)
        SET_COMP ("dcs",          CS_UCS2)
        SET_COMP("add_ci",        ADD_CI_NO)
        SET_COMP("num_spare",     NUM_SPARE_0)
        SET_COMP("text", NET_TEXT_A)
ENDSTRUCT

BEGIN_PSTRUCT ("ntz", NTZ_CET)
        SET_COMP ("v_tz",         TRUE)
        SET_COMP ("tz",   TZ_CET)
ENDSTRUCT

BEGIN_PSTRUCT ("time", NET_TZ_AND_TIME_1)
        SET_COMP ("v_time",       TRUE)
        SET_COMP ("year",         YEAR_98)
        SET_COMP ("month",        MONTH_12)
        SET_COMP ("day",          DAY_13)
        SET_COMP ("hour",         HOUR_19)
        SET_COMP ("minute",       MINUTE_23)
```

```
        SET_COMP ("second",       SECOND_56)
ENDSTRUCT

BEGIN_MSTRUCT ("net_tz_and_time", MSG_NET_TZ_AND_TIME_1)
        SET_COMP ("year",         MSG_YEAR_98)
        SET_COMP ("month",        MSG_MONTH_12)
        SET_COMP ("day",          MSG_DAY_13)
        SET_COMP ("hour",         MSG_HOUR_19)
        SET_COMP ("minute",       MSG_MINUTE_23)
        SET_COMP ("second",       MSG_SECOND_56)
        SET_COMP ("tz",           TZ_CET)
ENDSTRUCT

BEGINARRAY (LAC_LIST_1, 24)
0x03,0x03,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00
ENDARRAY

BEGINARRAY (LAC_LIST_2, 24)
0x03,0x03,
0x07,0x07,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00,
0x00,0x00
ENDARRAY
```

3 TEST CASES

3.1 Internal Routing

3.1.1 MMG0001: Configure internal routing and PCO view

Description: Internal routing is configured and the duplication of primitives for performing the component tests with TAP and PCO view is carried out

Preamble: None

```
     MMI/CM/SIM                          MM                                  RR/DL
      |                                   |                                   |
COMMAND (TAP RESET)
COMMAND (MMI RESET)
COMMAND (CC RESET)
COMMAND (SS RESET)
COMMAND (SMS RESET)
COMMAND (MM RESET)
COMMAND (GMM RESET)
COMMAND (RR RESET)
COMMAND (DL RESET)
COMMAND (SIM RESET)
COMMAND (PL RESET)
      |                                   |                                   |
COMMAND (TAP REDIRECT CLEAR)
COMMAND (MMI REDIRECT CLEAR)
COMMAND (CC REDIRECT CLEAR)
COMMAND (SS REDIRECT CLEAR)
COMMAND (SMS REDIRECT CLEAR)
COMMAND (MM REDIRECT CLEAR)
COMMAND (GMM REDIRECT CLEAR)
COMMAND (RR REDIRECT CLEAR)
COMMAND (DL REDIRECT CLEAR)
COMMAND (SIM REDIRECT CLEAR)
COMMAND (PL REDIRECT CLEAR)
      |                                   |                                   |
COMMAND (MMI REDIRECT MM NULL)
COMMAND (MMI REDIRECT GMM NULL)
COMMAND (MMI REDIRECT CC NULL)
COMMAND (MMI REDIRECT SS NULL)
COMMAND (MMI REDIRECT SMS NULL)
COMMAND (MMI REDIRECT PL NULL)
      |                                   |                                   |
COMMAND (CC REDIRECT MMI NULL)
COMMAND (CC REDIRECT MM NULL)
      |                                   |                                   |
COMMAND (SS REDIRECT MMI NULL)
COMMAND (SS REDIRECT MM NULL)
      |                                   |                                   |
COMMAND (SMS REDIRECT MMI NULL)
COMMAND (SMS REDIRECT MM NULL)
      |                                   |                                   |
COMMAND (MM REDIRECT MMI TAP)
```

```
COMMAND (MM REDIRECT GMM TAP)
COMMAND (MM REDIRECT CC TAP)
COMMAND (MM REDIRECT SS TAP)
COMMAND (MM REDIRECT SMS TAP)
COMMAND (MM REDIRECT SIM TAP)
COMMAND (MM REDIRECT RR TAP)
COMMAND (MM REDIRECT DL TAP)
      |                                 |                                 |
COMMAND (GMM REDIRECT MMI TAP)
COMMAND (GMM REDIRECT MM TAP)
      |                                 |                                 |
COMMAND (RR REDIRECT MM NULL)
COMMAND (RR REDIRECT DL NULL)
COMMAND (RR REDIRECT PL NULL)
COMMAND (RR CONFIG NO_SYS_TIME)
      |                                 |                                 |
COMMAND (DL REDIRECT RR NULL)
COMMAND (DL REDIRECT MM NULL)
COMMAND (DL REDIRECT PL NULL)
      |                                 |                                 |
COMMAND (PL REDIRECT RR NULL)
COMMAND (PL REDIRECT DL NULL)
COMMAND (PL REDIRECT MMI NULL)
      |                                 |                                 |
COMMAND (SIM REDIRECT MM NULL)
      |                                 |                                 |
COMMAND (TAP REDIRECT TAP MM)
      |                                 |                                 |
MUTE (1000)
      |                                 |                                 |
```

Parametrization

Primitive	Parameter	Value

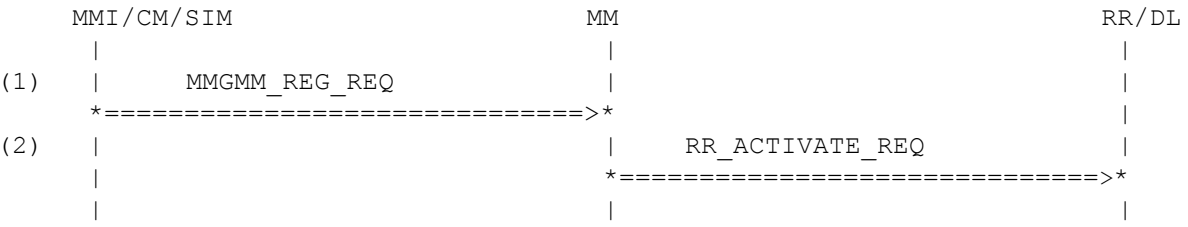
History:	04.07.97	PZ	Initial Registration
	04.02.02	HM	Added delay to allow PS to start properly

3.2 Registration

3.2.1 MMG0021: Registration without SIM card

Description: The reaction of MM to a request for registration with unplugged SIM card is tested. MM receives a MMR-REG request primitive and responds by issuing a RR-ACTIVATE request primitive in which the op field is set to 'limited service, no SIM'.

Preamble: MMG0001



Parametrization

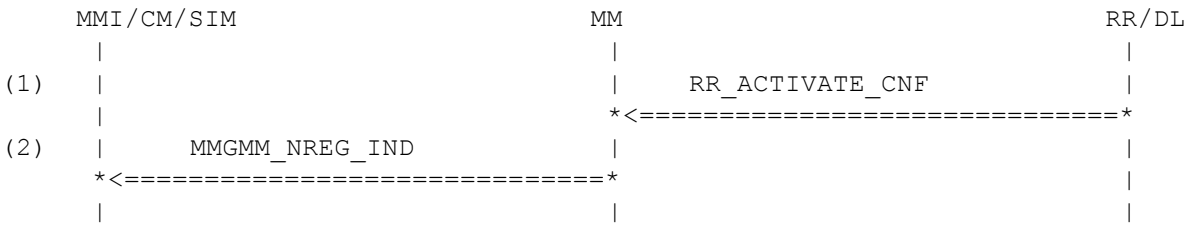
Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_MODE_NO_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.2.2 MMG0022: Mobile station is synchronous to a Cell

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. The network identification if forwarded to MMI as part of a MMR-NREG indication primitive.

Preamble: MMG0021



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

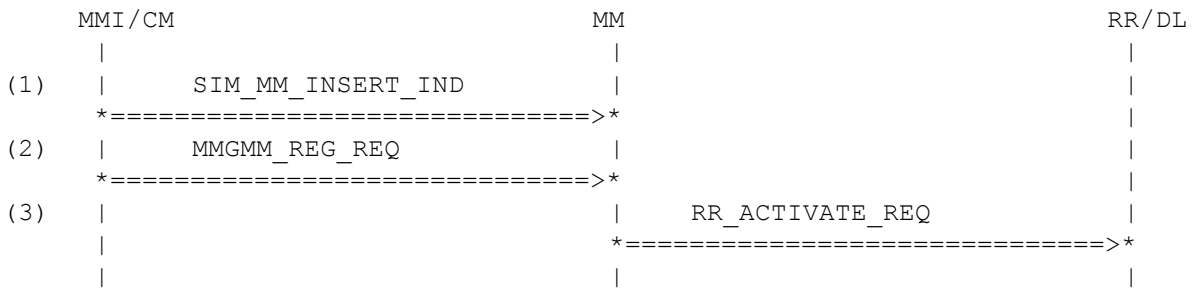
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)

3.2.3 MMG0023: SIM inserted - initiate cell selection

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive.

Preamble: MMG0022

Variants: <A>....<B>



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
<A>	op_mode	NORMAL_SIM_INS
<B>	op_mode	TEST_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
<A>	op	OP_SIM_AUTO_PLMNSRCH_NS
<B>	op	OP_MODE_TEST_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
<A>	bcch_info	BCCH_INFO_ECL
<B>	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.02.00	HM	Revised
	12.04.00	HM	Revised

3.2.4 MMG0024: Successful conclusion of cell selection - cell with same LAI

Description: Successful conclusion of cell selection is signalled by the receipt of a RR-ACTIVATE confirmation primitive. MM forwards the PLMN identification to MMI in the form of a MMR-REG confirmation primitive.

Preamble: MMG0023A

Parametrization

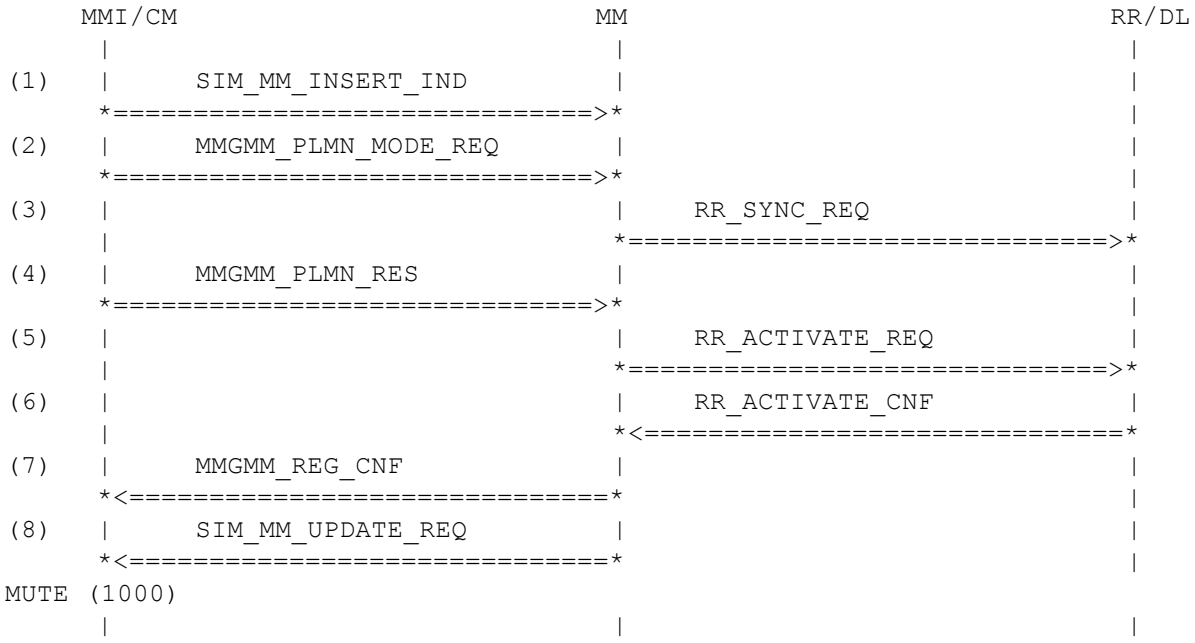
Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_2
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(3) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

History:			
	09.07.97	HK	Initial
	30.01.02	HM	Revised

3.2.5 MMG0025: SIM inserted - Search for specific network (no LUP)

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive after receiving a start trigger of MMI.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_PLMN_MODE_REQ		
	mode	MODE_MAN
(3) RR_SYNC_REQ		
	op	OP_MODE_SIM_NO_SERV_M1
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_PRESENT_16BIT

		accc	NOT_USED
		thplmn	NOT_USED
(4)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(6)	RR_ACTIVATE_CNF		
		op	OP_SIM_MAN_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(7)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:	23.04.99	LE	Initial
	30.01.02	HM	Revised

3.2.6 MMG0026: SIM inserted - Search for specific network (with LUP)

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive after receiving a start trigger of MMI. A location updating is necessary

Only applicable for <B>: This testcase is modelled after GSM 11.10 testcase 27.7.4.

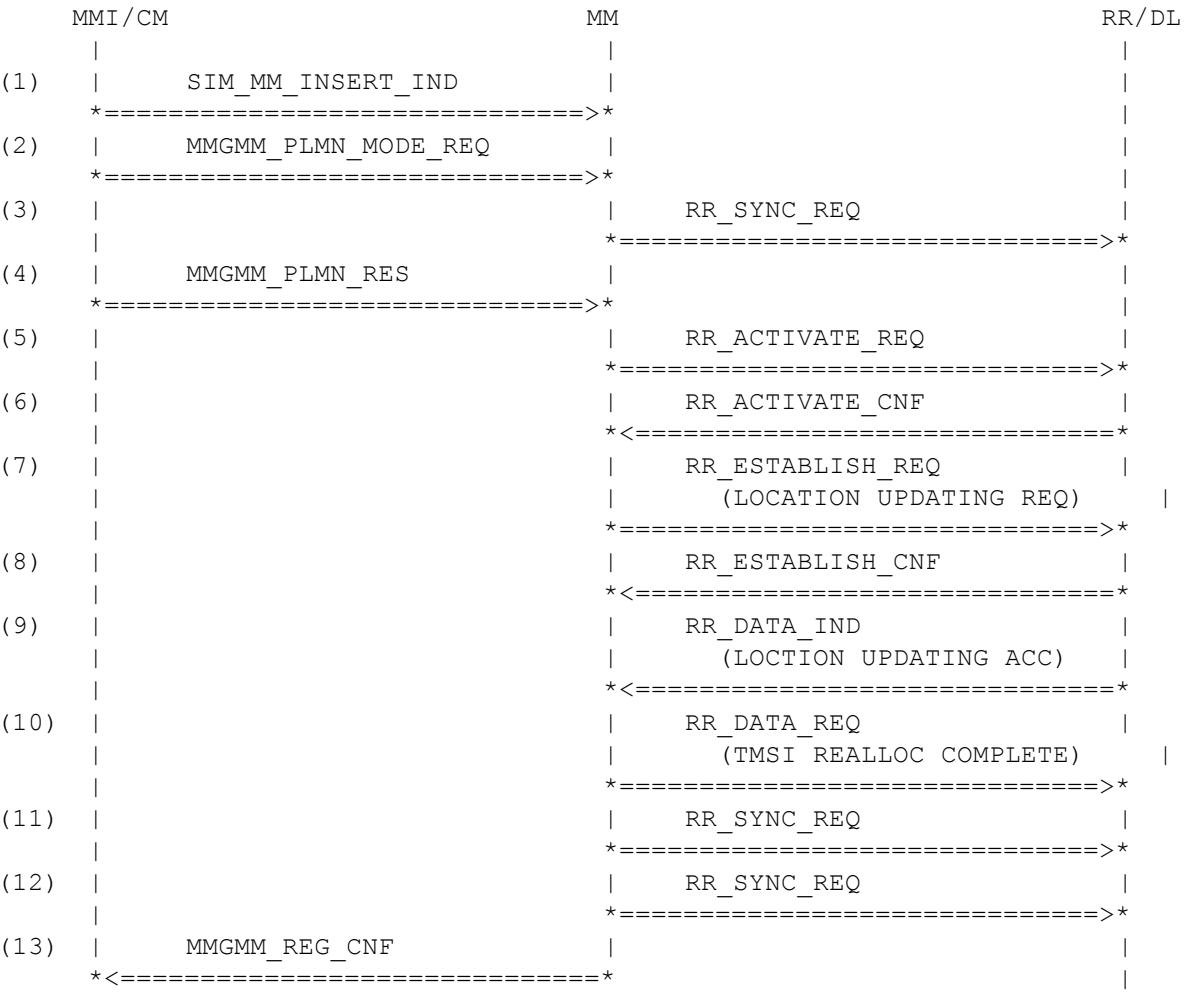
Inital forbidden: MCC=FFF, MNC=FF
MCC=FFF, MNC=FF
MCC=123, MNC=44
MCC=FFF, MNC=FF

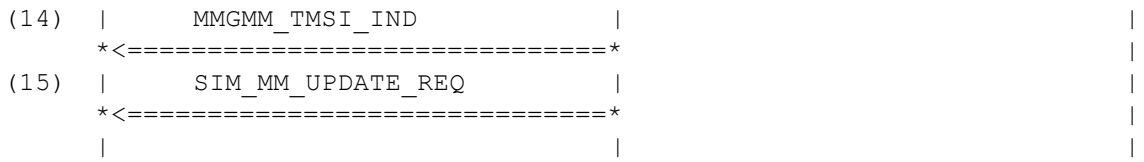
Always applicable:

Final forbidden: MCC=FFF, MNC=FF
MCC=FFF, MNC=FF
MCC=FFF, MNC=FF
MCC=FFF, MNC=FF

Preamble: MMG0022

Variants: <A>....<B>





Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
<A>		forb_plmn	FORB_PLMN_NONE
<B>		forb_plmn	FORB_PLMN_FF_FF_44_FF
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(3)	RR_SYNC_REQ		
		op	OP_MODE_SIM_NO_SERV_M1
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(4)	MMGMM_PLMN_RES		
		plmn	PLMN_123_44
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_44
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

(6) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_44
lac	LAC_0002
power	RF_CLASS_2
gprs_indication	GPRS_NO

(7) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(8) RR_ESTABLISH_CNF

param	NOT_USED

(9) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_ACCEPT
ti	TI_0
loc_area_ident	LOC_AREA_ID_123_44_0002
mob_id	MOB_IDENT_NEW_TMSI
follow_proceed	NOT_USED
}	

(10) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_TMSI_REALLOC_COMP
ti	TI_0
}	

(11) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED

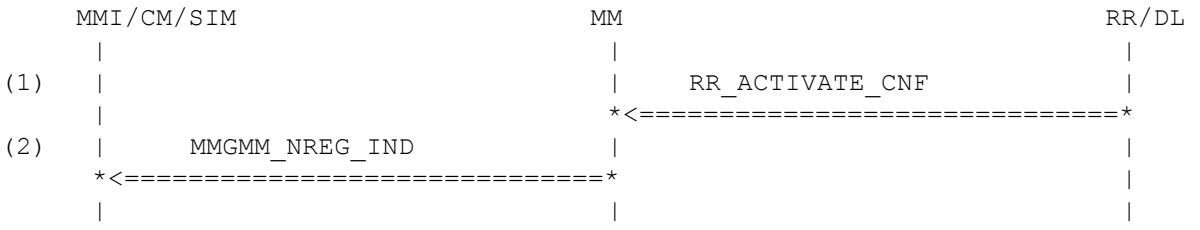
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_44
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(13)	MMGMM_REG_CNF		
		plmn	PLMN_123_44
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(14)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(15)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_44_0002_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	FORB_PLMN_NONE
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

History:	23.04.99	LE	Initial
	17.01.02	HM	Revised
	06.02.02	HM	Revised to prove GSM 11.10 27.7 works

3.2.7 MMG0027: Mobile station is synchronous to a Cell (reestablish allowed in cell)

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. The network identification if forwarded to MMI as part of a MMR-NREG indication primitive. This testcase is equivalent to testcase MMG0022 with the difference that call reestablishment is allowed in the cell (MM_INFO -> MM_INFO_2).

Preamble: MMG0021



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

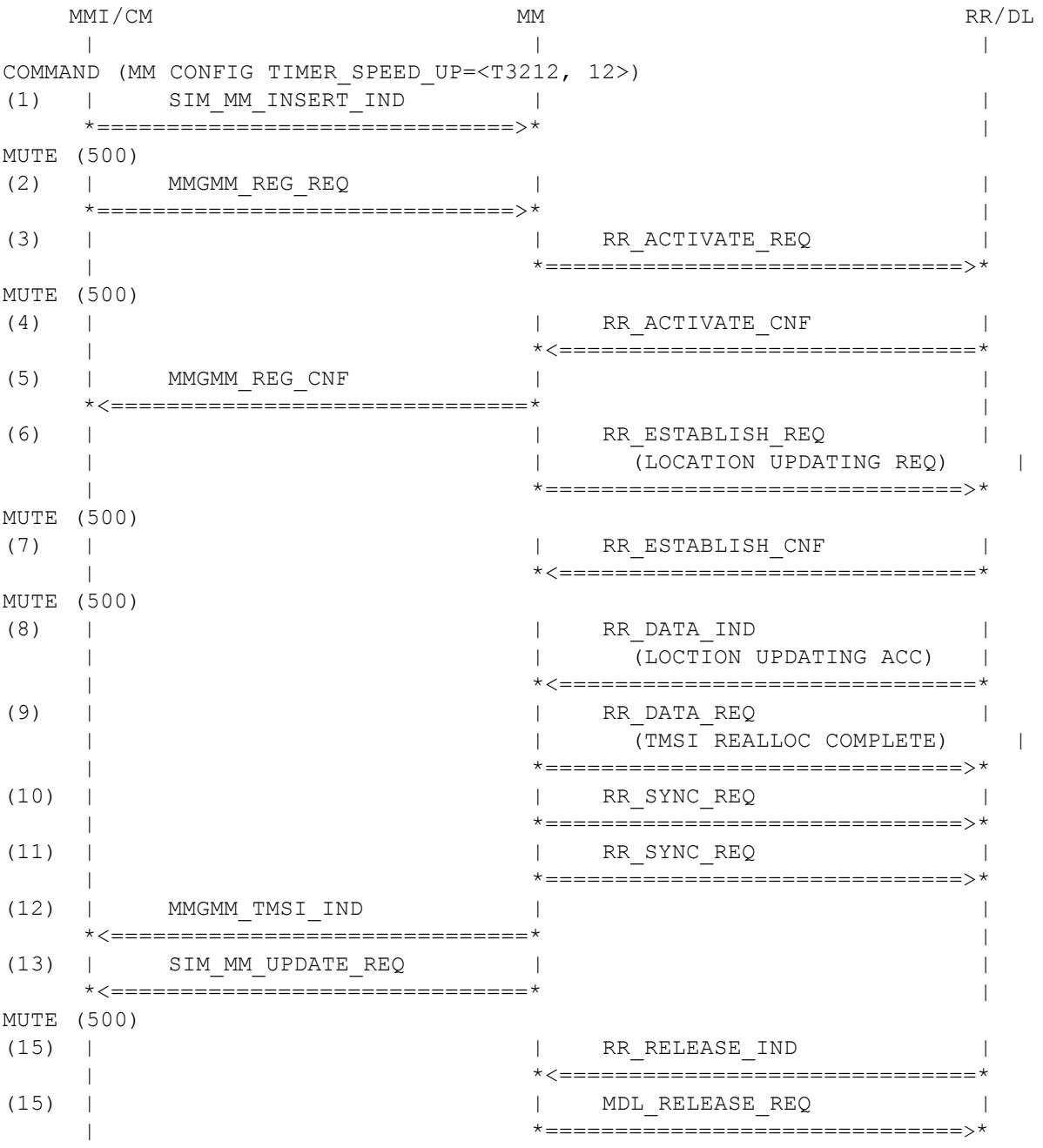
History:			
	16.02.00	HM	Initial
	02.03.00	HM	Revised (search_running)

3.2.8 MMG0028: Updated, IMSI Attach, TMSI reallocation

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive. Successful conclusion of cell selection is signalled by the receipt of a RR-ACTIVATE confirmation primitive. MM forwards the PLMN identification to MMI in the form of a MMR-REG confirmation primitive. An IMSI attach is started and successfully finished, a new TMSI is allocated.
<A> IMSI ATTACH only annnounced by the cell
<B> IMSI ATTACH and PERIODIC announced by the cell

Preamble: MMG0022

Variants: <A>....<B>



Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
<A>		mm_info	MM_INFO_ATT
<B>		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	

	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(7) RR_ESTABLISH_CNF		
	param	NOT_USED
(8) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(9) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(10) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33

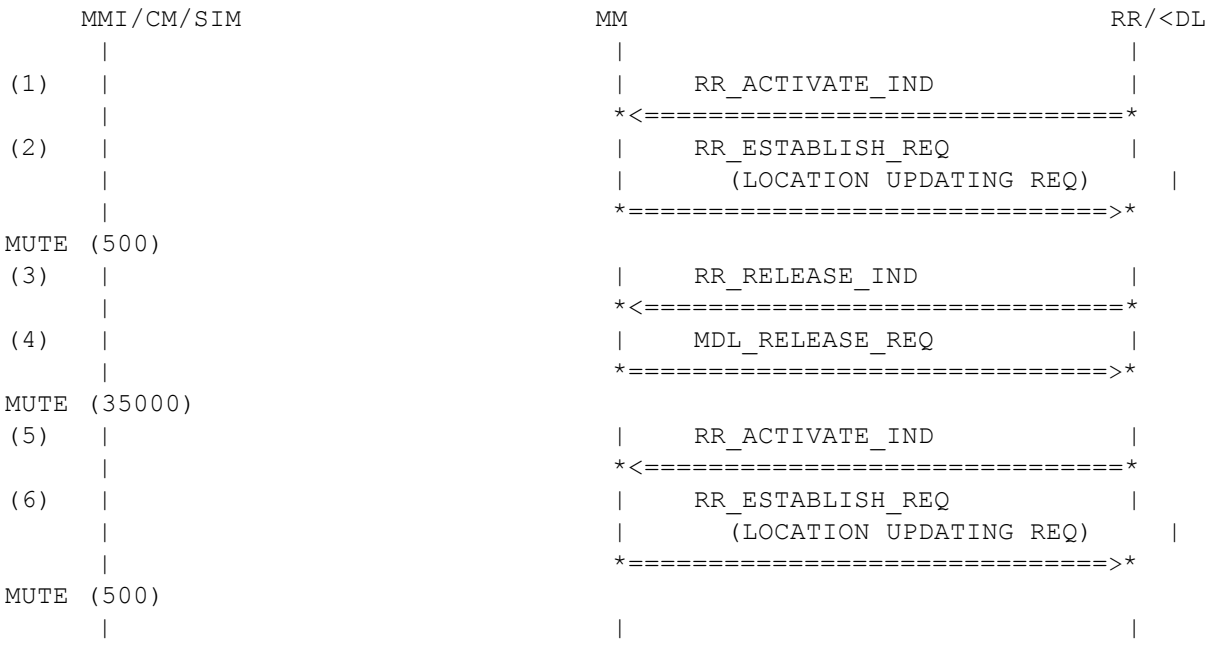
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(12) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	FORB_PLMN_NONE
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	27.07.02	HM	Initial
	19.08.02	HM	Revised

3.2.9 MMG0029: Updated, LAC change, periodic, LAC change back

Description: MM is IDLE updated on the cell, periodic updating. After a while we change to another location area where no periodic updating is announced. The cell is barred. T3212 expires. We come back to the old updated area and have to perform immediately a periodic update.

Preamble: MMG0028B



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	

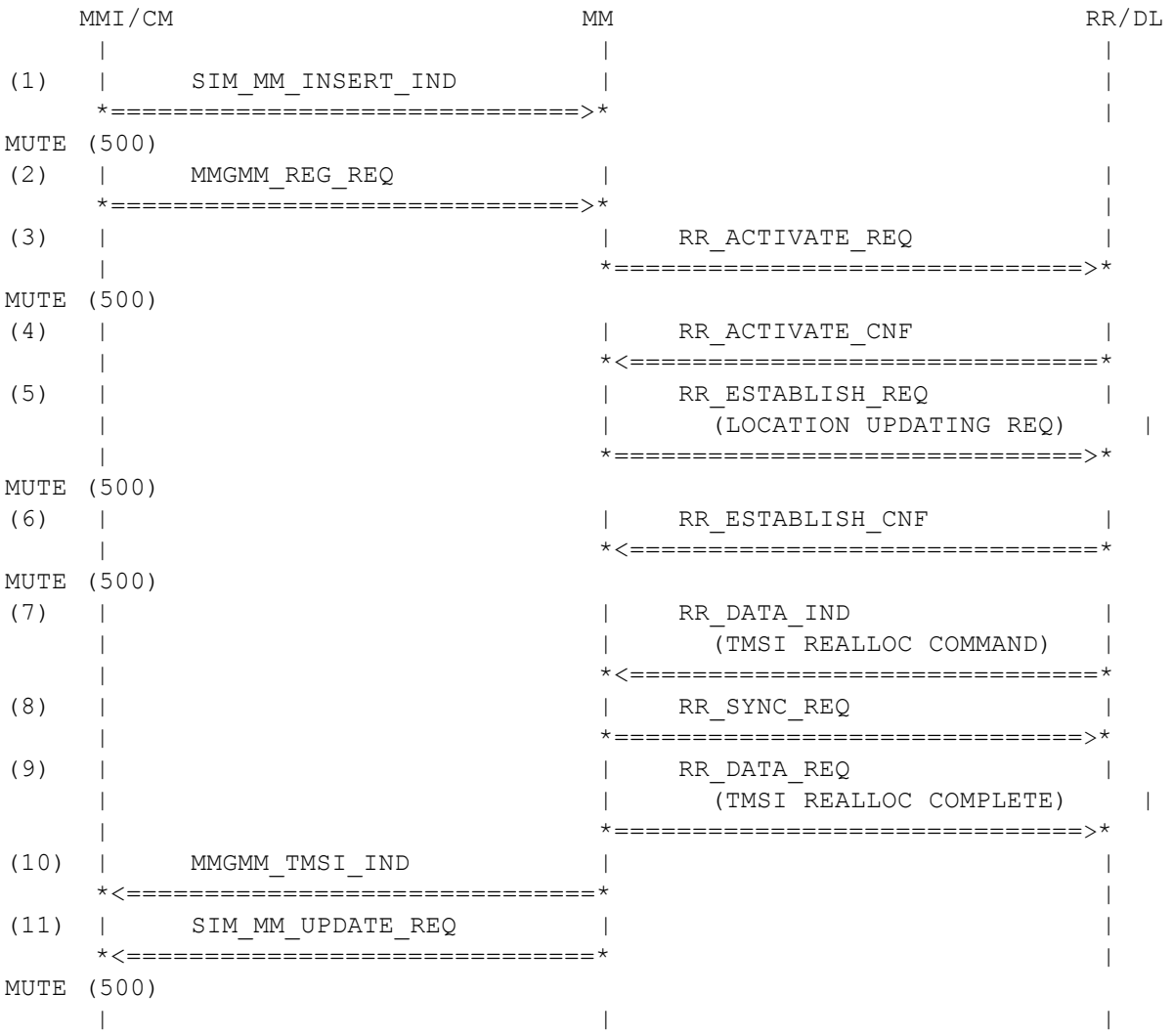
(3)	RR_RELEASE_IND		
		cause	RRCS_ACCESS_BARRED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	

History:	19.08.02	HM	Initial

3.2.10 MMG0030: SIM inserted - normal update after cell selection, TMSI REALLOC

Description: MM receives a SIM-INSERT indication primitive, the registration procedure is started. A normal update after cell selection. . The TMSI REALLOCATION procedure is performed. AS we were not updated and the update change shall only be changed to updated as a result of a location updating procedure we have in the end the strange case that we have a TMSI, but are not updated.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(4) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY

	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(5) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(6) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(7) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT_PER
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(8) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(9) RR_ESTABLISH_CNF		
	param	NOT_USED
(10) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK

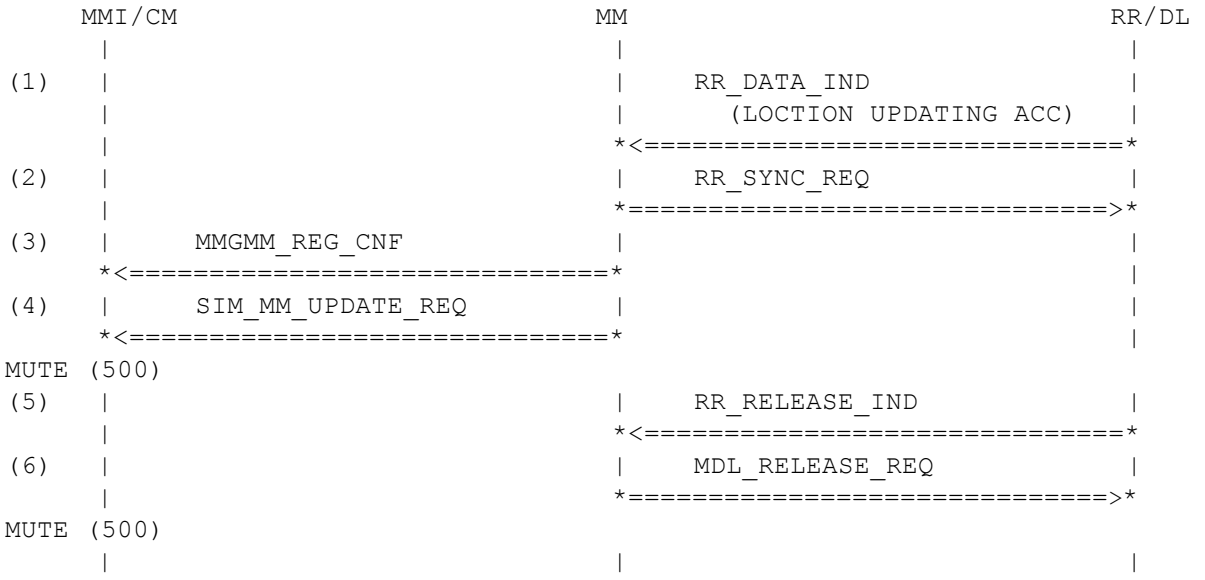
	pd	D_TMSI_REALLOC_CMD
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(12) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(13) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(14) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_0002_34125708_NU
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122

History:	31.01.03	HM	Initial

3.2.11 MMG0031: SIM inserted - normal update after cell selection, LUP ACCEPT

Description: MM receives a SIM-INSERT indication primitive, the registration procedure is started. A normal update after cell selection. TMSI REALLOCATION and LOCATION UPDATING ACCEPTED are performed by different message. Successful case. In the end we are updated with TMSI.

Preamble: MMG0030



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_id	NOT_USED
	follow_proceed	NOT_USED
	}	
(2) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED

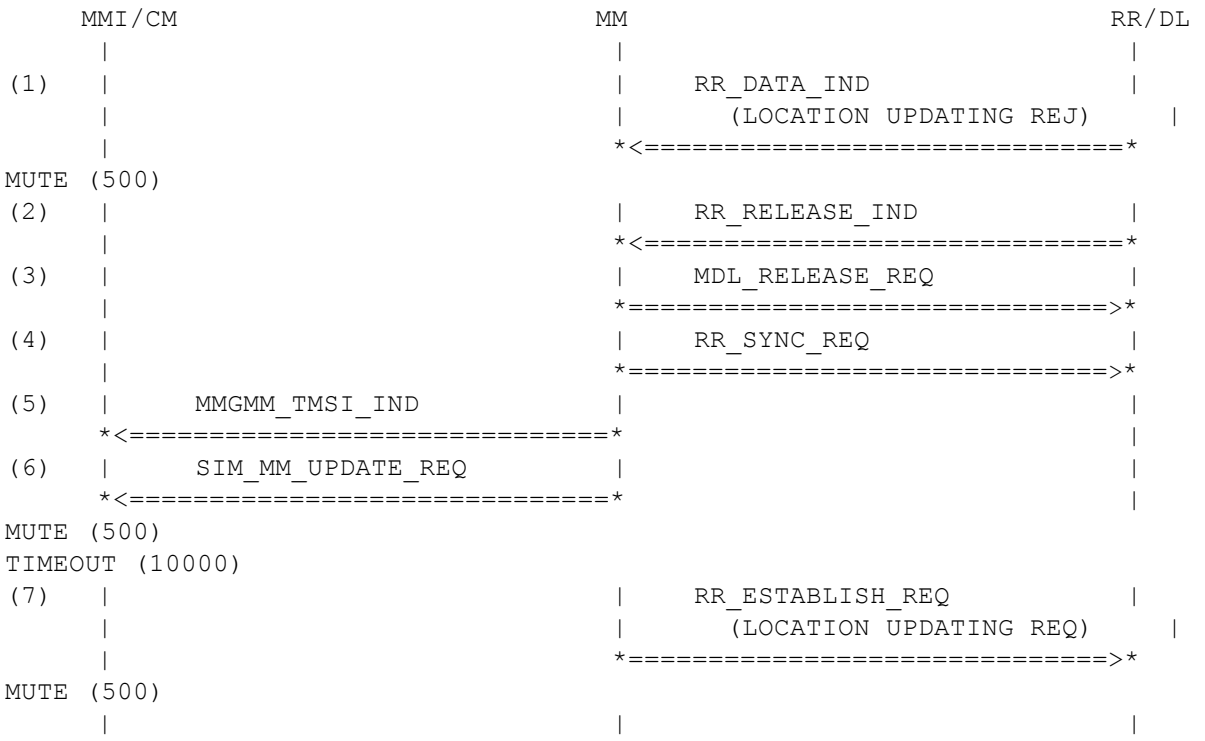
(3)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(4)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_0002_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	FORB_PLMN_NONE
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

History:	03.02.03	HM	Initial

3.2.12 MMG0032: LUP REJECT after TMSI REALLOC CMD in NOT UPDATED

Description: MM receives a SIM-INSERT indication primitive, the registration procedure is started. A normal update after cell selection. TMSI REALLOCATION and LOCATION UPDATING REJECT with cause #17. The mobile continues updating without a TMSI.

Preamble: MMG0030



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(2) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK

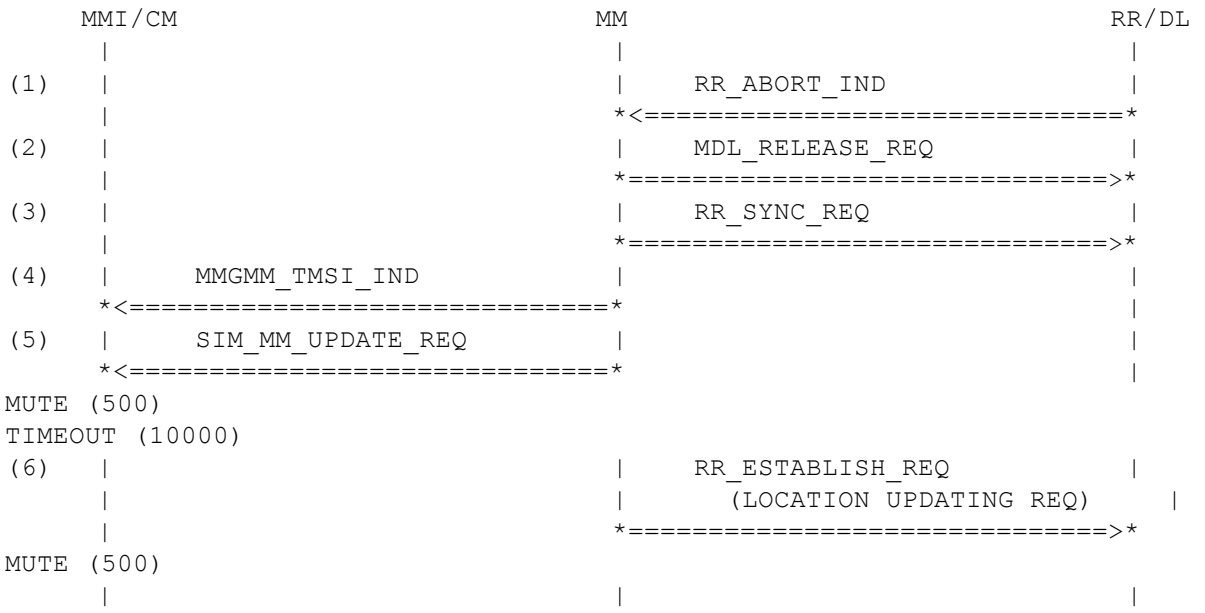
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(5)	MMGMM_TMSI_IND		
		tmsi	TMSI_INVALID_ULONG
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	03.02.03	HM	Initial

3.2.13 MMG0033: SIM inserted - normal update, TMSI REALLOC, Radio link failure

Description: MM receives a SIM-INSERT indication primitive, the registration procedure is started. A normal update after cell selection. TMSI REALLOCATION and subsequently radio link failure. The mobile continues updating without a TMSI.

Preamble: MMG0030



Parametrization

Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED

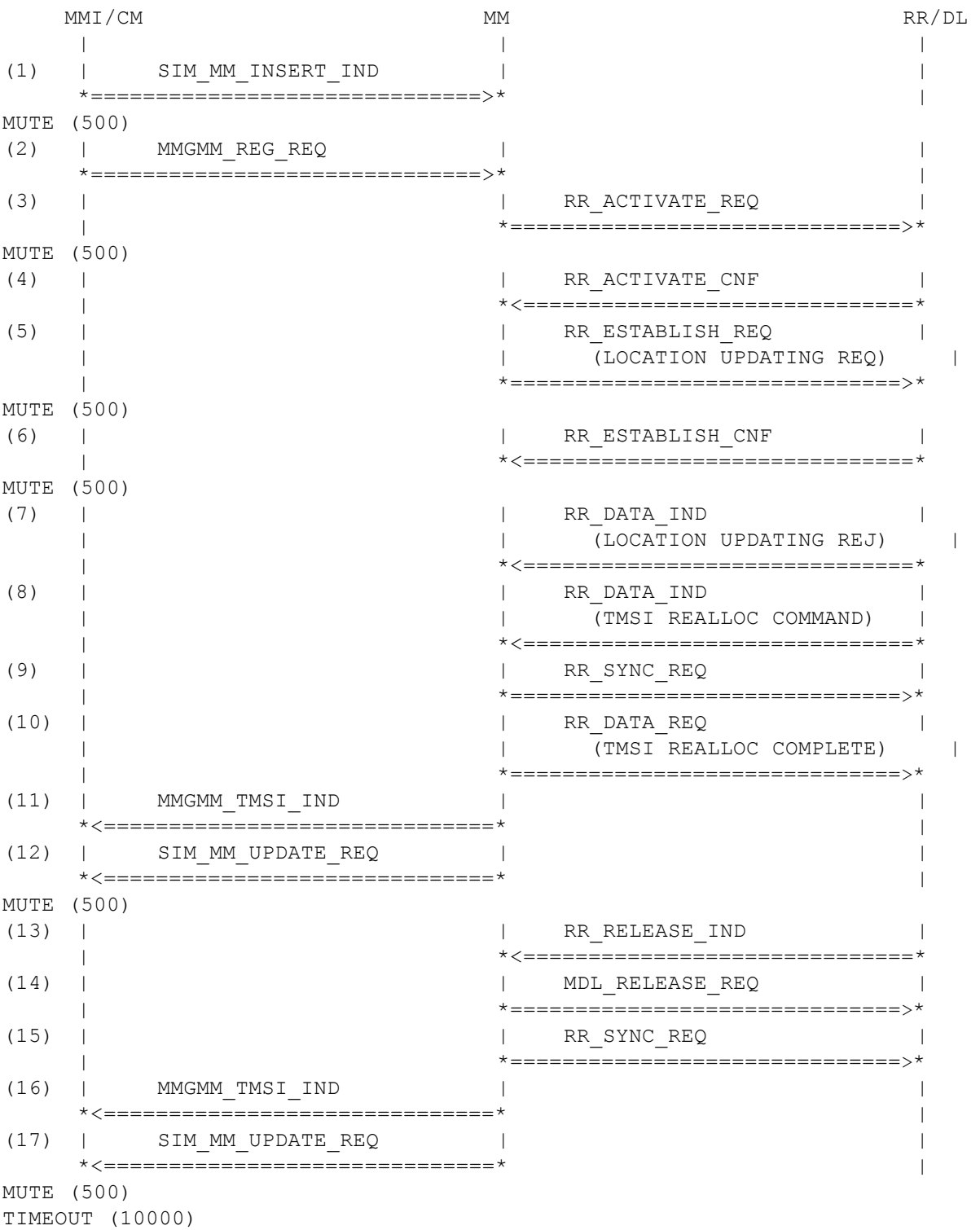
(4)	MMGMM_TMSI_IND		
		tmsi	TMSI_INVALID_ULONG
(5)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

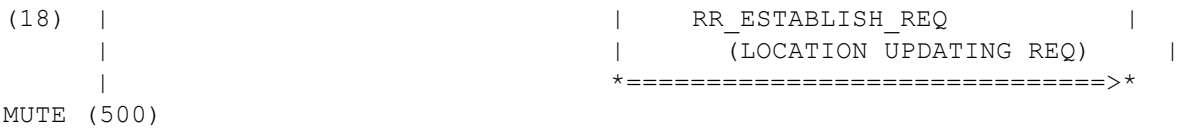
History:	03.02.03	HM	Initial

3.2.14 MMG0034: TMSI REALLOC in state MM LUP REJECTED

Description: MM receives a SIM-INSERT indication primitive, the registration procedure is started. A normal update after cell selection. MM receives LUP REJECT. The TMSI REALLOCATION procedure is performed. It is expected that updating continues without a TMSI.

Preamble: MMG0022





Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ

	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(6) RR_ESTABLISH_CNF		
	param	NOT_USED
(7) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(8) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_TMSI_REALLOC_CMD
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(9) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(10) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	

(11) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(12) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_0002_34125708_NU
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(13) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(15) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(16) MMGMM_TMSI_IND		
	tmsi	TMSI_INVALID_ULONG
(17) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(18) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

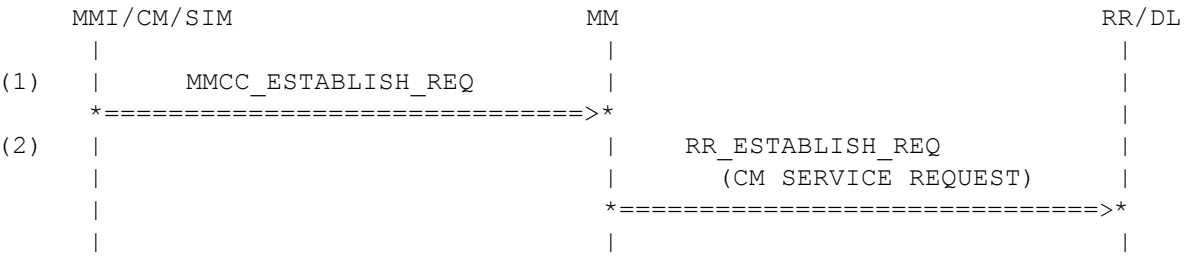
History:	31.01.03	HM	Initial

3.3 Connection Establishment

3.3.1 MMG0041: Establish request prior to existing RR Connection

Description: MM receives a MMCC-ESTABLISH request primitive from CC and requests a RR connection by sending a CM SERVICE REQUEST message to RR as part of a RR-ESTABLISH request primitive.

Preamble: MMG0024



Parametrization

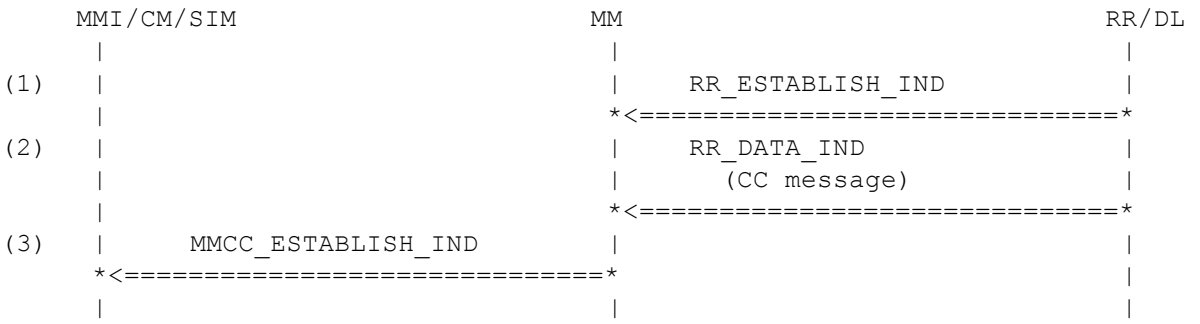
Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_MOB_ORIG_SPCH
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	

History: 08.07.97 HK Initial

3.3.2 MMG0042: Mobile terminated MM Connection

Description: MM is alerted of a mobile-terminated call by the receipt of a RR- ESTABLISH indication primitive followed by a CC message as part of a RR-DATA indication primitive. MM enters State 6 (MM Connection Active) and issues a MMCC-ESTABLISH indication primitive.

Preamble: MMG0024



Parametrization

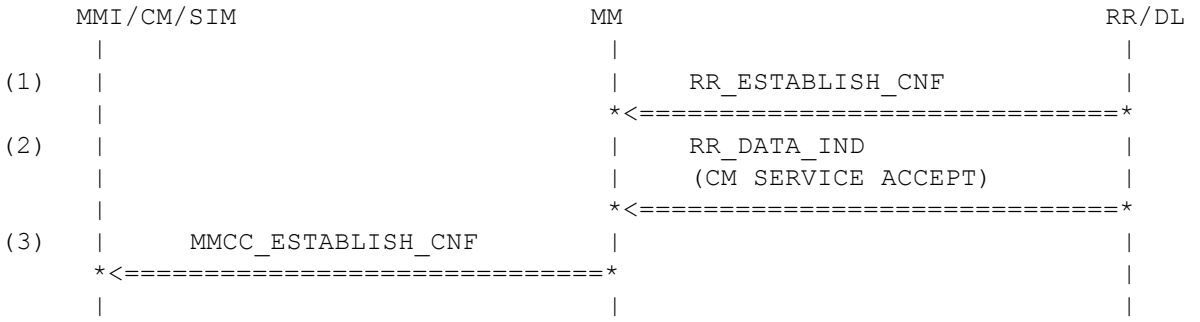
Primitive		Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(3)	MMCC_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE

History:			
	09.07.97	HK	Initial
	17.09.97	DL	revised

3.3.3 MMG0043: Acknowledgement of MM Connection

Description: The MM connection is confirmed by the network in the form of a RR-ESTABLISH primitive followed by with a CM SERVICE ACCEPT message. MM changes to State 6 (MM Connection Active) and informs CC by issuing a MMCC-ESTABLISH confirmation primitive.

Preamble: MMG0041



Parametrization

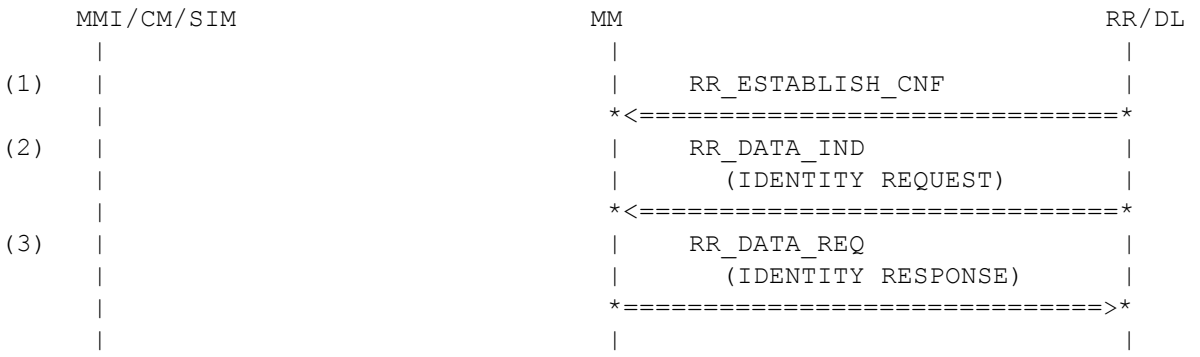
	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(3)	MMCC_ESTABLISH_CNF		
		ti	TI_2

History: 08.07.97 HK Initial

3.3.4 MMG0044: Identity Request in State 5

Description: MM changes to State 5 (Wait for Outgoing MM Connection) on receipt of a RR-ESTABLISH confirmation primitive. An IDENTITY REQUEST message is received from the network, to which MM responds by issuing an IDENTITY RESPONSE message.

Preamble: MMG0041



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_IDENT_REQ
	ti	TI_0
	ident	IDENT_TYPE_IMSI
	}	
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IDENT_RES
	ti	TI_0
	mob_id	MOB_IDENT_IMSI
	}	

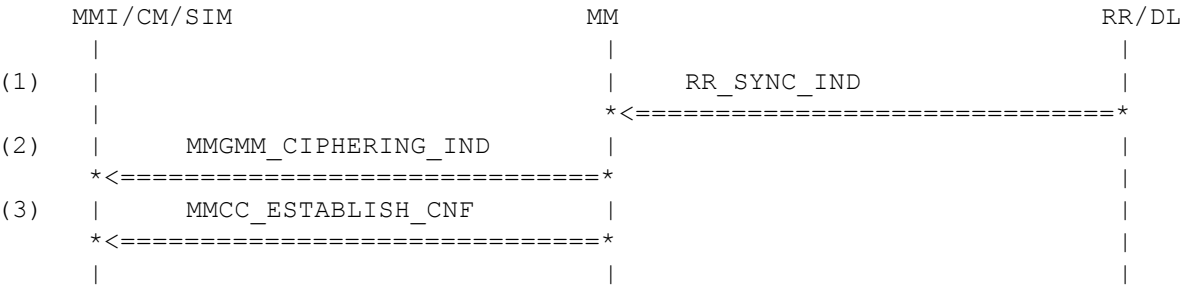
History:	08.07.97	HK	Initial

3.3.5 MMG0045: RR-MM Synchronization

Description: Synchronization by RR is signalled in the form of a RR-SYNC indication primitive. MM issues a MNCC-ESTABLISH confirmation primitive to CC.

Preamble: MMG0044

Variants: <A>....<B>



Parametrization

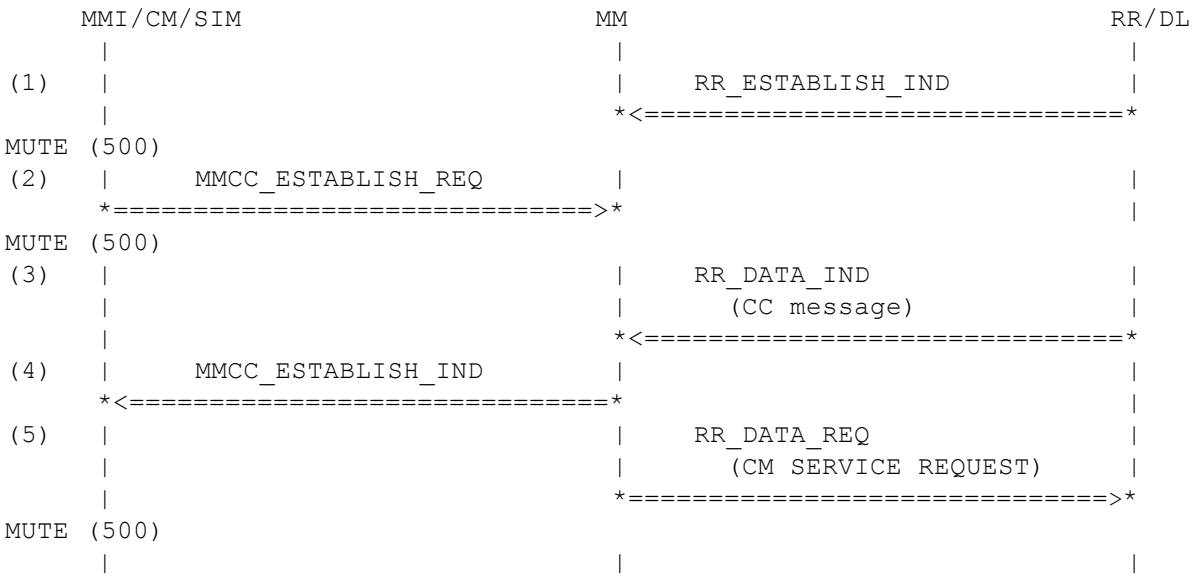
Primitive	Parameter	Value
(1) RR_SYNC_IND		
<A>	ciph	CIPH_ON
<B>	ciph	CIPH_OFF
	mm_info	MM_INFO_2
	bcch_info	BCCH_INFO_NONE
	synccs	NOT_USED
	chm	CHM_NOT_PRESENT
(2) MMGMM_CIPHERING_IND		
<A>	ciph	CIPH_ON
<B>	ciph	CIPH_OFF
(3) MMCC_ESTABLISH_CNF		
	ti	TI_2

History:			
	09.07.97	HK	Initial
	20.11.01	HM	MMGMM_CIPHERING_IND added

3.3.6 MMG0046: MTC interleaved by MOC in state MM_WAIT_FOR_NW_CMD

Description: MM is alerted of a mobile-terminated call by the receipt of a RR- ESTABLISH indication primitive followed by a CC message as part of a RR-DATA indication primitive. While MM is in state MM_WAIT_FOR_NW_CMD a MOC is attempted. MM enters State 6 (MM Connection Active) as intermediate state and issues a MMCC-ESTABLISH indication primitive. The MOC is attempted immediately without going through IDLE mode.

Preamble: MMG0024



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(4)	MMCC_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK

pd	U_CM_SERV_REQ
ti	TI_0
cm_serv_type	ST_MOC
ciph_key_num	CIPH_KEY_NUM_RES
mob_class_2	MOB_CLASS_2
mob_id	MOB_IDENT_IMSI

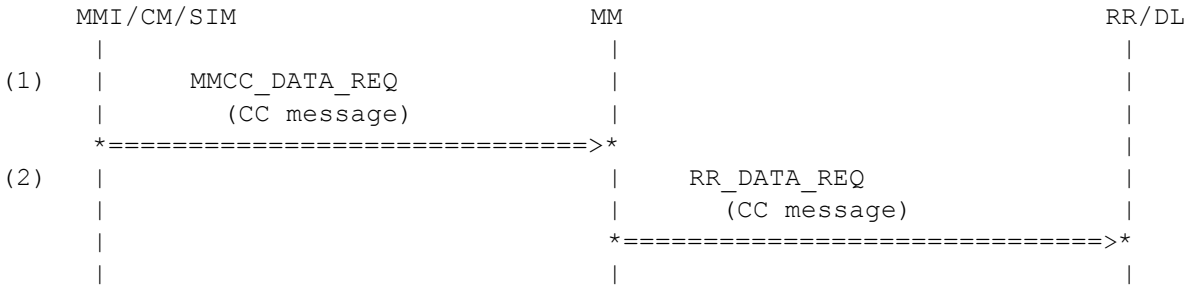
}

History:	27.03.03	HM	Initial

3.3.7 MMG0047: Data Transfer from Mobile Station in State 6

Description: In State 6 (MM Connection Active) MM receives a CC message and forwards this to the network as part of a RR-DATA request primitive.

Preamble: MMG0043



Parametrization

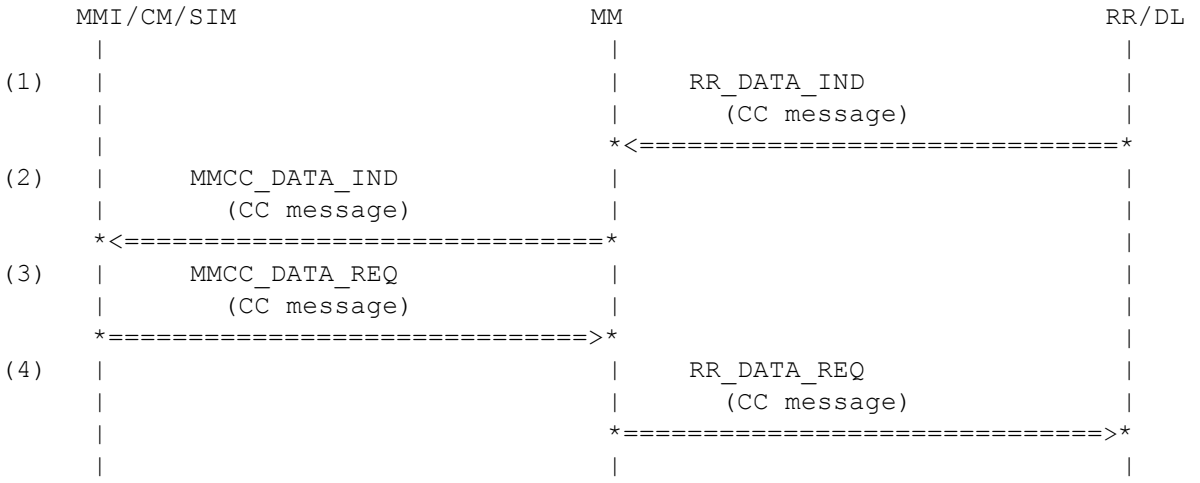
Primitive	Parameter	Value
(1) MMCC_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE

History: 09.07.97 HK Initial

3.3.8 MMG0048: Data Transfer in both directions in State 6

Description: In State 6 (MM Connection Active) MM receives a CC message both from CC and the network. MM forwards the message from the network to CC as part of a MMCC-DATA indication primitive and to the network as part of a RR-DATA request primitive.

Preamble: MMG0043



Parametrization

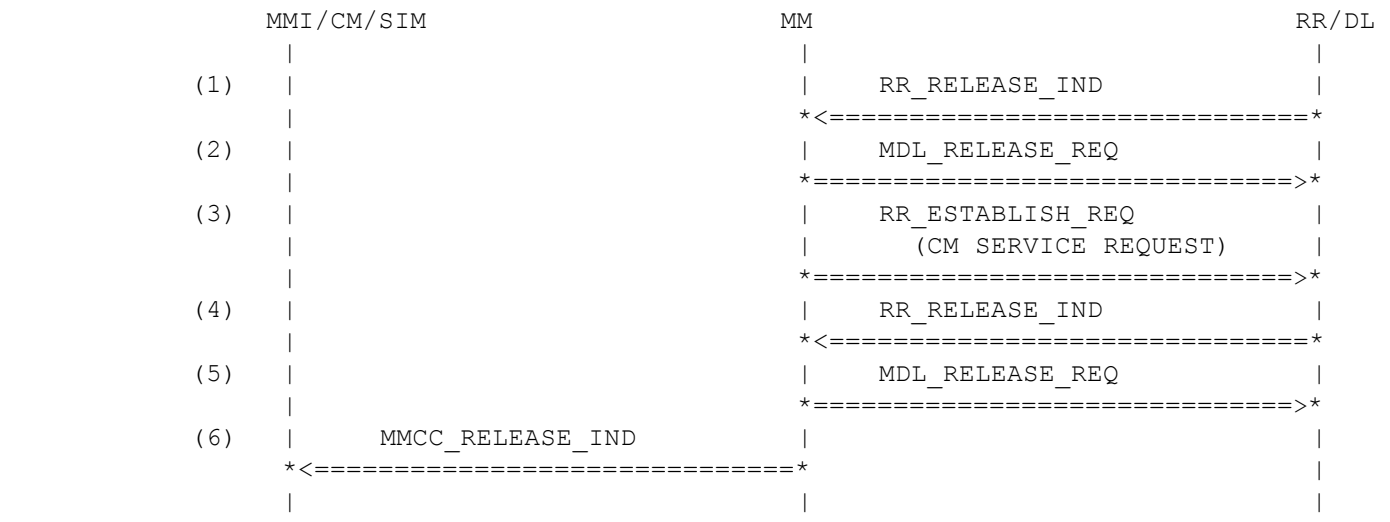
Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE_RESPONSE
(2) MMCC_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE_RESPONSE
(3) MMCC_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(4) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE

History:			
	09.07.97	HK	Initial
	11.03.03	HM	Fixed

3.3.9 MMG0049: Random Access Failed, internal auto redial

Description: RR responses with RR-RELEASE-IND to MM indicating a random access failure. MM starts one internal redialling.

Preamble: MMG0041



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

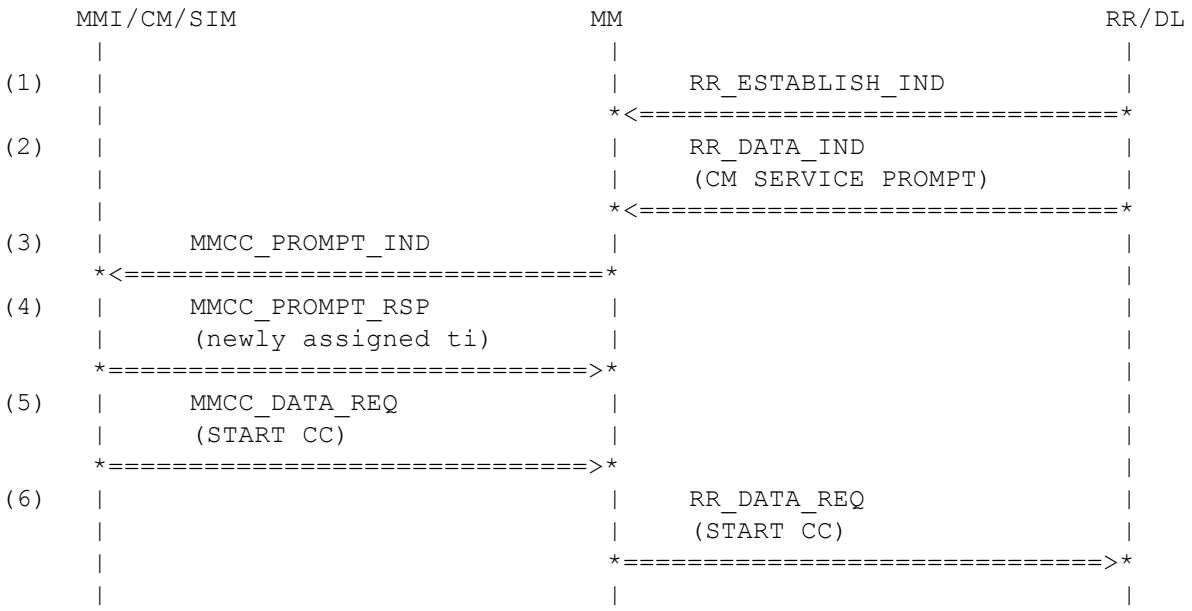
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_RND_ACC_FAIL

History:	08.07.97	HK	Initial

3.3.10 MMG0050: Initiation of CCBS call back

Description: Network sends CM SERVICE PROMPT for CM entity CC and SAPI = 0. MM notifies CC by MMCC_PROMPT_IND and enters state MM_PROCESS_PROMPT. CC assigns a transaction identifier for the new MM connection by MMCC_PROMPT_RSP, from now CC is allowed to send CM messages. The first CM message for CCBS is a START CC message, this will be forwarded by MM to RR.

Preamble: MMG0024



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	RR_DATA_IND	d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERVICE_PROMPT
		pd_and_sapi	PD_CC_AND_SAPI_0
		}	
(3)	MMCC_PROMPT_IND		
(4)	MMCC_PROMPT_RSP		
		ti	TI_5
(5)	MMCC_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE

(6) RR_DATA_REQ

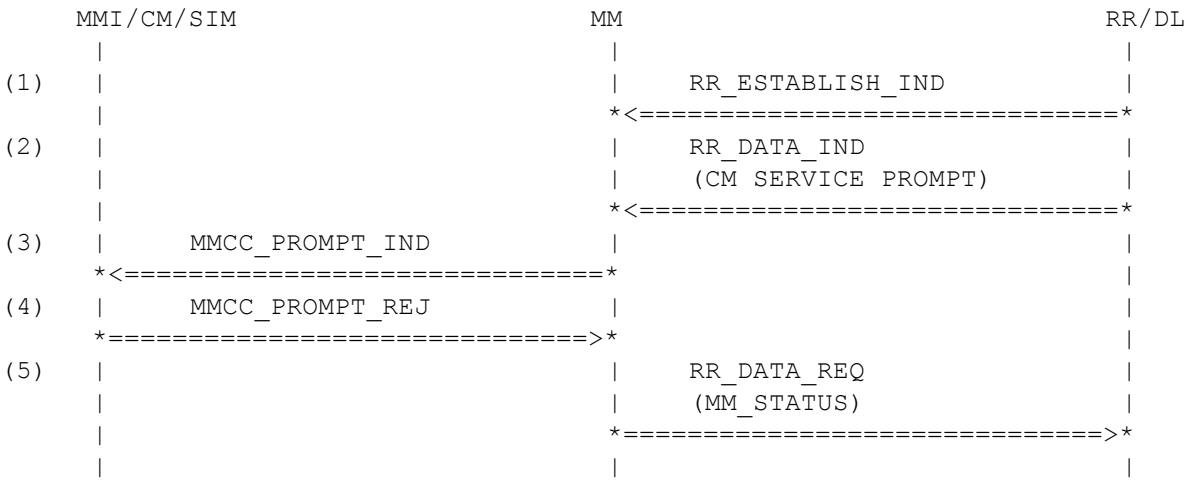
d1	NOT_USED
d2	NOT_USED
sdu	CC_MESSAGE

History:	15.02.00	HM	Initial

3.3.11 MMG0051: Initiation of CCBS call back, out of ti

Description: Network sends CM SERVICE PROMPT for CM entity CC and SAPI = 0. MM notifies CC by MMCC_PROMPT_IND and enters state MM_PROCESS_PROMPT. CC doesn't assign a transaction identifier for the new MM connection e.g. due to a lack of transaction identifiers. MM shall return to state MM_WAIT_FOR_NW_CMD and release the connection after timeout if no further messages are received by the network.

Preamble: MMG0024



Parametrization

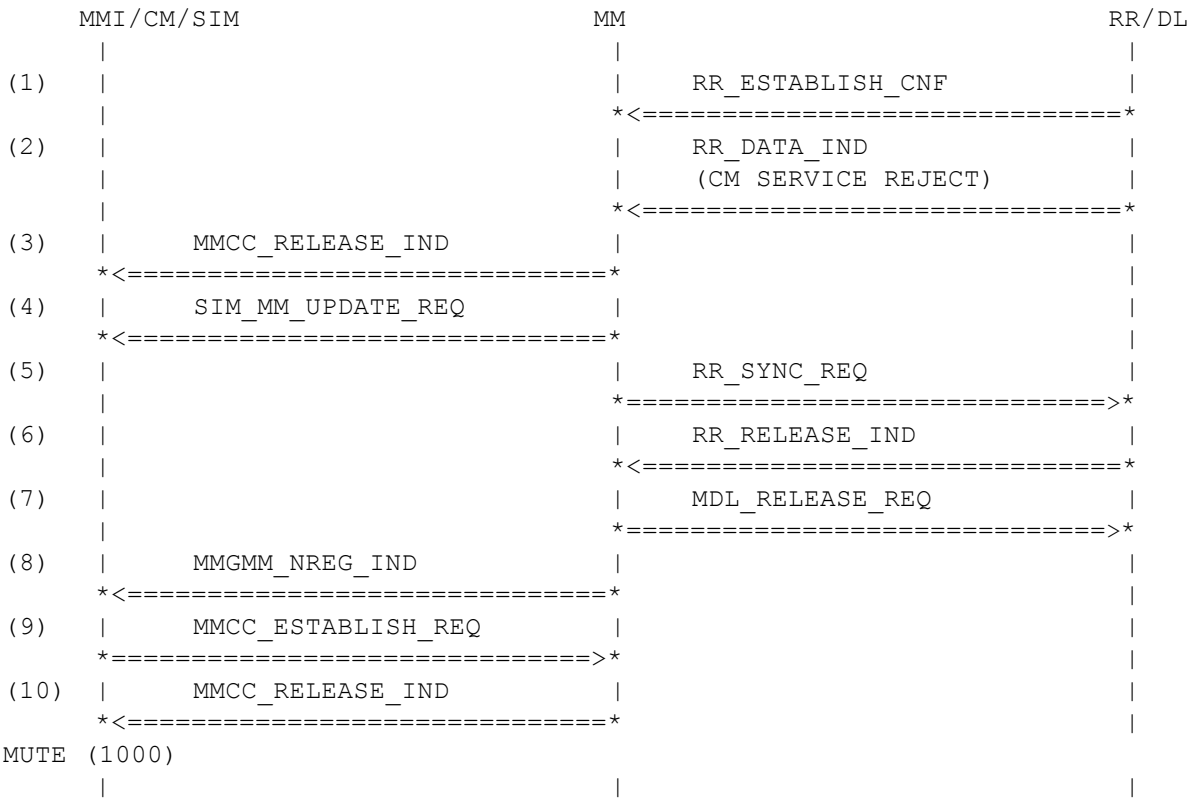
	Primitive	Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	RR_DATA_IND	d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERVICE_PROMPT
		pd_and_sapi	PD_CC_AND_SAPI_0
		}	
(3)	MMCC_PROMPT_IND		
(4)	MMCC_PROMPT_REJ		
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	B_MM_STATUS
		rej_cause	RC_SERVICE_ORDER
		}	

History:	15.02.00	HM	Initial

3.3.12 MMG0052: CM_SERV_REJ (Illegal ME)

Description: The MM connection is confirmed by the network in the form of a RR-ESTABLISH primitive followed by with a CM SERVICE REJECT message containing the cause RC_ILLEGAL_ME. MM invalidates the SIM and changes to State 9 (MM_WAIT_FOR_NW_CMD). After RR connection release the MMI is informed about the limited service condition. No further calls (except emergency calls) are possible.

Preamble: MMG0041



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_REJ
		ti	TI_0
		rej_cause	RC_ILLEGAL_ME
		}	

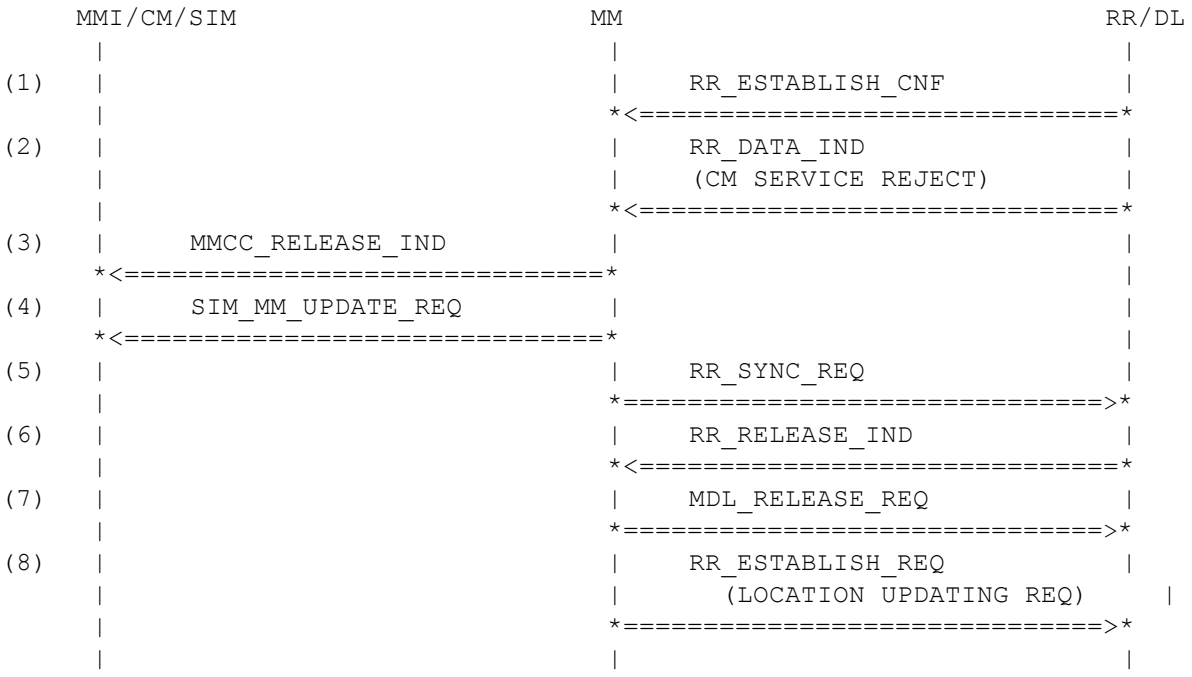
(3)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_ILLEGAL_ME
(4)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_PLMN_NOT_ALLOW
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
		accc	NOT_USED
		thplmn	NOT_USED
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_ILLEGAL_ME
(9)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(10)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION

History:	20.11.01	HM	Initial

3.3.13 MMG0053: CM_SERV_REJ (IMSI unknown in VLR)

Description: The MM connection is confirmed by the network in the form of a RR-ESTABLISH primitive followed by with a CM SERVICE REJECT message containing the cause RC_IMSI_IN_VLR. MM invalidates the update state and changes to State 9 (MM_WAIT_FOR_NW_CMD). After RR connection release a normal location updating procedure is started.

Preamble: MMG0041



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_REJ
		ti	TI_0
		rej_cause	RC_IMSI_IN_VLR
		}	
(3)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_IMSI_IN_VLR

(4) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(5) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(6) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(7) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(8) RR_ESTABLISH_REQ

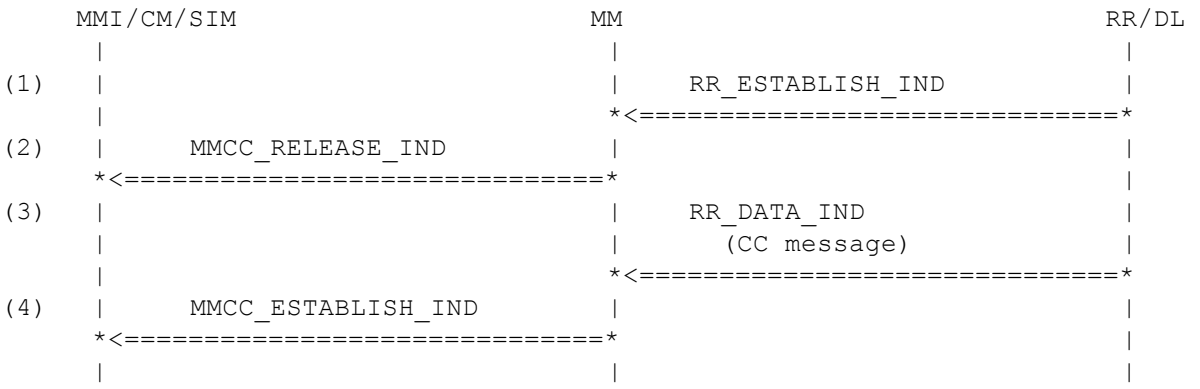
estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

History:	20.11.01	HM	Initial

3.3.14 MMG0055: RR_ESTABLISH_IND in state MM_WAIT_FOR_RR_CONN_MM

Description: MM receives a RR_ESTABLISH_IND in state MM_WAIT_FOR_RR_CONN_MM. This is a clash case. The MT connection has precedence, a MNCC_RELEASE_IND is sent for the MO connection and the MT connection is going to be established.

Preamble: MMG0041



Parametrization

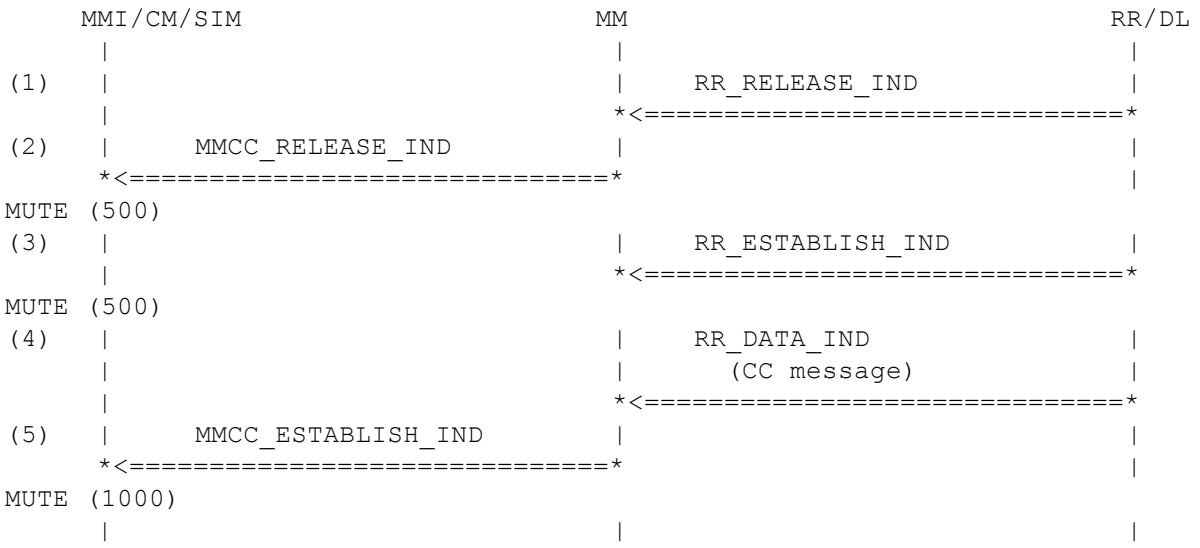
Primitive		Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_INT_PREEM
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(4)	MMCC_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE

History: 19.04.00 HM Initial

3.3.15 MMG0056: RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM

Description: MM receives a RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM. This is a clash case. There is an incoming MT call already in RR, the MT connection has precedence, RR sends a RR_RELEASE_IND for the MO connection and then the MT connection is going to be established. It is important here that the L2 connection is not releases by issuing a MDL_RELEASE_REQ.

Preamble: MMG0041



Parametrization

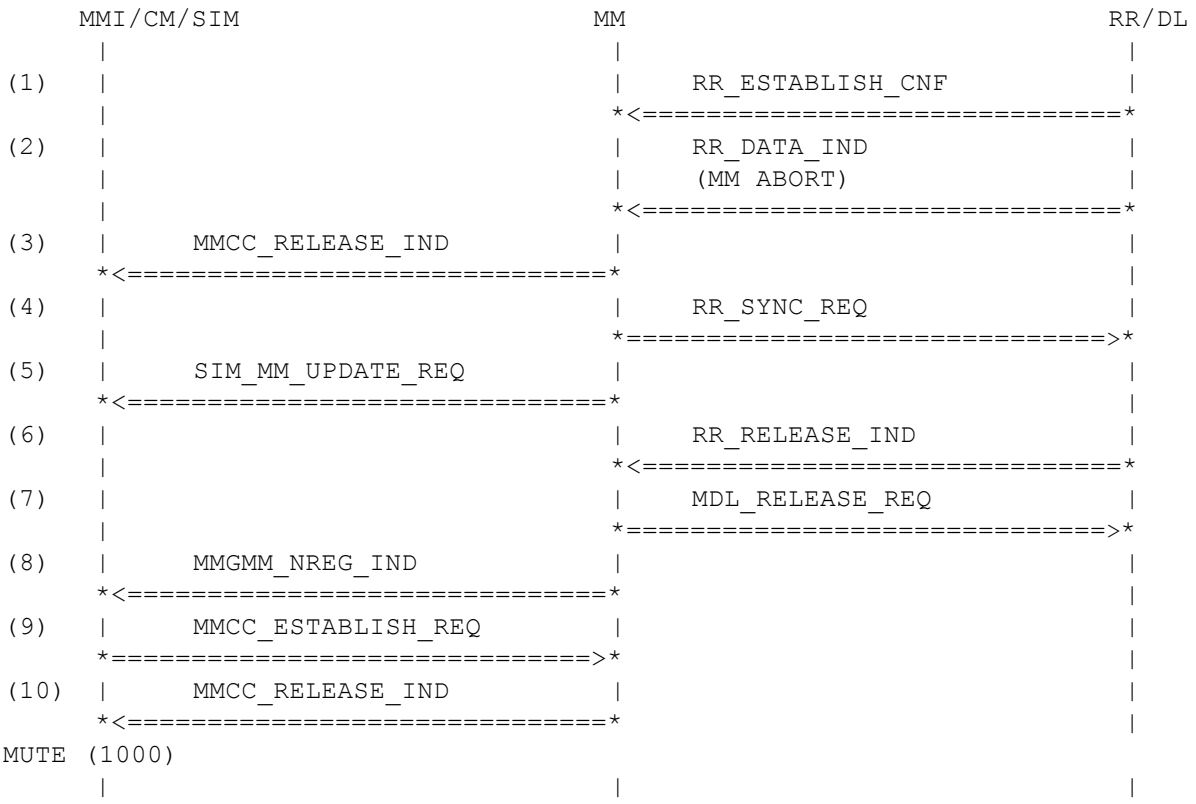
Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_MO_MT_COLL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_MO_MT_COLL
(3)	RR_ESTABLISH_IND		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(5)	MMCC_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE

History:			
	19.04.00	HM	Initial
	20.11.02	HM	Revised

3.3.16 MMG0057: ABORT (Illegal ME)

Description: The MM connection is confirmed by the network in the form of a RR-ESTABLISH primitive followed by with an ABORT message containing the cause RC_ILLEGAL_ME. MM invalidates the SIM and changes to State 9 (MM_WAIT_FOR_NW_CMD). After RR connection release the MMI is informed about the limited service condition. No further calls (except emergency calls) are possible.

Preamble: MMG0041



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_ABORT
		ti	TI_0
		rej_cause	RC_ILLEGAL_ME
		}	

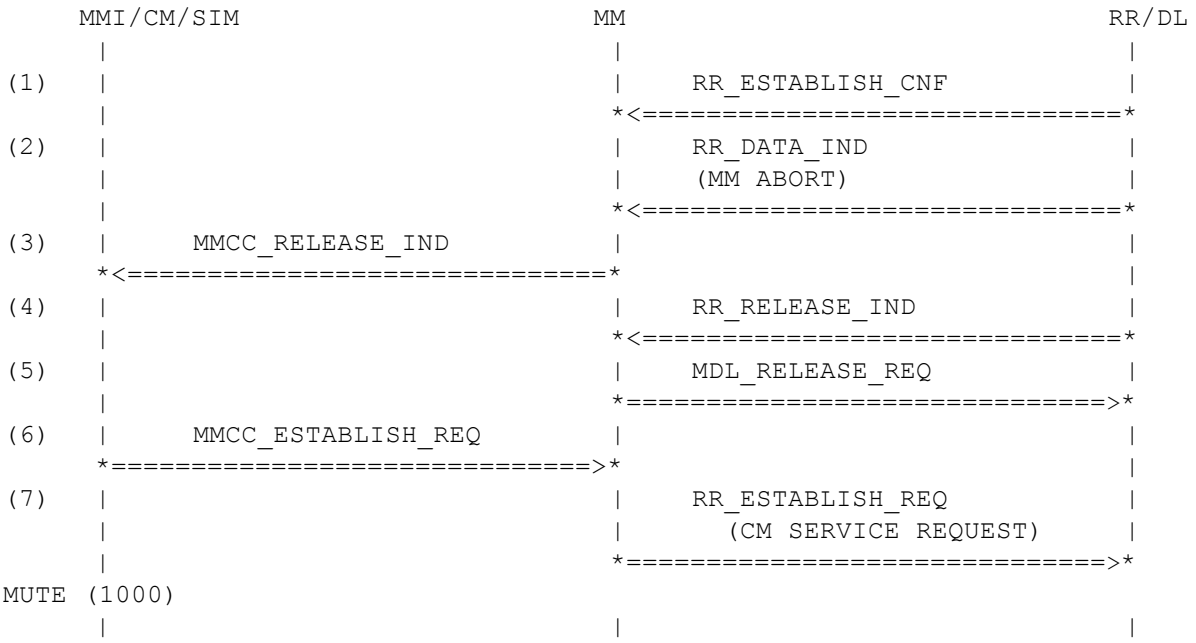
(3)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_ILLEGAL_ME
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
		accc	NOT_USED
		thplmn	NOT_USED
(5)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_PLMN_NOT_ALLOW
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_ILLEGAL_ME
(9)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(10)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION

History:	20.11.01	HM	Initial

3.3.17 MMG0058: ABORT (Network Failure)

Description: The MM connection is confirmed by the network in the form of a RR-ESTABLISH primitive followed by with an ABORT message containing the cause RC_NETWORK_FAILURE. MM releases all ongoing call locally and changes to State 9 (MM_WAIT_FOR_NW_CMD). After RR connection release a new call is attempted from the MMI, this shall be possible.

Preamble: MMG0041



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_ABORT
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RC_NETWORK_FAILURE
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM

		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	

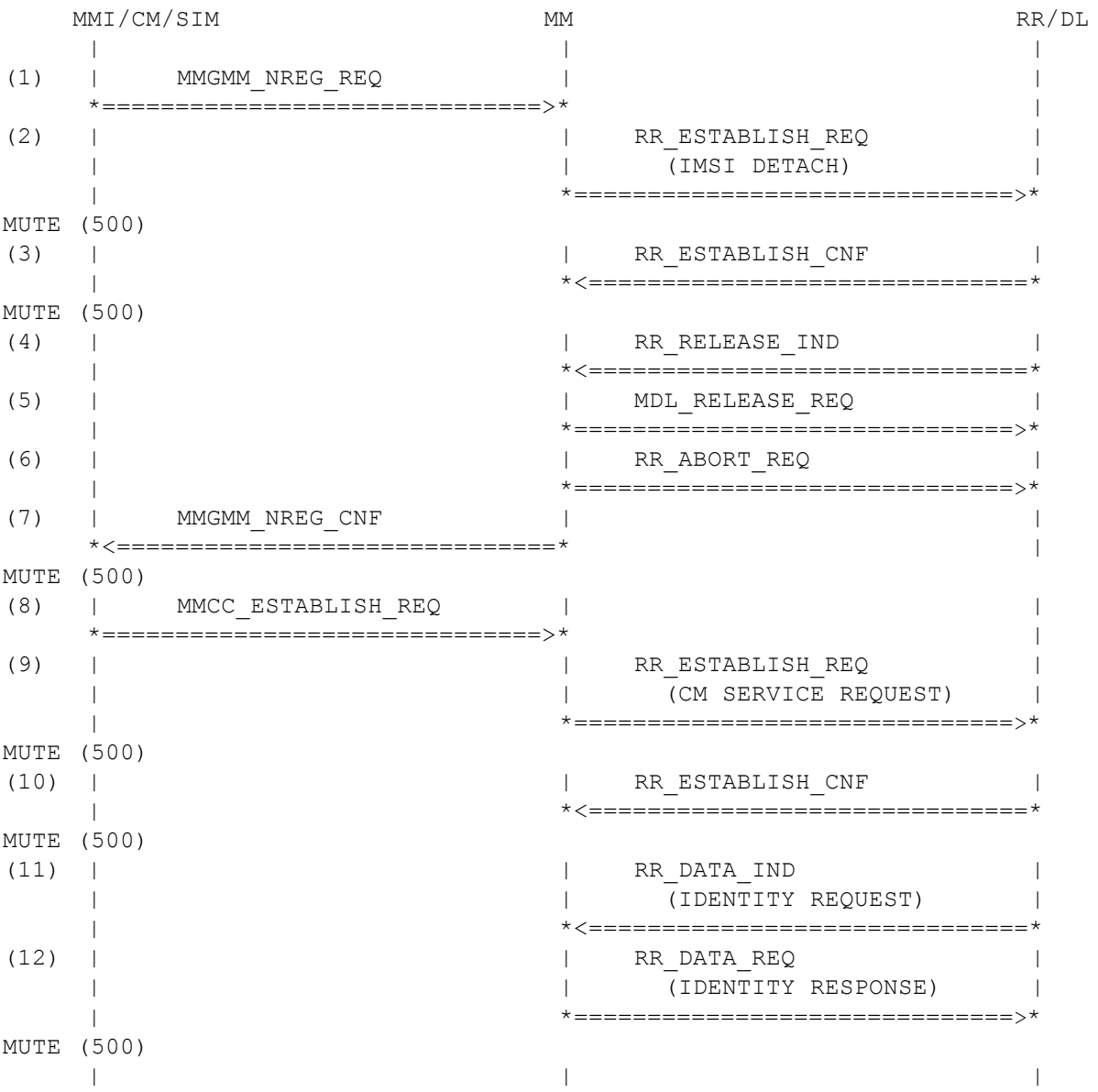
History:	20.11.01	HM	Initial

3.4 Emergency Call

3.4.1 MMG0060: Emergency Call after AT+CFUN=2

Description: MM receives a MMGMM_NREG_REQ (CS_SIM_REM). The SIM is soft-removed, an IMSI DETACH is performed. Afterwared an emergency call is attempted. It is tested that no TMSI is sent in the CM SERVICE REQUEST message to the network.

Preamble: MMG0028A



Parametrization

Primitive	Parameter	Value

(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM
(8)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_EMERGE
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_EMRG_CAL
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_EMERGENCY
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMEI
		}	
(10)	RR_ESTABLISH_CNF		
		param	NOT_USED
(11)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED

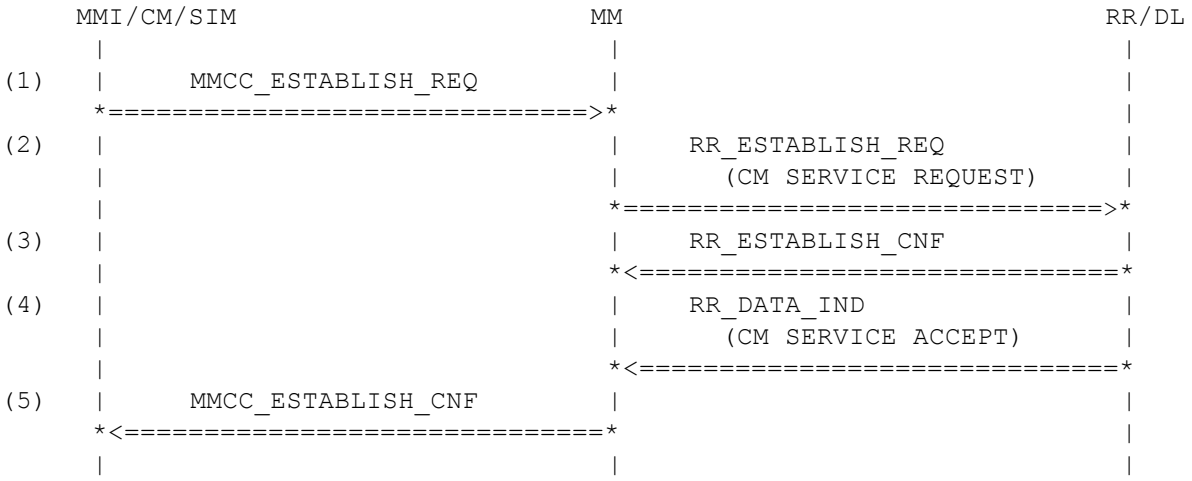
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_IDENT_REQ
		ti	TI_0
		ident	IDENT_TYPE_IMSI
		}	
(12)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IDENT_RES
		ti	TI_0
		mob_id	MOB_IDENT_IMSI
		}	

History:	27.06.02	HM	Initial

3.4.2 MMG0061: Emergency Call in Idle State 19.2

Description: MM receives an establishment request from CC while in State 19.2 (Idle Attempting to Update). It then sends a CM SERVICE REQUEST message to the network. On receipt of a RR-ESTABLISH confirmation primitive from the network followed by a CM SERVICE ACCEPT message, MM issues as MMCC-ESTABLISH confirmation primitive.

Preamble: MMG0103



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_EMERGE
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	

	{	
component		MM
direction		DOWNLINK
pd		D_CM_SERV_ACCEPT
ti		TI_0
}		

(5) MMCC_ESTABLISH_CNF

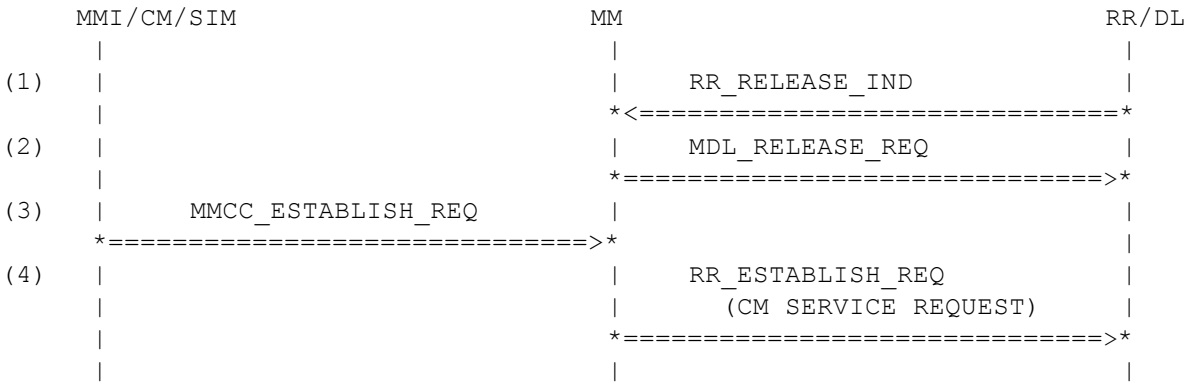
ti		TI_3

History:	09.07.97	HK	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.4.3 MMG0062: RR Release followed by Call Establishment Request

Description: Release of the RR connection is followed by an establishment request for an emergency call.

Preamble: MMG0101



Parametrization

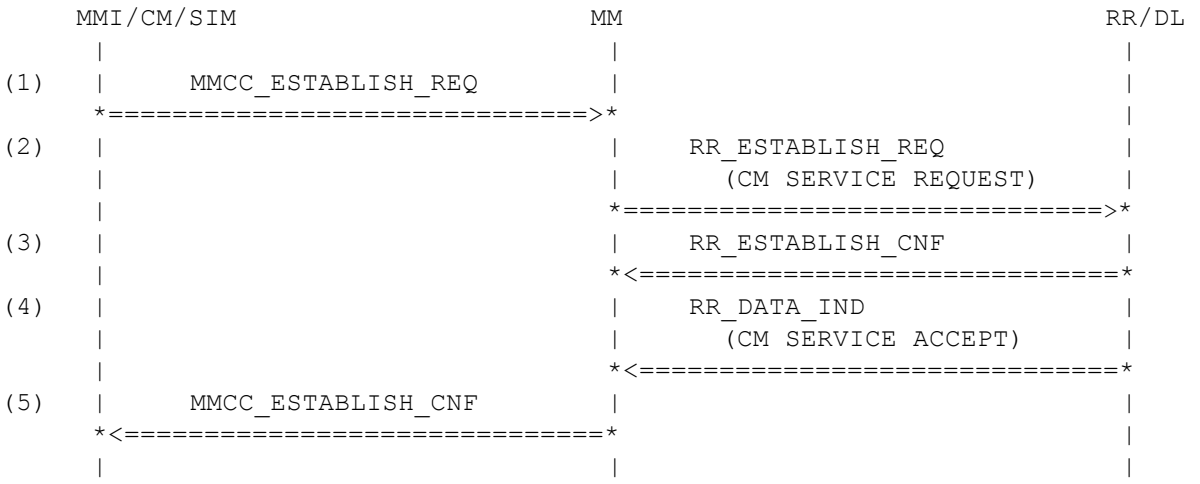
Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMCC_ESTABLISH_REQ		
	ti	TI_6
	estcs	ESTCS_EMERGE
(4) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	

History:			
	09.07.97	HK	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.4.4 MMG0063: Emergency Call in Idle State 19.4

Description: MM receives an establishment request from CC while in State 19.4 (Idle No IMSI). It then sends a CM SERVICE REQUEST message to the network. On receipt of a RR-ESTABLISH confirmation primitive from the network followed by a CM SERVICE ACCEPT message, MM issues as MMCC-ESTABLISH confirmation primitive.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_EMERGE
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMEI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	

	{	
component		MM
direction		DOWNLINK
pd		D_CM_SERV_ACCEPT
ti		TI_0
}		

(5) MMCC_ESTABLISH_CNF

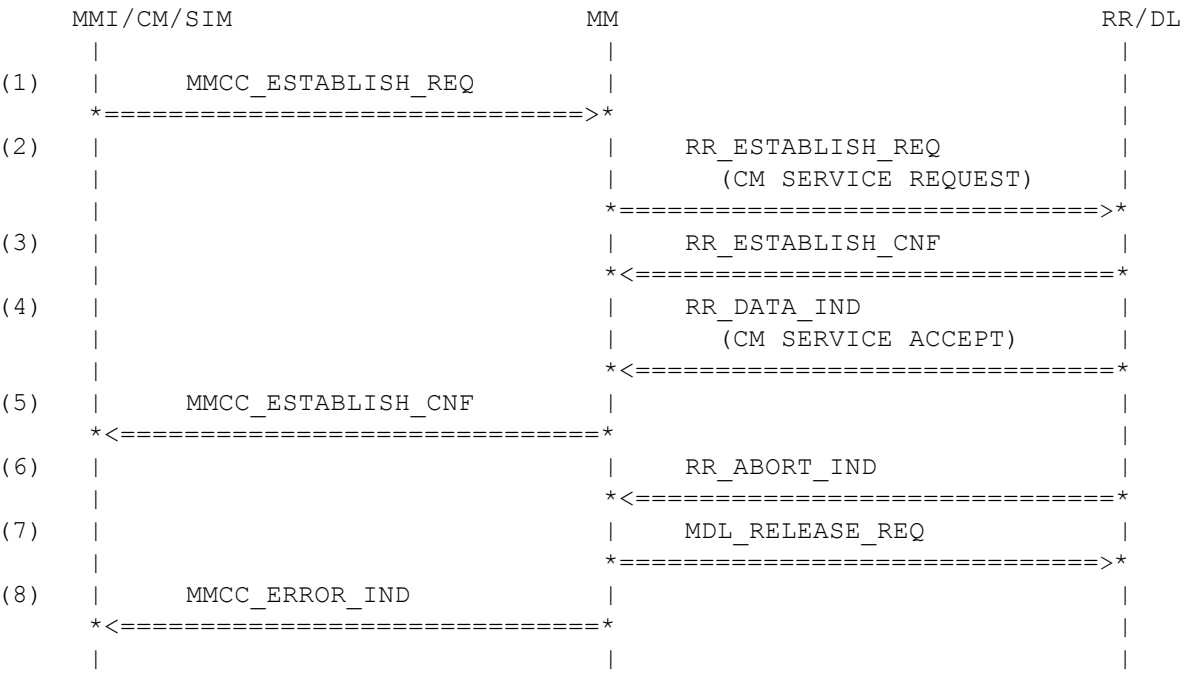
ti		TI_3

History:	09.07.97	HK	Initial
	19.09.97	DL	revised

3.4.5 MMG0064: Reestablishment during EC (Emergency Call)

Description: MM receives an establishment request from CC while in State 19.2 (Idle Attempting to Update). It then sends a CM SERVICE REQUEST message to the network. On receipt of a RR-ESTABLISH confirmation primitive from the network followed by a CM SERVICE ACCEPT message, MM issues as MMCC-ESTABLISH confirmation. On receipt of a RR-ABORT indication primitive MDL_RELEASE_REQ MMCC_ERROR_IND.

Preamble: MMG0027



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_EMERGE
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMEI
	}	

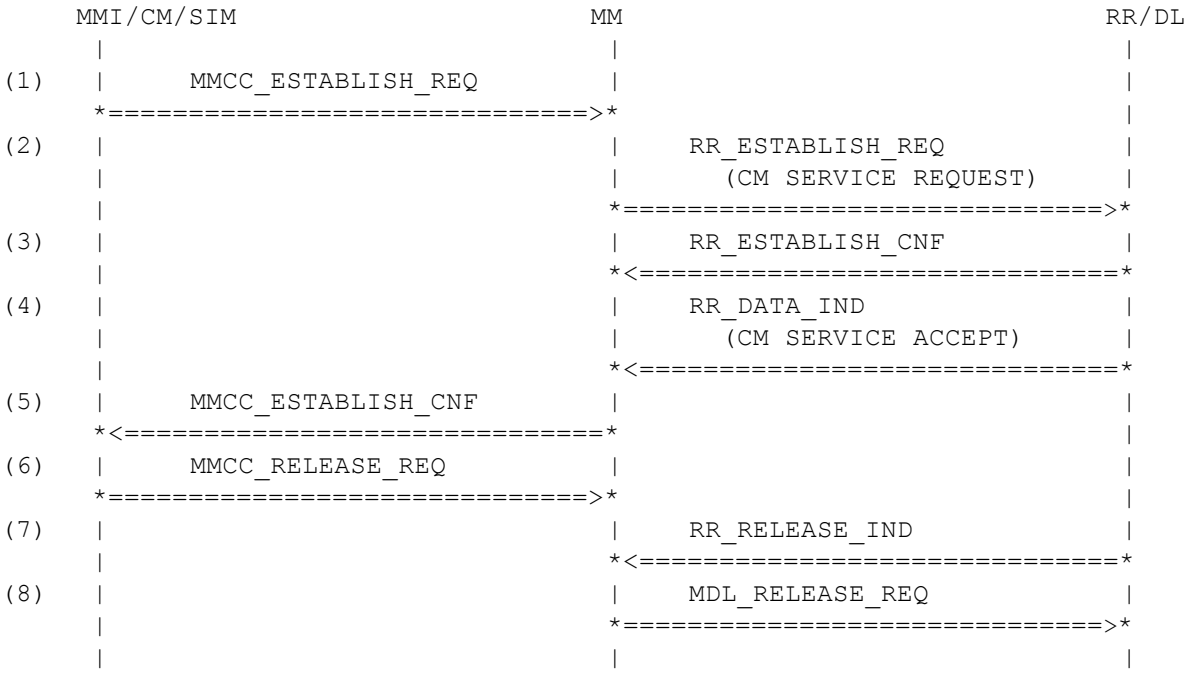
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(5) MMCC_ESTABLISH_CNF		
	ti	TI_3
(6) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(7) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(8) MMCC_ERROR_IND		
	ti	TI_3
	cause	RRCS_ABORT_RAD_LNK_FAIL

History:	21.07.97	HK	Initial
	19.09.97	DL	revised
	16.02.00	HM	revised
	10.02.03	LOL	added lac_list

3.4.6 MMG0065: Emergency Call in State 19.3

Description: An emergency call is started following an establishment request in State 19.3 (Idle, Limited Service).

Preamble: MMG0108



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_EMERGE
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	

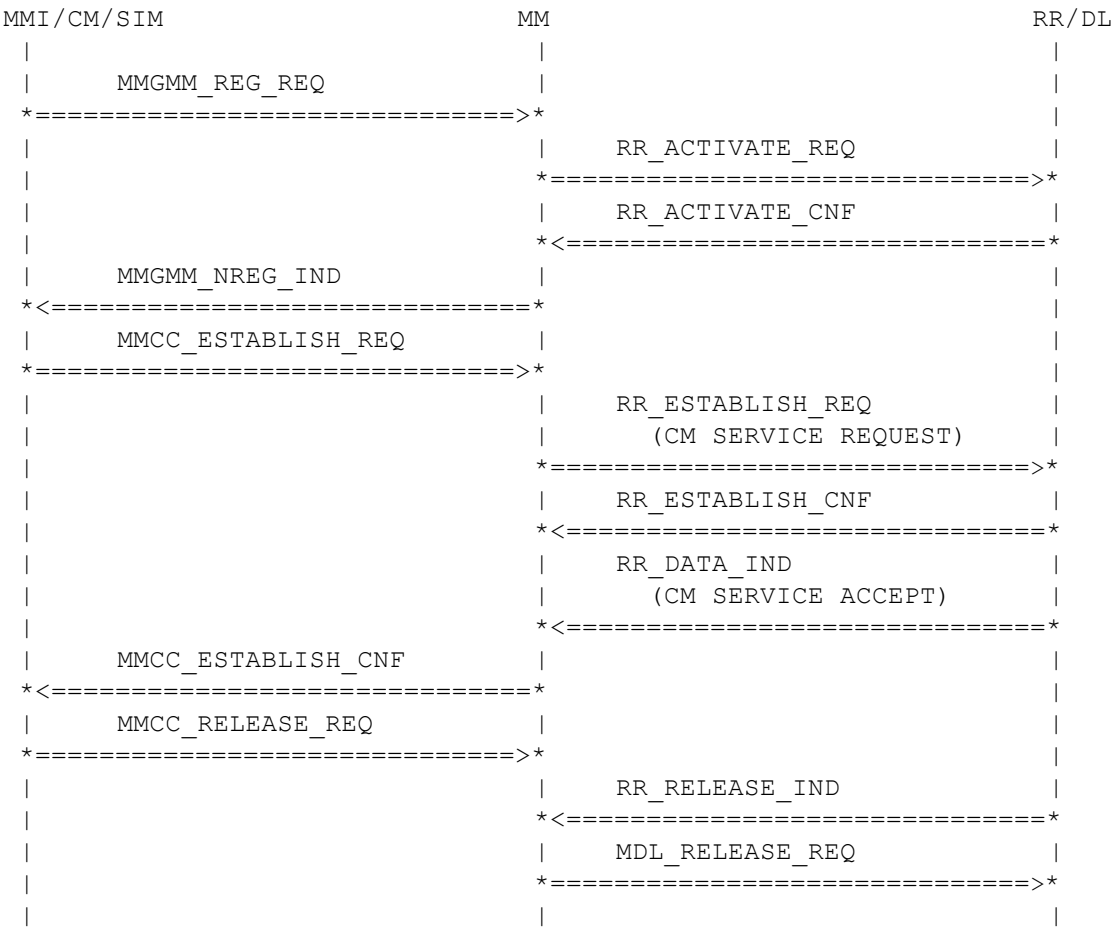
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(5) MMCC_ESTABLISH_CNF		
	ti	TI_3
(6) MMCC_RELEASE_REQ		
	ti	TI_3
(7) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	09.07.97	HK	Initial

3.4.7 MMG0066: Calls after power cycle with SIM Remove (CS_POW_OFF)

Description: Following a hard power off the mobile station the mobile station is reactivated, an emergency call is started.

Preamble: MMG0202A



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED

		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(5)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_EMERGE
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_EMRG_CAL
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_EMERGENCY
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	NOT_USED
		mob_id	MOB_IDENT_IMEI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(9)	MMCC_ESTABLISH_CNF		
		ti	TI_3
(10)	MMCC_RELEASE_REQ		
		ti	TI_3
(11)	RR_RELEASE_IND		
		cause	RRCS_NORM

	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

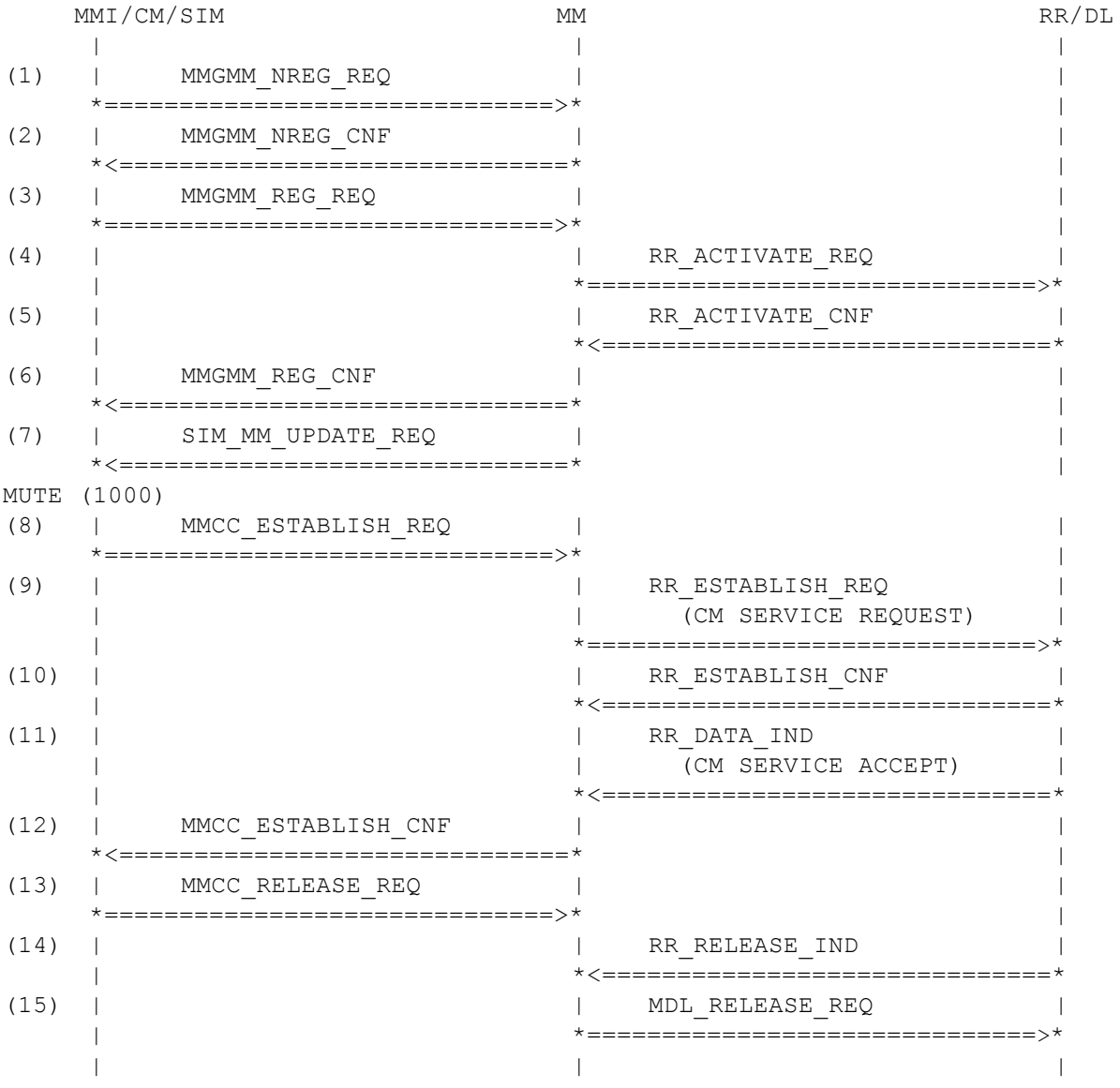
History:	22.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.04.01	HM	Revised, now 2 subcases after CFUN=4
	27.06.01	HM	Rolled back for AT+CFUN=0

3.4.8 MMG0067: Calls after power cycle without SIM Remove (CS_SOFT_OFF)

Description: Following a power off the mobile station the mobile station is reactivated in a cell where the mobile is updated, an IMSI ATTACH is not allowed by the network, a call is started.
<A> Emergency call
<B> Normal call

Preamble: MMG0628

Variants: <A>....<B>



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_SOFT_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT

(2)	MMGMM_NREG_CNF		
		detach_cause	CS_SOFT_OFF
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(8)	MMCC_ESTABLISH_REQ		
		ti	TI_3
<A>		estcs	ESTCS_EMERGE
<B>		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
(9)	RR_ESTABLISH_REQ		
<A>		estcs	ESTCS_EMRG_CAL
<B>		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ

		ti	TI_0
	<A>	cm_serv_type	ST_EMERGENCY
	<B>	cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	NOT_USED
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_ESTABLISH_CNF		
		param	NOT_USED
(11)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(12)	MMCC_ESTABLISH_CNF		
		ti	TI_3
(13)	MMCC_RELEASE_REQ		
		ti	TI_3
(14)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

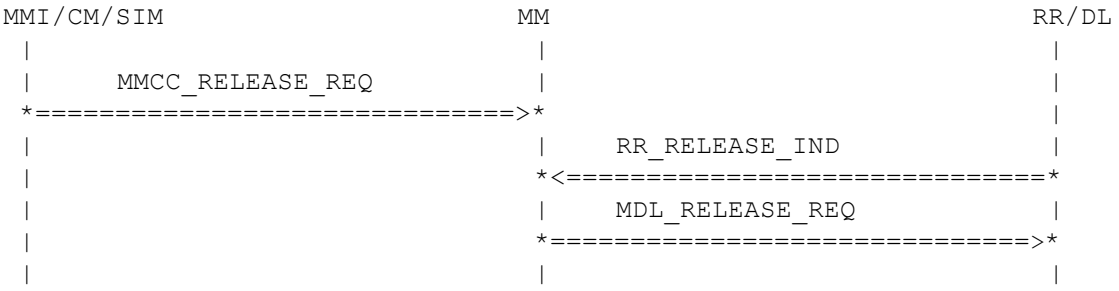
History:	22.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.04.01	HM	Revised, now 2 subcases after CFUN=4
	27.06.01	HM	Revised
	29.08.01	HM	Made testcase according to description
	02.11.01	HM	Revised the broken testcase
	31.01.02	HM	Revised

3.5 Connection Release

3.5.1 MMG0081: Release of Connection via MS

Description: Following the release of a connection M issues a MDL-RELEASE request primitive and returns to State 1 Idle Updated.

Preamble: MMG0043



Parametrization

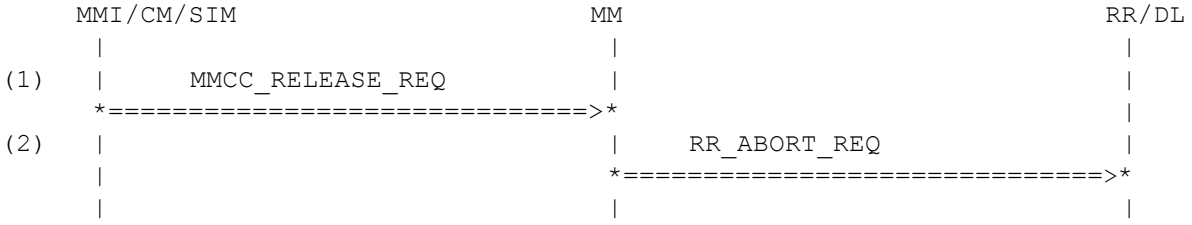
Primitive	Parameter	Value
(1) MMCC_RELEASE_REQ		
	ti	TI_2
(2) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History: 09.07.97 HK Initial

3.5.2 MMG0082: MMCC_REL_REQ in State 14

Description: MM receives a MMCC-RELEASE request primitive from CC before a RR connection has been made. MM issues a RR-ABORT request.

Preamble: MMG0041



Parametrization

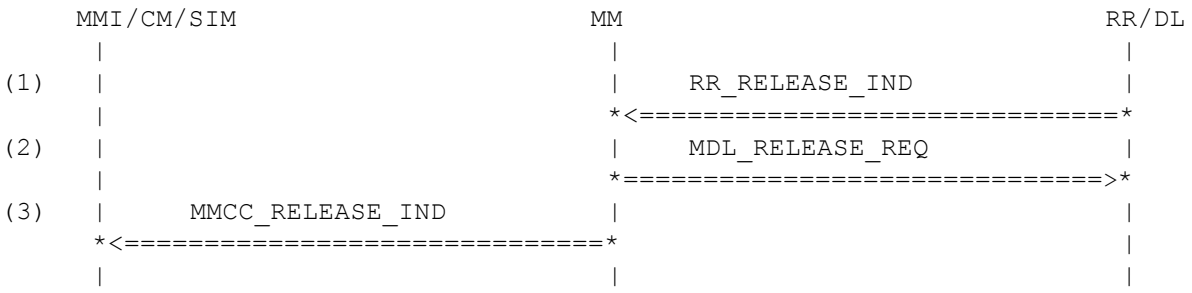
Primitive	Parameter	Value
(1) MMCC_RELEASE_REQ		
	ti	TI_2
(2) RR_ABORT_REQ		
	abcs	ABCS_NORM

History: 10.07.97 HK Initial

3.5.3 MMG0083: Release of Connection via BS

Description: MM receives a RR-RELEASE request primitive from RR. MM issues a a MDL-RELEASE request primitive to DL followed by a MMCC-RELEASE request primitive.

Preamble: MMG0043



Parametrization

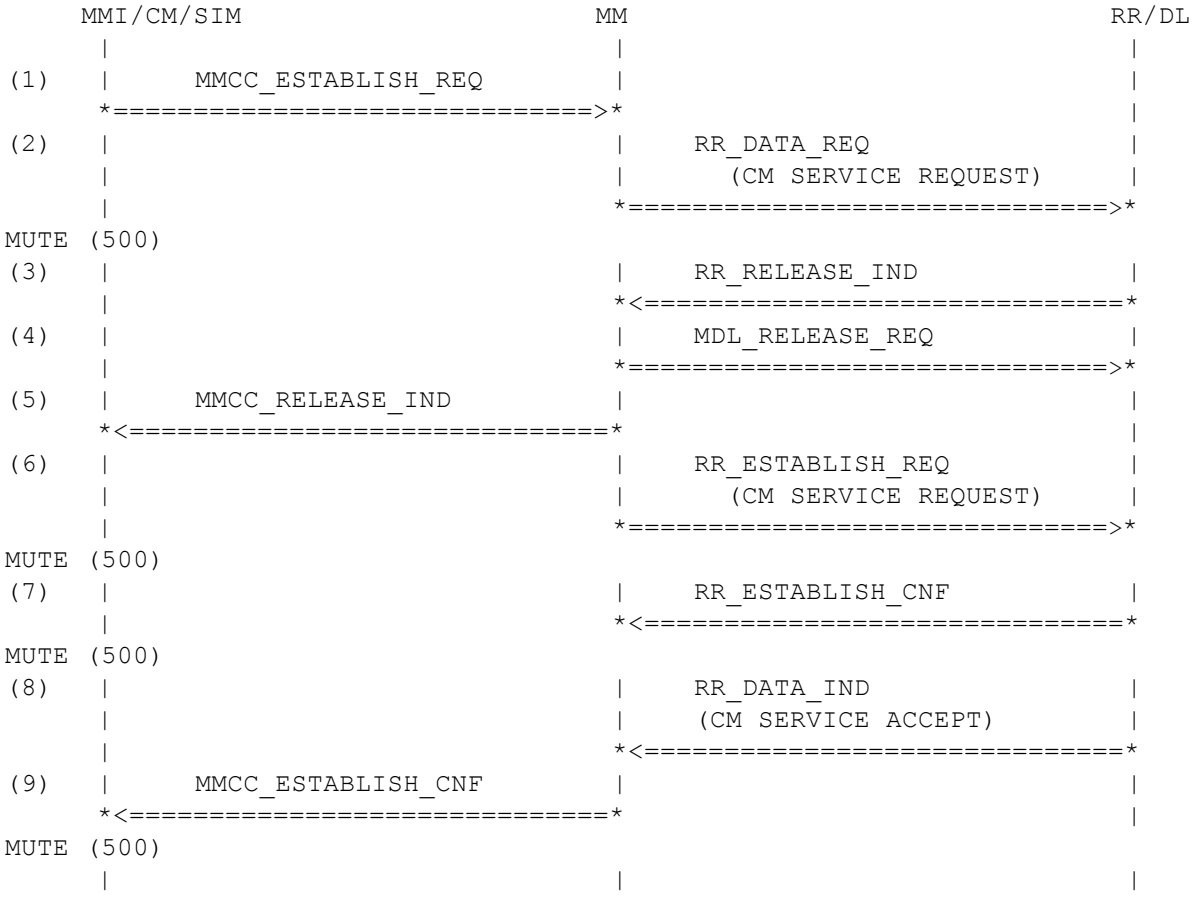
Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMCC_RELEASE_IND		
	ti	TI_2
	cause	RRCS_NORM

History: 09.07.97 HK Initial

3.5.4 MMG0084: Clash case in MM_WAIT_FOR_ADD_MM_CONN (I), success

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awiats the acception of the additionally requested MM connection. In this moment the active connection is released by RR. MM indicates the release of the active connection to the connection management and retries to establish the new CM connection. It is assumed that the retry is successful, the network accepts the CM SERVICE REQUEST and the successful establishment of a MM connection is confirmed to the CM.

Preamble: MMG0047



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_5
	estcs	ESTCS_MOB_ORIG_SPCH
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	

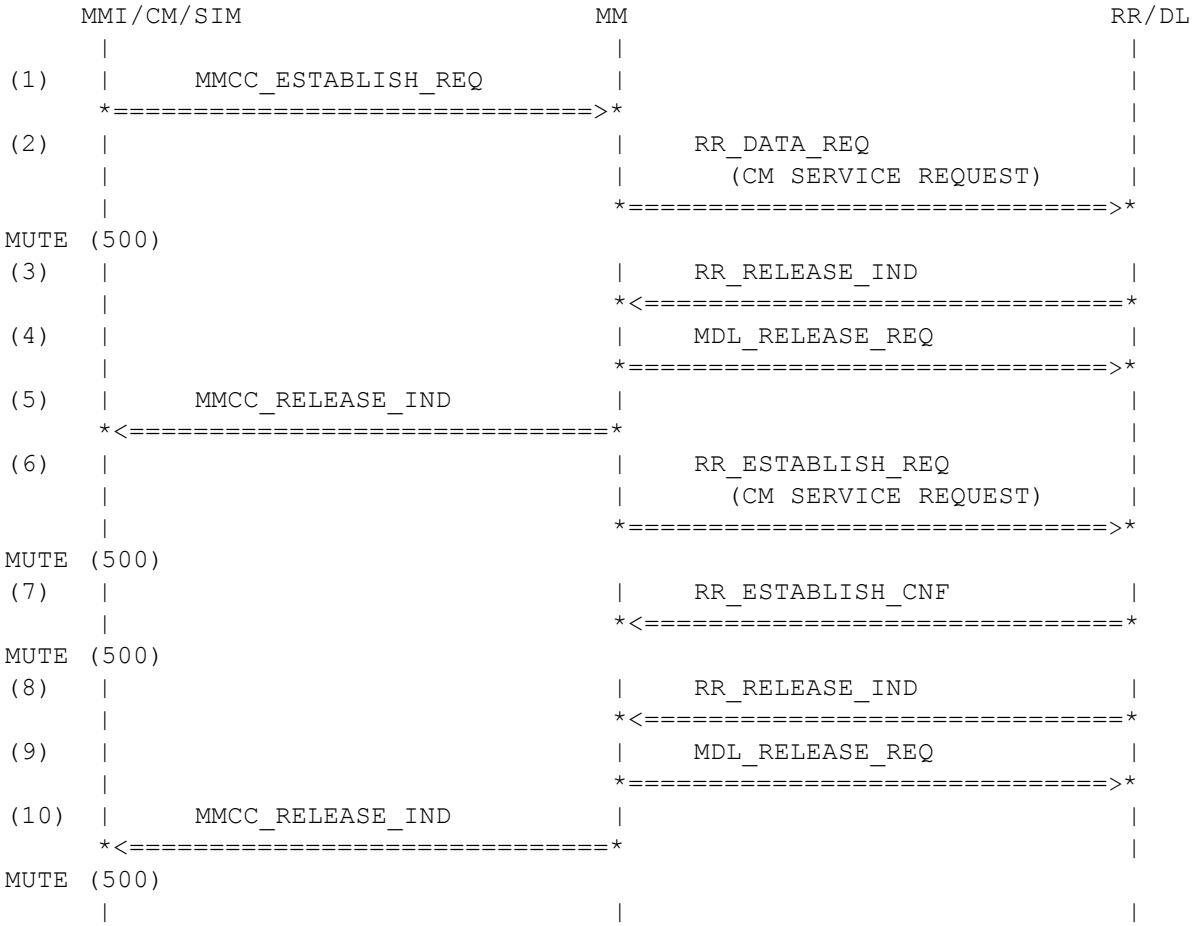
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_NORM
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(9)	MMCC_ESTABLISH_CNF		
		ti	TI_5

History:	11.03.03	HM	Initial

3.5.5 MMG0085: Clash case in MM_WAIT_FOR_ADD_MM_CONN (I), failure

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awiats the acception of the additionally requested MM connection. In this moment the active connection is released by RR. MM indicates the release of the active connection to the connection management and retries to establish the new CM connection. It is assumed that the retry is not successful, the network releases the RR connection before a CM SERVICE ACCEPT is received. It is checked that in this case no second retry is attempted.

Preamble: MMG0047



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_5
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	

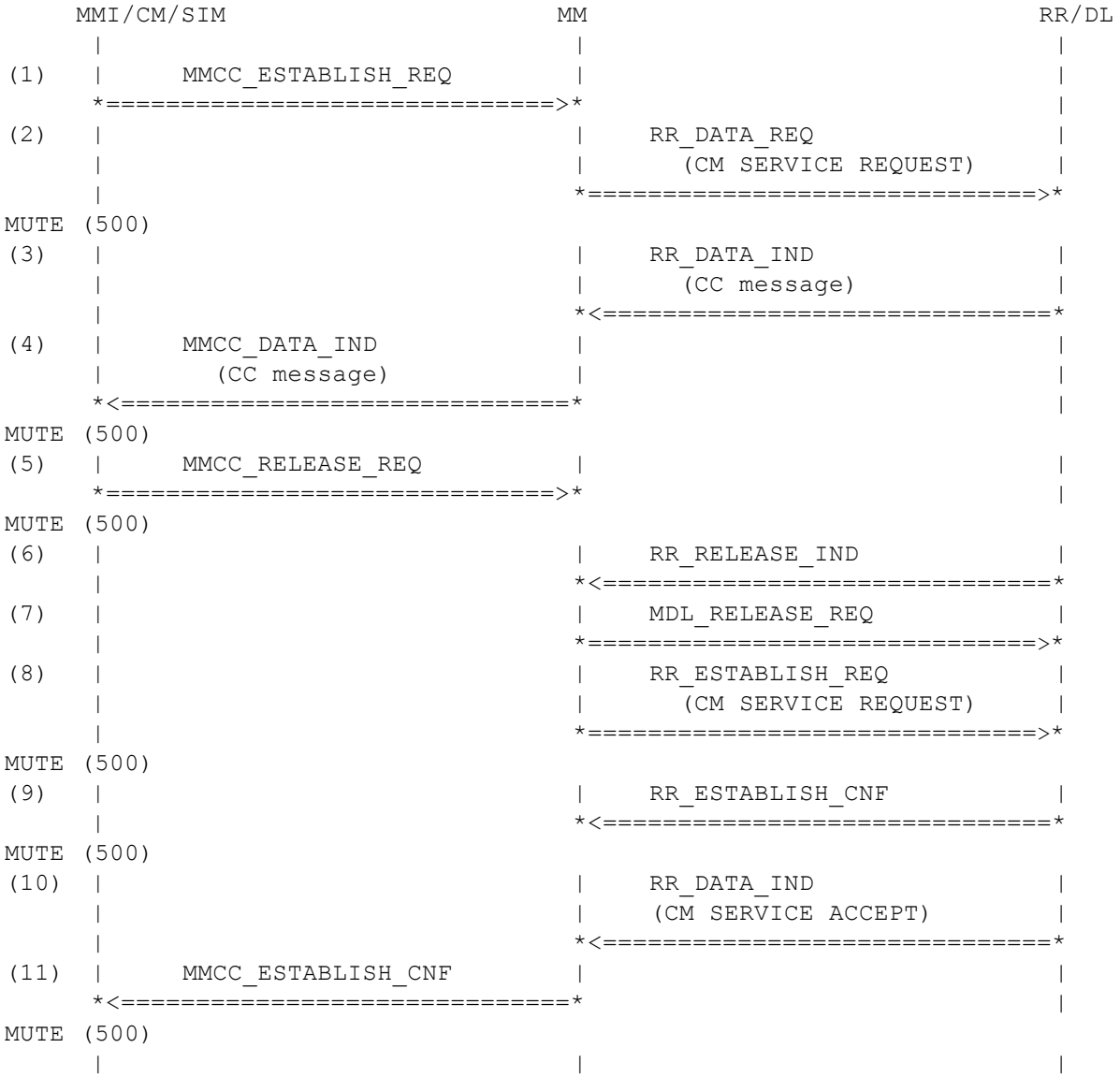
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_NORM
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	MMCC_RELEASE_IND		
		ti	TI_5
		cause	RRCS_NORM

History:	11.03.03	HM	Initial

3.5.6 MMG0086: Clash case in MM_WAIT_FOR_ADD_MM_CONN (II), success

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awiats the acception of the additionally requested MM connection. In this moment the active connection is released by CM and subsequently the RR connection is released. MM retries to establish the new CM connection. It is assumed that the retry is successful, the network accepts the CM SERVICE REQUEST and the successful establishment of a MM connection is confirmed to the CM.

Preamble: MMG0047



Parametrization

Primitive	Parameter	Value

(1)	MMCC_ESTABLISH_REQ		
		ti	TI_5
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(4)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(5)	MMCC_RELEASE_REQ		
		ti	TI_2
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED

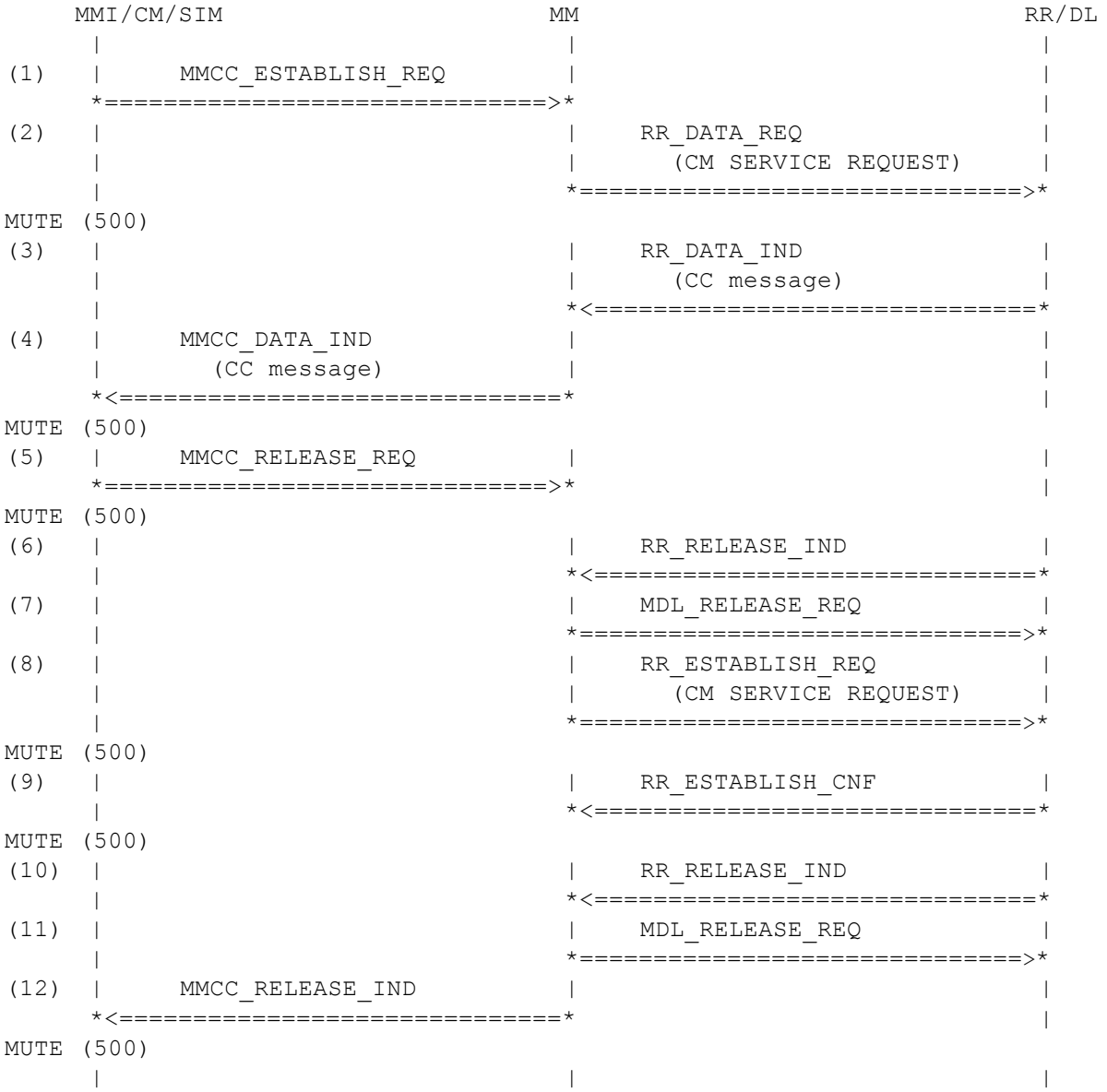
(10) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(11) MMCC_ESTABLISH_CNF		
	ti	TI_5

History:	11.03.03	HM	Initial

3.5.7 MMG0087: Clash case in MM_WAIT_FOR_ADD_MM_CONN (II), failure

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awiats the acception of the additionally requested MM connection. In this moment the active connection is released by CM and subsequently the RR connection is released. MM retries to establish the new CM connection. It is assumed that the retry is not successful, the network releases the RR connection before a CM SERVICE ACCEPT is received. It is checked that in this case no second retry is attempted.

Preamble: MMG0047



Parametrization

Primitive	Parameter	Value

(1)	MMCC_ESTABLISH_REQ		
		ti	TI_5
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(4)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(5)	MMCC_RELEASE_REQ		
		ti	TI_2
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED

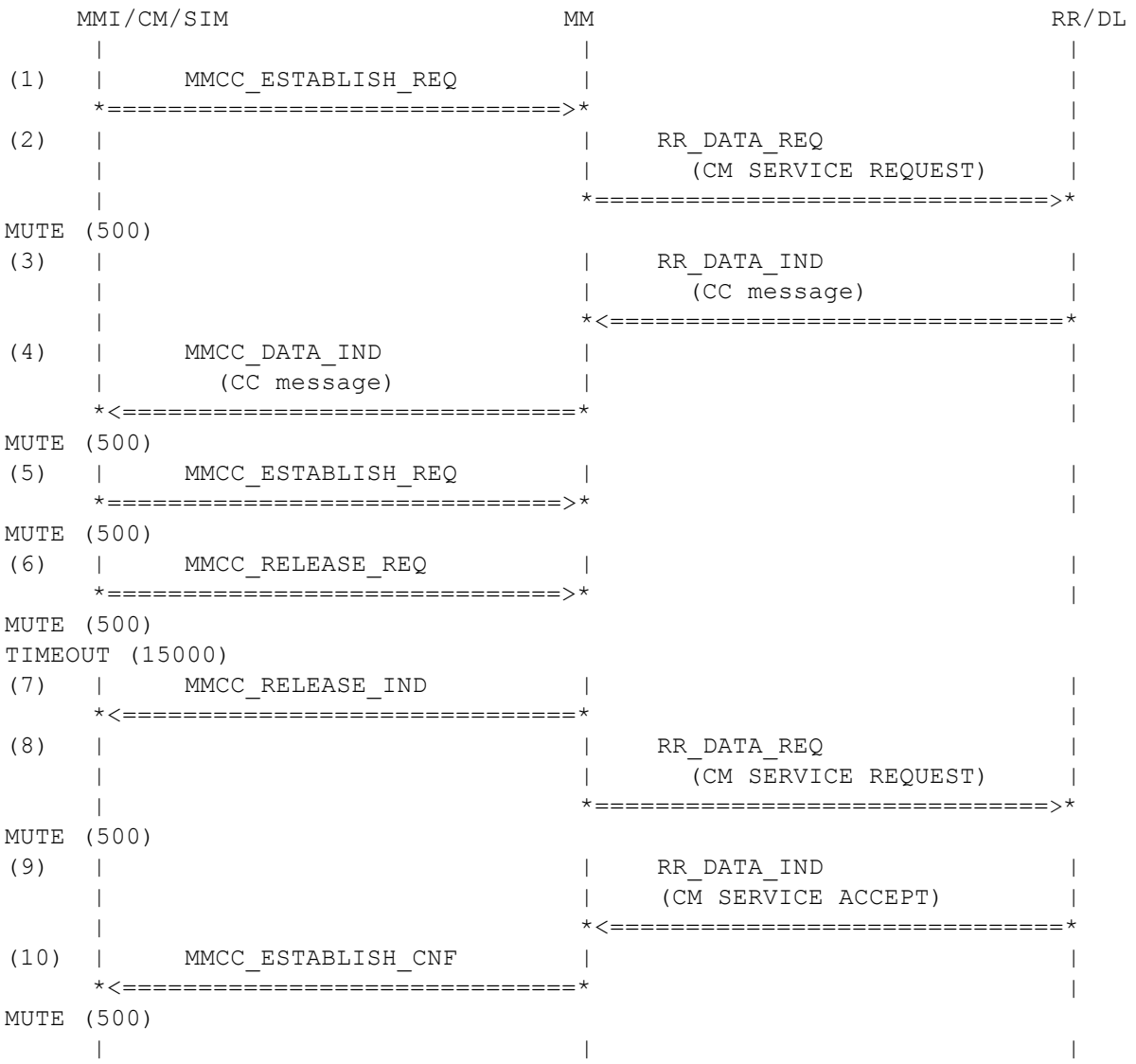
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	MMCC_RELEASE_IND		
		ti	TI_5
		cause	RRCS_NORM

History:	11.03.03	HM	Initial

3.5.8 MMG0088: Expiry of T3230 for 2nd requested MM connection

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awaits the acception of the additionally requested MM connection. The active connection is released, MM still waiting for CM SERVICE REQUEST. Another connection is requested by CM, this is stored. The network does not react. on the CM SERVICE REQUEST, T3230 expires. It is checked that the stored connection gets established.

Preamble: MMG0047



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_MOB_ORIG_SPCH

(2) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_CM_SERV_REQ
ti	TI_0
cm_serv_type	ST_MOC
ciph_key_num	CIPH_KEY_NUM_RES
mob_class_2	MOB_CLASS_2
mob_id	MOB_IDENT_IMSI
}	

(3) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	CC_MESSAGE_RESPONSE

(4) MMCC_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	CC_MESSAGE_RESPONSE

(5) MMCC_ESTABLISH_REQ

ti	TI_5
estcs	ESTCS_MOB_ORIG_SPCH

(6) MMCC_RELEASE_REQ

ti	TI_2

(7) MMCC_RELEASE_IND

ti	TI_3
cause	MMCS_TIMER_RECOVERY

(8) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_CM_SERV_REQ
ti	TI_0
cm_serv_type	ST_MOC
ciph_key_num	CIPH_KEY_NUM_RES
mob_class_2	MOB_CLASS_2
mob_id	MOB_IDENT_IMSI
}	

(9) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM

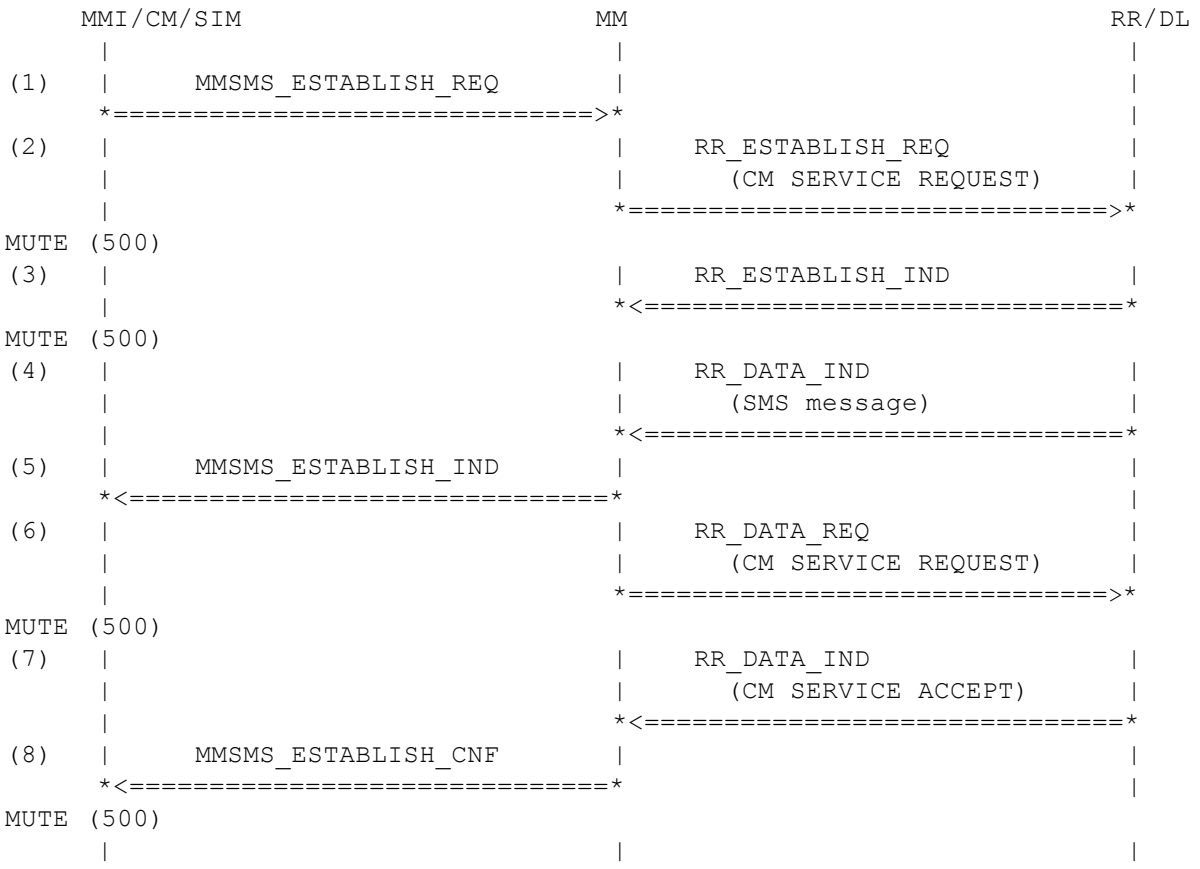
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(10)	MMCC_ESTABLISH_CNF		
		ti	TI_5

History:	11.03.03	HM	Initial

3.5.9 MMG0089: Clash of MO/MT SMS, RR_ESTABLISH_IND

Description: A MO SMS is to be established while RR is busy with responding to paging for a MT SMS (or whatever CM service). Instead of a RR_ESTABLISH_CNF for the MO SMS we get a RR_ESTABLISH_CNF for the MT SMS. After the MT SMS entered active state, the CM service request for the MO SMS is sent to the network when MM enters state MM_CONN_ACTIVE.

Preamble: MMG0024



Parametrization

Primitive	Parameter	Value
(1) MMSMS_ESTABLISH_REQ		
	ti	TI_2
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_SMS

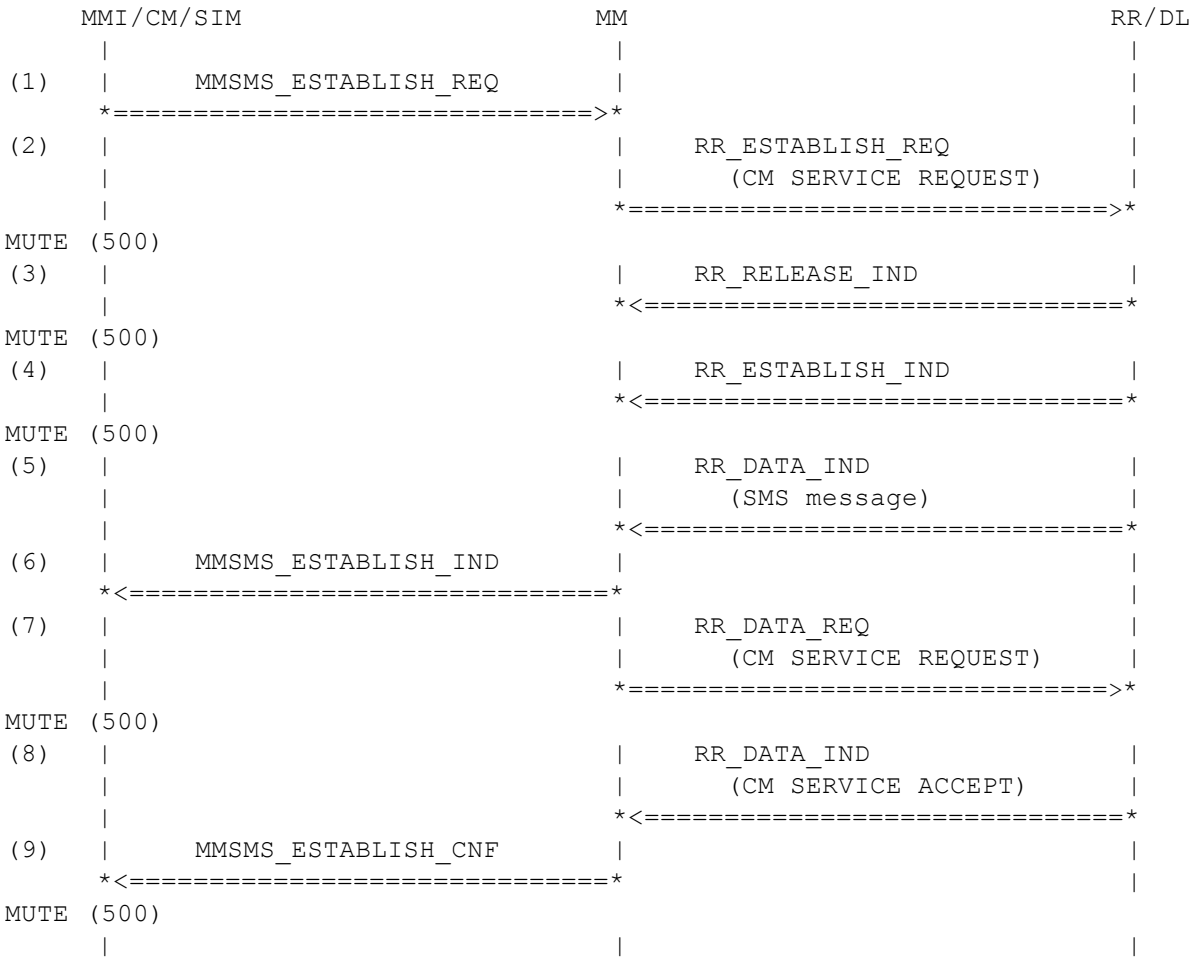
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_IND		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	SMS_MESSAGE_5
(5)	MMSMS_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	SMS_MESSAGE_5
(6)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_SMS
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(8)	MMSMS_ESTABLISH_CNF		
		ti	TI_2

History:	24.04.03	HM	Initial

3.5.10 MMG0090: Clash of MO/MT SMS, RR_RELEASE_IND, MT okay

Description: A MO SMS is to be established while RR is busy with responding to paging for a MT SMS (or whatever CM service). Instead of a RR_ESTABLISH_CNF for the MO SMS we get a RR_RELEASE_IND indicating there was a collision. Subsequently we get the RR_ESTABLISH_CNF for the MT SMS. After the MT SMS entered active state, the CM service request for the MO SMS is sent to the network when MM enters state MM_CONN_ACTIVE.

Preamble: MMG0024



Parametrization

Primitive	Parameter	Value
(1) MMSMS_ESTABLISH_REQ		
	ti	TI_2
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
	sdu	
	{	
	component	MM

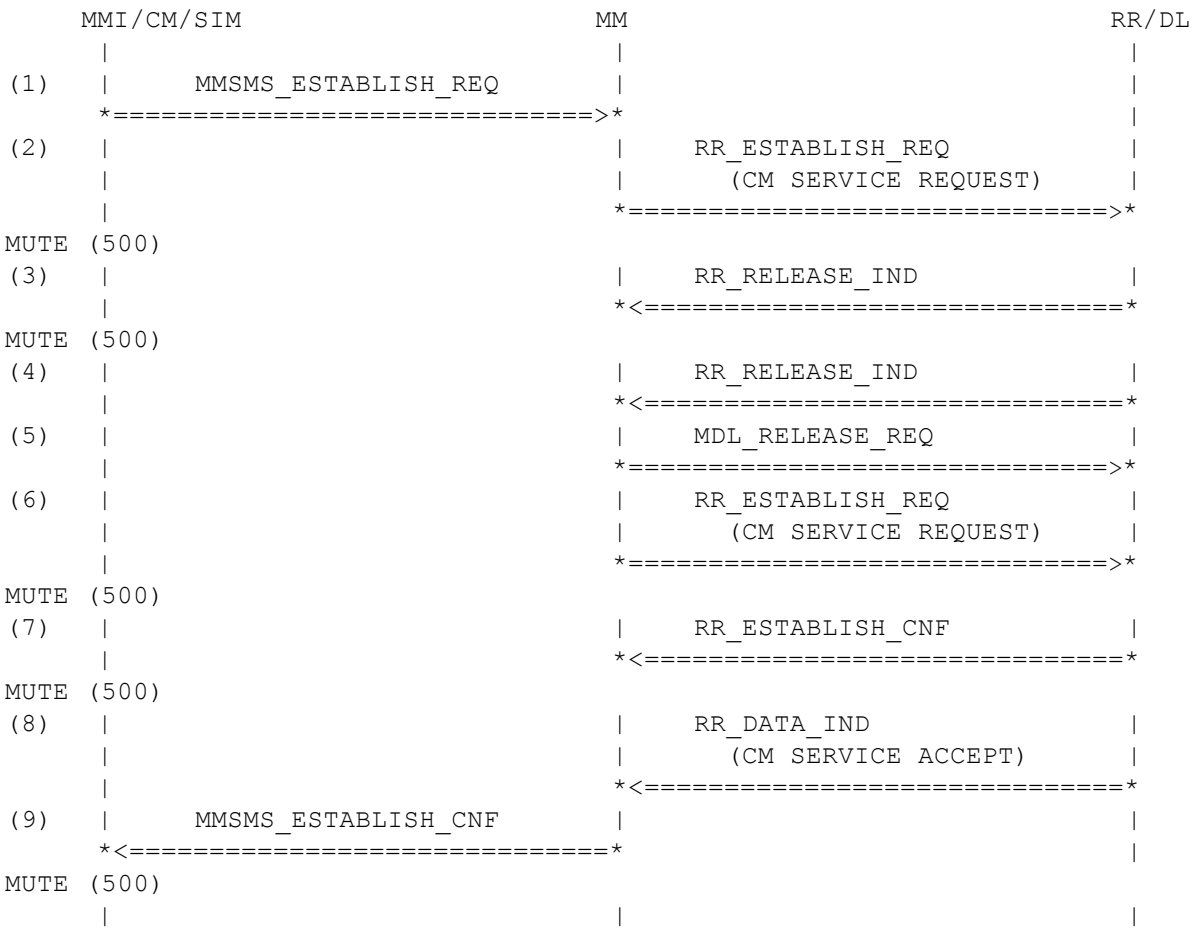
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_SMS
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_MO_MT_COLL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	RR_ESTABLISH_IND		
		param	NOT_USED
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	SMS_MESSAGE_5
(6)	MMSMS_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	SMS_MESSAGE_5
(7)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_SMS
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(9)	MMSMS_ESTABLISH_CNF		
		ti	TI_2

History:	24.04.03	HM	Initial

3.5.11 MMG0091: Clash of MO/MT SMS, RR_RELEASE_IND, MT not okay

Description: A MO SMS is to be established while RR is busy with responding to paging for a MT SMS (or whatever CM service). Instead of a RR_ESTABLISH_CNF for the MO SMS we get a RR_RELEASE_IND indicating there was a collision. As there were problems in RR responding to paging, the MT SMS is not established, instead MM receives a RR_RELEASE_IND for the MT SMS. The CM service request for the MO SMS is sent to the network when MM receives the RR_RELEASE_IND for the MT in IDLE state.

Preamble: MMG0024



Parametrization

Primitive		Parameter	Value
(1)	MMSMS_ESTABLISH_REQ		
		ti	TI_2
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK

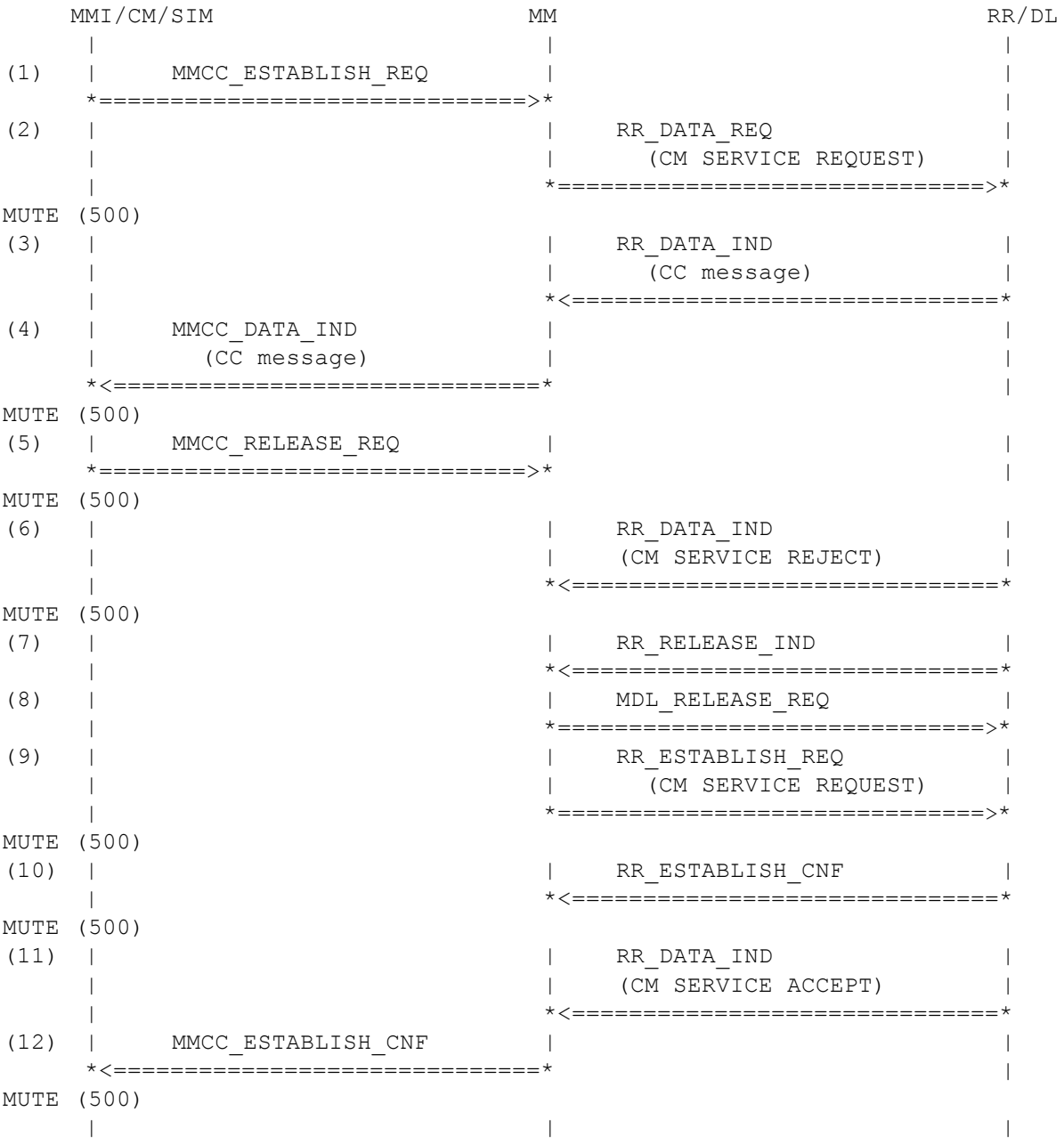
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_SMS
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_MO_MT_COLL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	RR_RELEASE_IND		
		cause	RRCS_DATA_LINK_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_SMS
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(9)	MMSMS_ESTABLISH_CNF		
		ti	TI_2

History:	24.04.03	HM	Initial

3.5.12 MMG0092: Clash case in MM_CONN_ACTIVE, CM_SERV_REJ, success

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awiats the acception of the additionally requested MM connection. In this moment the active connection is released by CM. Before the RR connection is released by RR a CM SERVICE REJECT is. MM retries to establish the new CM connection. It is assumed that the retry is successful, the network accepts the CM SERVICE REQUEST and the successful establishment of a MM connection is confirmed to the CM.

Preamble: MMG0047



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_5
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(4)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(5)	MMCC_RELEASE_REQ		
		ti	TI_2
(6)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_REJ
		ti	TI_0
		rej_cause	RC_MESSAGE_INCOMPAT
		}	
(7)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	

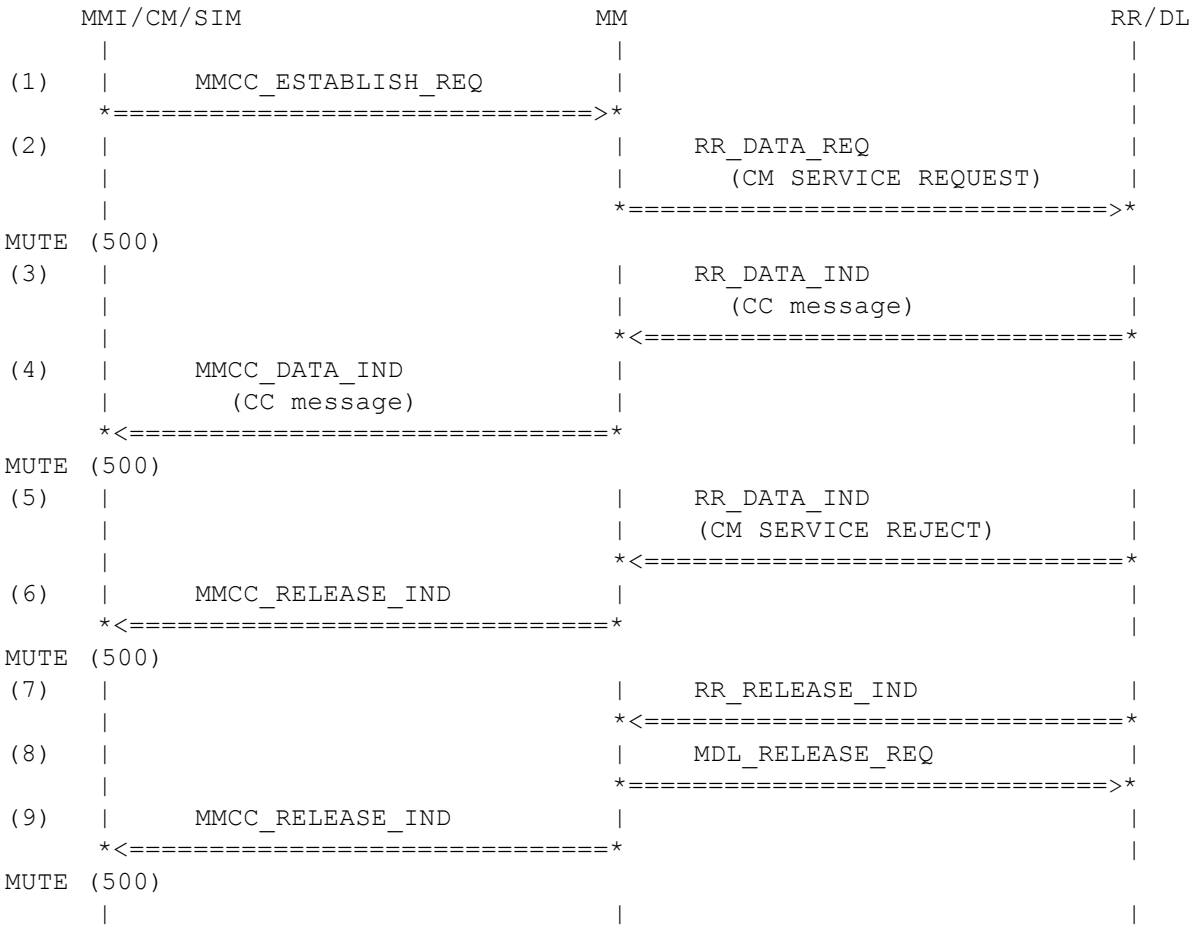
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_ESTABLISH_CNF		
		param	NOT_USED
(11)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(12)	MMCC_ESTABLISH_CNF		
		ti	TI_5

History:	24.04.03	HM	Initial

3.5.13 MMG0093: MM_CONN_ACTIVE, CM_SERV_REJ, no clash, no repeat

Description: In state MM_CONN_ACTIVE (6) a request to establish a second call is received by MM. MM sends via the existing MM connection a CM SERVICE REQUES message to the network and awaits the acception of the additionally requested MM connection. The CM service request is rejected by the network. As we still have an active connection the clash case is not given here, therefore the CM SERVICE REJECT is handled exactly as described in GSM 04.08, this means, the CM layer is informed that the connection establishment failed and no reattempt is made.

Preamble: MMG0047



Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_5
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	

		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(4)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_REJ
		ti	TI_0
		rej_cause	RC_MESSAGE_INCOMPAT
		}	
(6)	MMCC_RELEASE_IND		
		ti	TI_5
		cause	MMCS_MESSAGE_INCOMPAT
(7)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_NORM

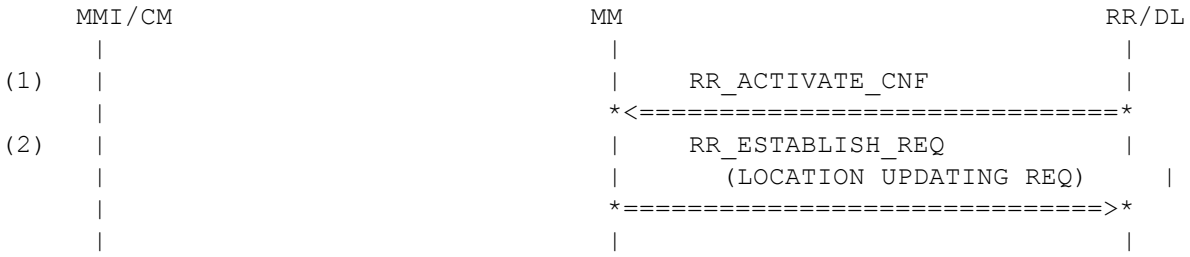
History:	24.04.03	HM	Initial

3.6 Location Updating

3.6.1 MMG0101: MS in new Location Area

Description: A new location area is signalled to MM in the form of a RR-ACTIVATE confirmation primitive. MM starts normal Location Updating by issuing a LOCATION UPDATING REQ message as part of a RR-ESTABLISH request primitive and enters State 13 (Wait for RR-Connection - Location Updating).

Preamble: MMG0023A



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:			
	07.07.97	HK	Initial
	30.01.02	HM	Revised

3.6.2 MMG0102: New LAI with Periodic Updating

Description: A new location area is signalled to MM in the form of a RR-ACTIVATE confirmation primitive. MM starts normal Location Updating by issuing a LOCATION UPDATING REQ message as part of a RR-ESTABLISH request primitive and enters State 13 (Wait for RR-Connection - Location Updating).

Preamble: MMG0023A

Parametrization

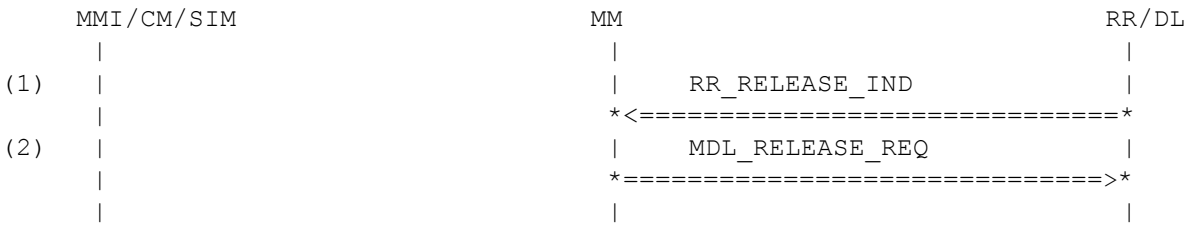
Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0001
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ	estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:			
	08.07.97	HK	Initial
	04.08.97	DL	Revised
	30.01.02	HM	Revised

3.6.3 MMG0103: Access classes barred in State 13

Description: MM receives a RR-RELEASE indication primitive from RR; normal Location Updating cannot be carried out because the access classes in the chosen cell are barred. MM issues a MDL-RELEASE request primitive and changes to State 19.2 (Idle Attempting to Update).

Preamble: MMG0101



Parametrization

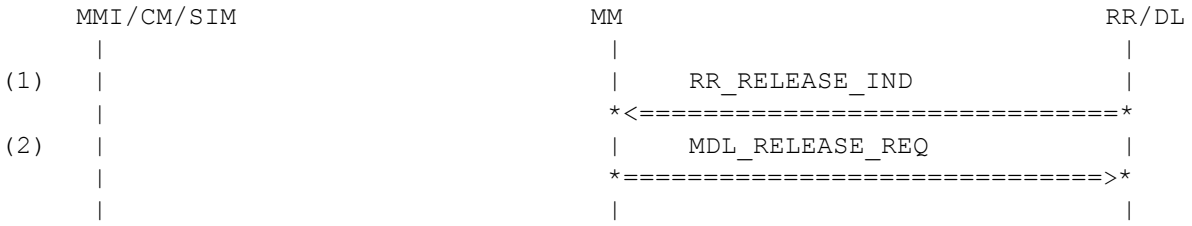
Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History: 09.07.97 HK Initial

3.6.4 MMG0104: Random access delayed in State 13

Description: MM receives a RR-RELEASE indication primitive from RR; Normal Location Updating cannot be carried out because of random access delay. MM issues a MDL-RELEASE request primitive.

Preamble: MMG0101



Parametrization

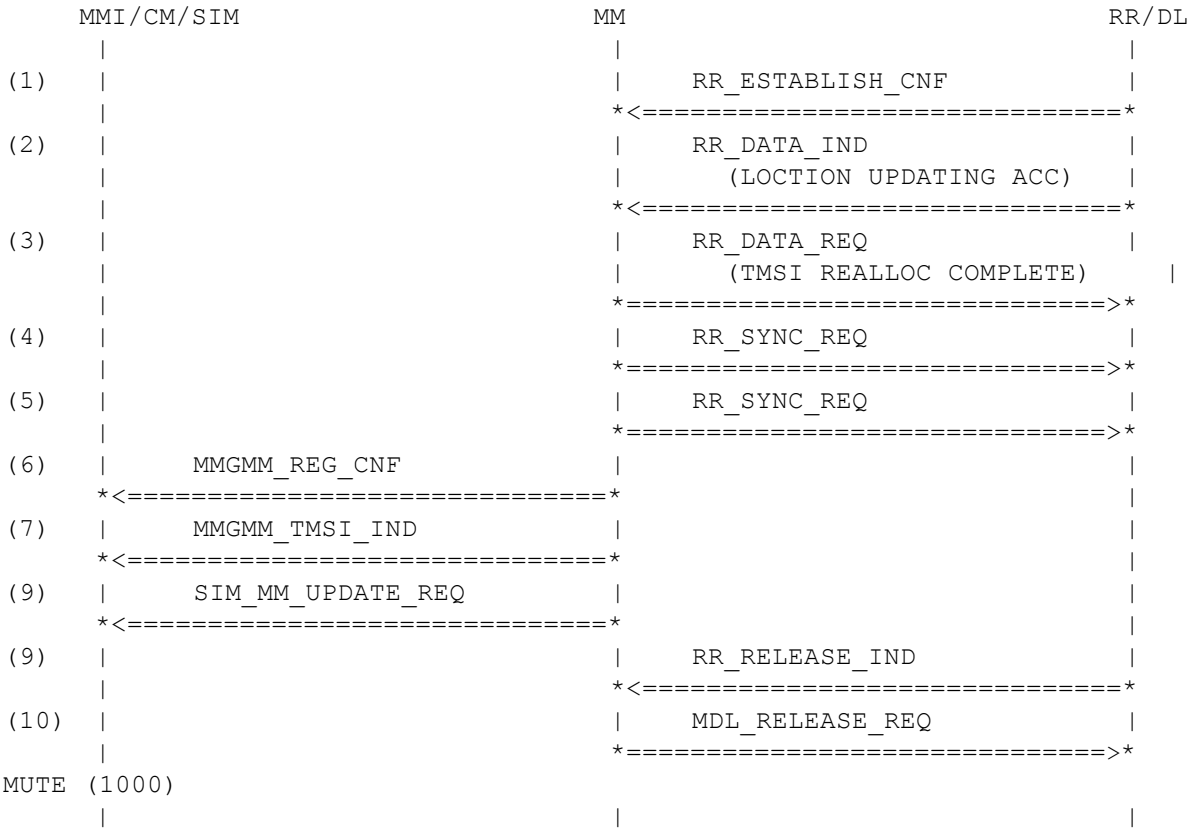
Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_DELAY
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History: 09.07.97 HK Initial

3.6.5 MMG0105: Successful Location Updating

Description: Successful registration of the mobile station is signalled by the base station in the form of a RR-ESTABLISH confirmation primitive and the receipt of a LOCTION UPDATING ACC message. MM changes to State 9 (Wait for Network Command) and issues a TMSI REALLOC COMPLETE message followed by a RR_SYNC request and a SIM_MM_UPDATE_REQ primitive.

Preamble: MMG0101



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_id	MOB_IDENT_NEW_TMSI

	follow_proceed	NOT_USED
	}	
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(4) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(5) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(6) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
	resumption	NOT_USED
(7) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(8) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_0002_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(9) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK

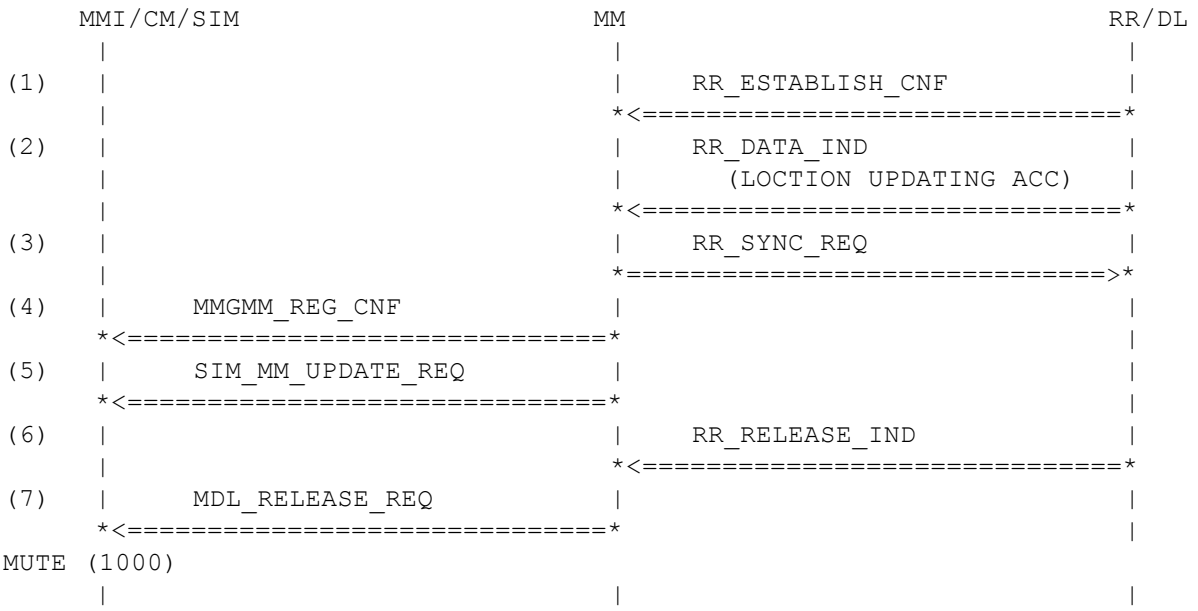
(10) MDL_RELEASE_REQ

		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
History:	08.07.97	HK	Initial
	31.07.97	DL	Revised
	12.08.97	HK	Revised
	06.12.00	HM	Revised
	17.01.02	HM	Revised
	04.02.02	HM	Revised

3.6.6 MMG0106: Location Accept without Mobile Identity

Description: Successful registration of the mobile station is signalled by the base station in the form of a RR-ESTABLISH confirmation primitive. MM changes to State 9 (Wait for Network Command) and issues a LOCTION UPDATING ACC message (without Mobile Identity) followed by a RR-SYNC request, a MMR-REG confirmation and a SIM-MM-UPDATE request primitive. Following receipt of a RR-RELEASE indication primitive, MM issues a MDL-RELEASE request primitive.

Preamble: MMG0101



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_id	NOT_USED
	follow_proceed	NOT_USED
	}	
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED

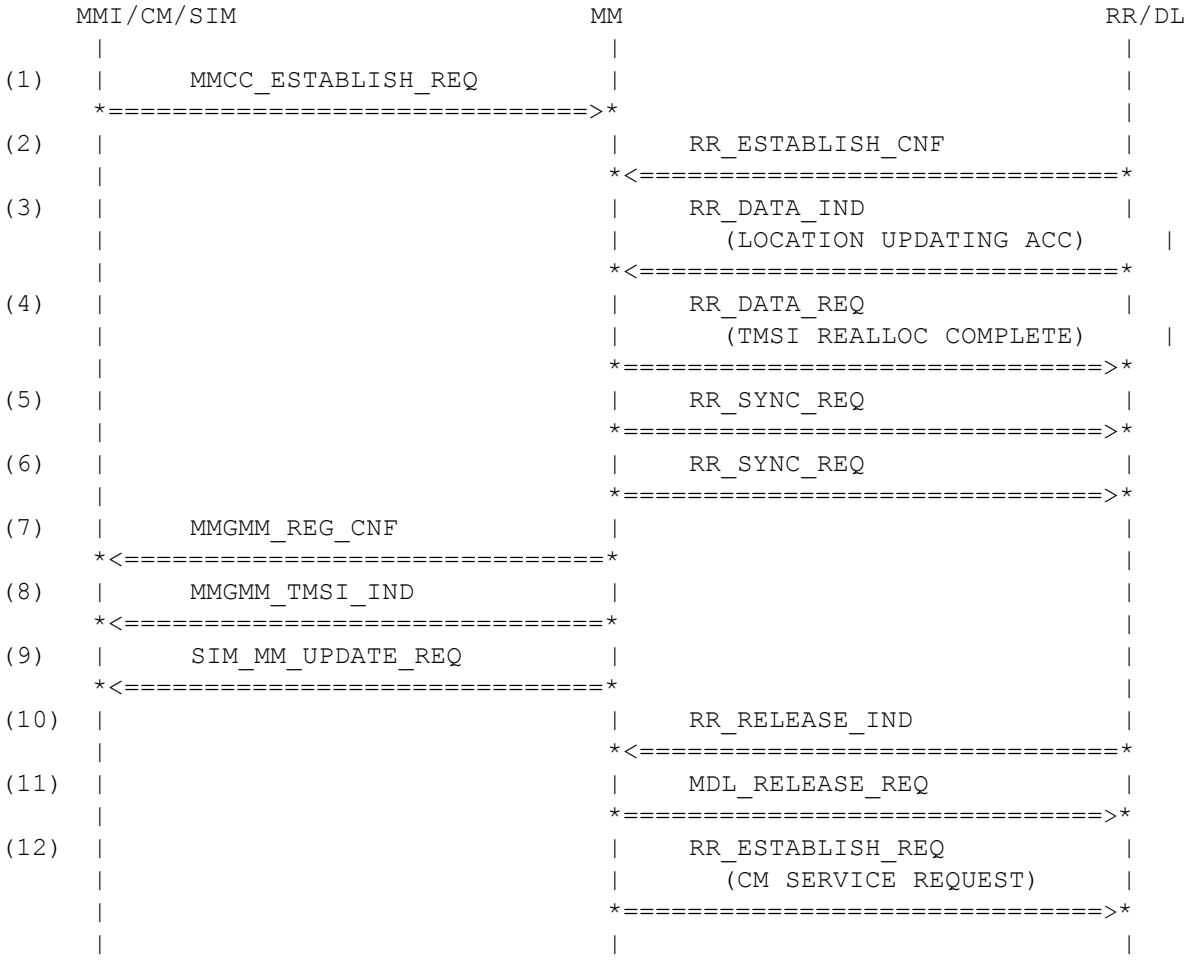
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(4) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
	resumption	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_0002_FFFFFFFF
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(6) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	10.07.97	HK	Initial
	04.02.02	HM	Revised

3.6.7 MMG0107: Connection request stored until Location Updating complete

Description: MM receives a MMCC-ESTABLISH request primitive from MM and a RR-ESTABLISH confirmation primitive from RR. MM stores the connection request until Location Updating has been completed. The mobile-terminated call is then processed (RR-SYNC request, MMR-REG confirmation primitive). Following completion of the MOT in the form of a RR-RELEASE indication primitive, RR releases the requested connection. After having completely released the RR connection, this is reestablished immediately to satisfy the pending connection request. For this test, a TEST SIM is inserted into the mobile.

Preamble: MMG0115



Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_ESTABLISH_CNF		
		param	NOT_USED
(3)	RR_DATA_IND		
		d1	NOT_USED

		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(4)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(7)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(8)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(9)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_0002_34125708
		bcch_inf	BCCH_INF_1

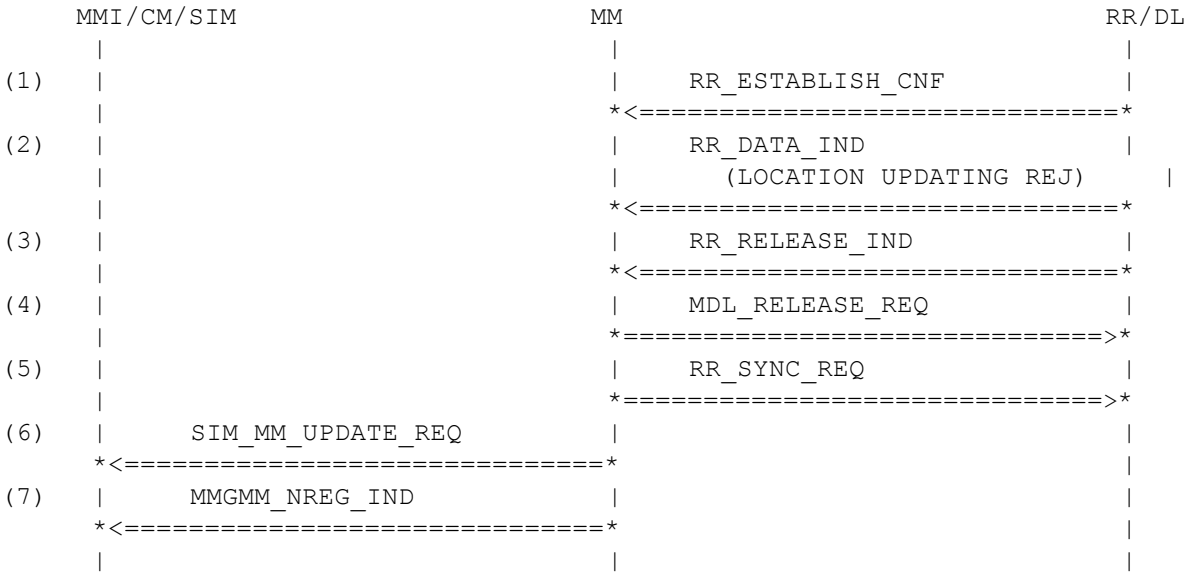
forb_plmn		NOT_USED
cksn		CKSN_RES
kc		KC_VALUE_EMPTY
cell_identity		CELL_ID_1122
(10) RR_RELEASE_IND		
cause		RRCS_ABNORM_UNSPEC
sapi		SAPI_0
gprs_resumption		GPRS_RESUMPTION_NOT_ACK
(11) MDL_RELEASE_REQ		
ch_type		NOT_PRESENT_8BIT
sapi		SAPI_0
(12) RR_ESTABLISH_REQ		
estcs		ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
sdu		
{		
component		MM
direction		UPLINK
pd		U_CM_SERV_REQ
ti		TI_0
cm_serv_type		ST_MOC
ciph_key_num		CIPH_KEY_NUM_RES
mob_class_2		MOB_CLASS_2
mob_id		MOB_IDENT_TMSI
}		

History:	15.09.97	DL	Initial
	16.02.00	HM	Revised
	17.01.02	HM	Revised

3.6.8 MMG0108: Location Updating Reject (PLMN not allowed)

Description: A request for a RR connection for Location Updating is confirmed in the form of a RR-ESTABLISH confirmation primitive. MM changes to State 3 (Location Updating initiated). MM is then notified in the form of a LOCATION-UPDATING-REJECT message that PLMN roaming is not allowed for the mobile station. MM releases the RR connection by issuing a MDL-RELEASE request primitive and changes to State 11 (Idle Roaming not allowed).

Preamble: MMG0101



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_PLMN_NOT_ALLOWED
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

(5) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(6) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(7) MMGMM_NREG_IND

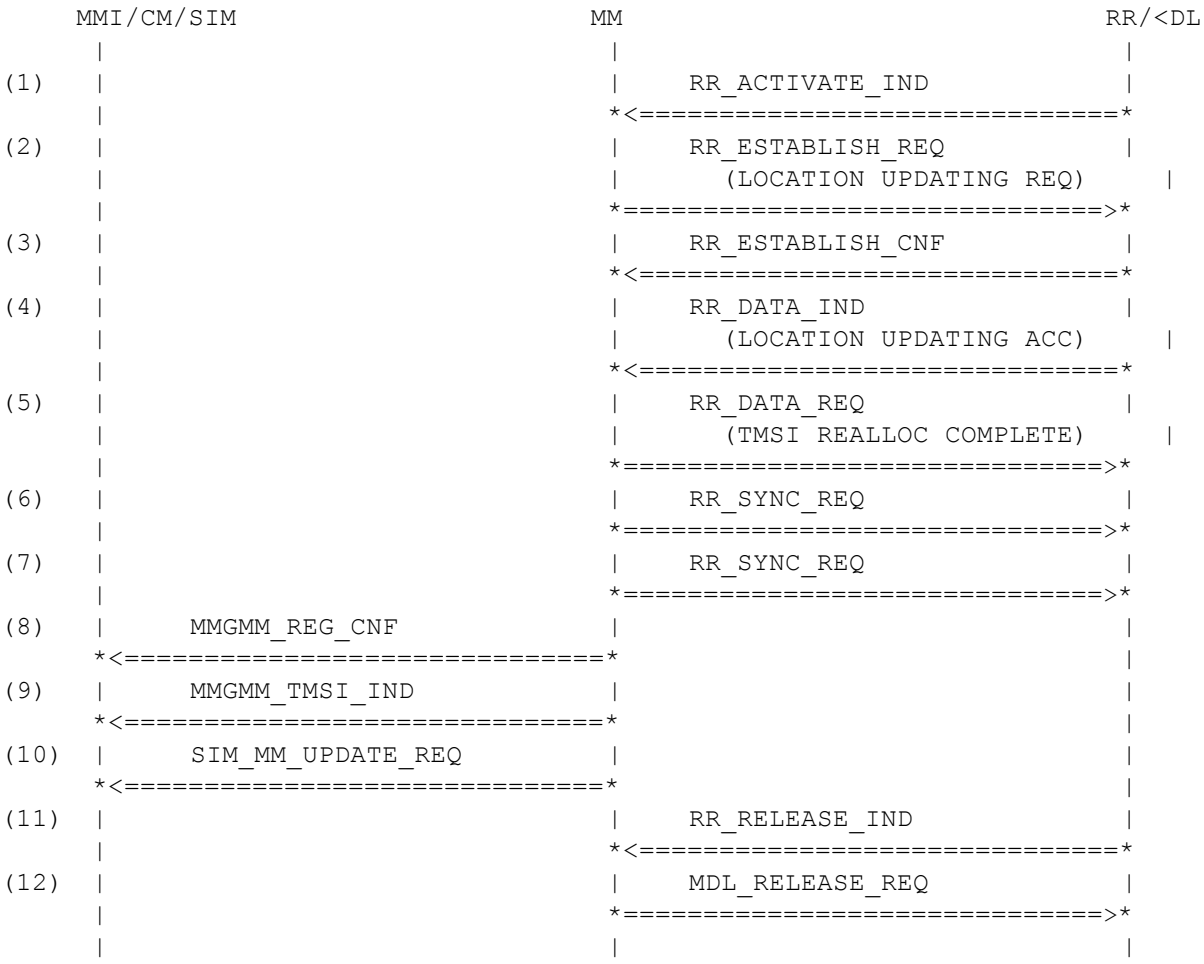
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_PLMN_NOT_ALLOWED

History:			
	09.07.97	HK	Initial
	04.08.97	DL	Revised
	02.03.00	HM	Revised (search_running)

3.6.9 MMG0109: Change of Area in Update Status U3

Description: MM receives a RR-ACTIVATE indication primitive indicating a change of location area while in Update Status U3 (Roaming not allowed). MM starts Location Updating by sending a LOCATION UPDATING REQ message. After completion of the Location Updating, MM is in State 1 (Idle updated).

Preamble: MMG0108



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	

		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_44_0002
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED

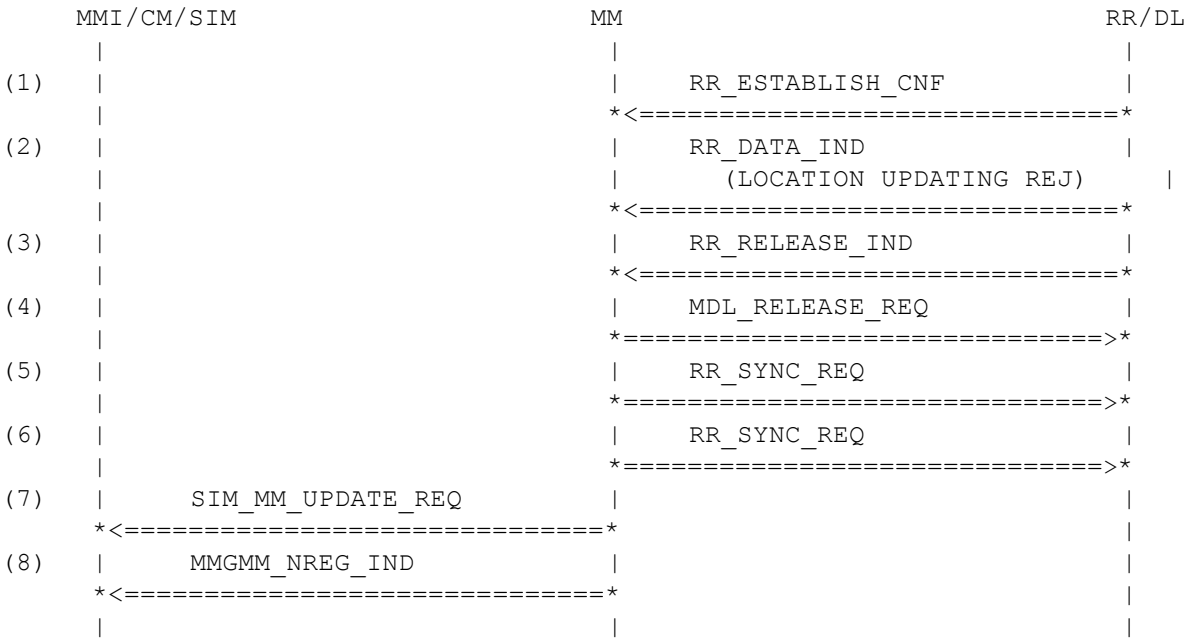
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(8)	MMGMM_REG_CNF		
		plmn	PLMN_123_44
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(10)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_44_0002_34125708
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(11)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

History:	09.07.97	HK	Initial
	05.08.97	DL	Revised
	24.11.00	HM	Revised

3.6.10 MMG0110: Location Updating Reject (LAI roaming not allowed)

Description: While in Update Status U3 (Roaming not allowed) MM receives a RR-ESTABLISH confirmation primitive followed by a LOCATION UPDATING REJECT message indicating that LAI roaming is not permitted for the mobile station. MM releases the RR connection and then issues a SIM-MM-UPDATE request primitive.

Preamble: MMG0101



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_LA_NOT_ALLOWED
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

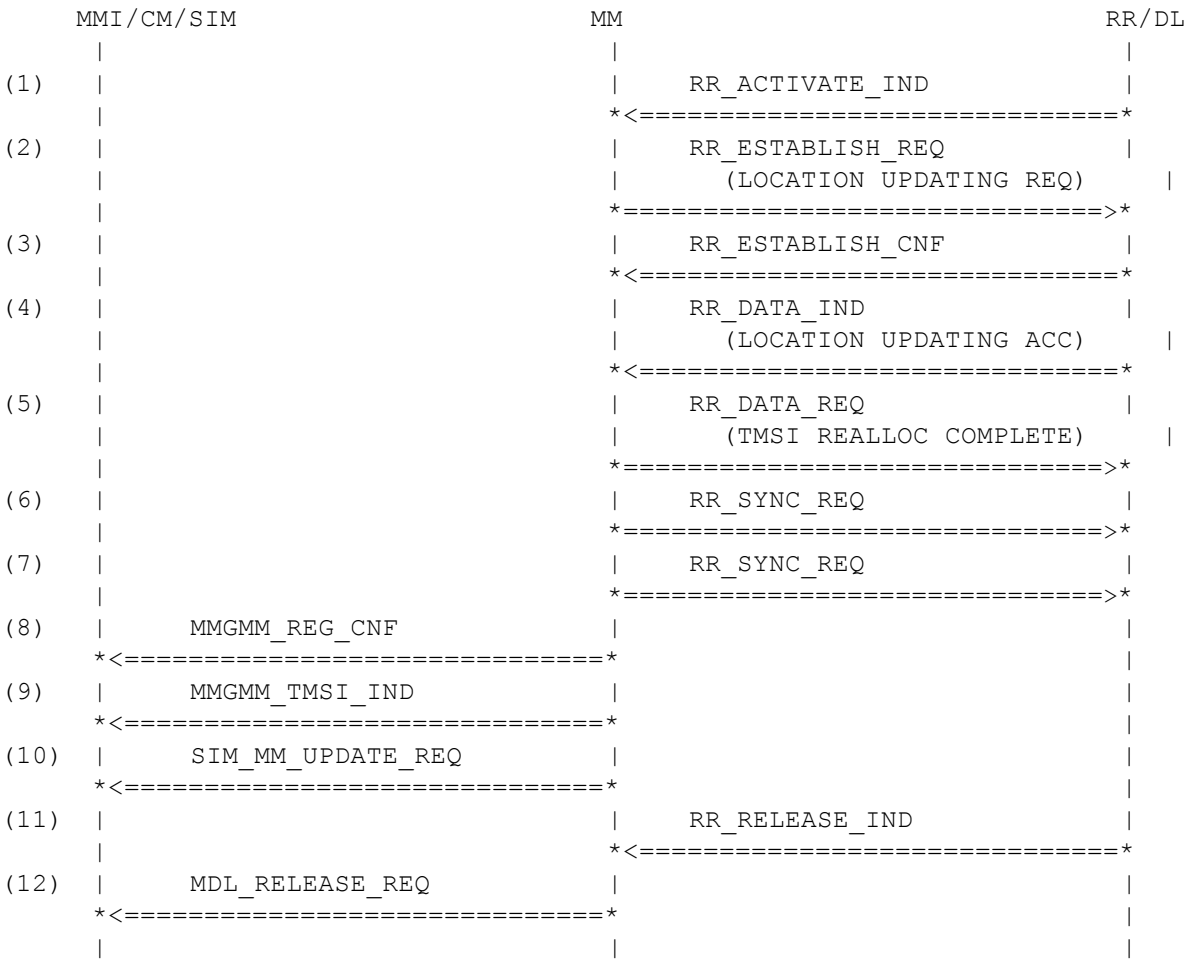
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_LAI_NOT_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_PLMN_NOT_ALLOW
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(8)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_LA_NOT_ALLOWED

History:	09.07.97	HK	Initial
	05.08.97	DL	Revised
	02.03.00	HM	Revised (search_running)

3.6.11 MMG0111: New Location Area Code in Update Status U3

Description: In Update Status U3 (Roaming not allowed) MM is . A new Location Updating is started by a change of cell. After completion of Location Updating MM is once more in State U1 Idle Updated.

Preamble: MMG0110



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0001
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM

	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_1
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(5) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(6) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(7) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED

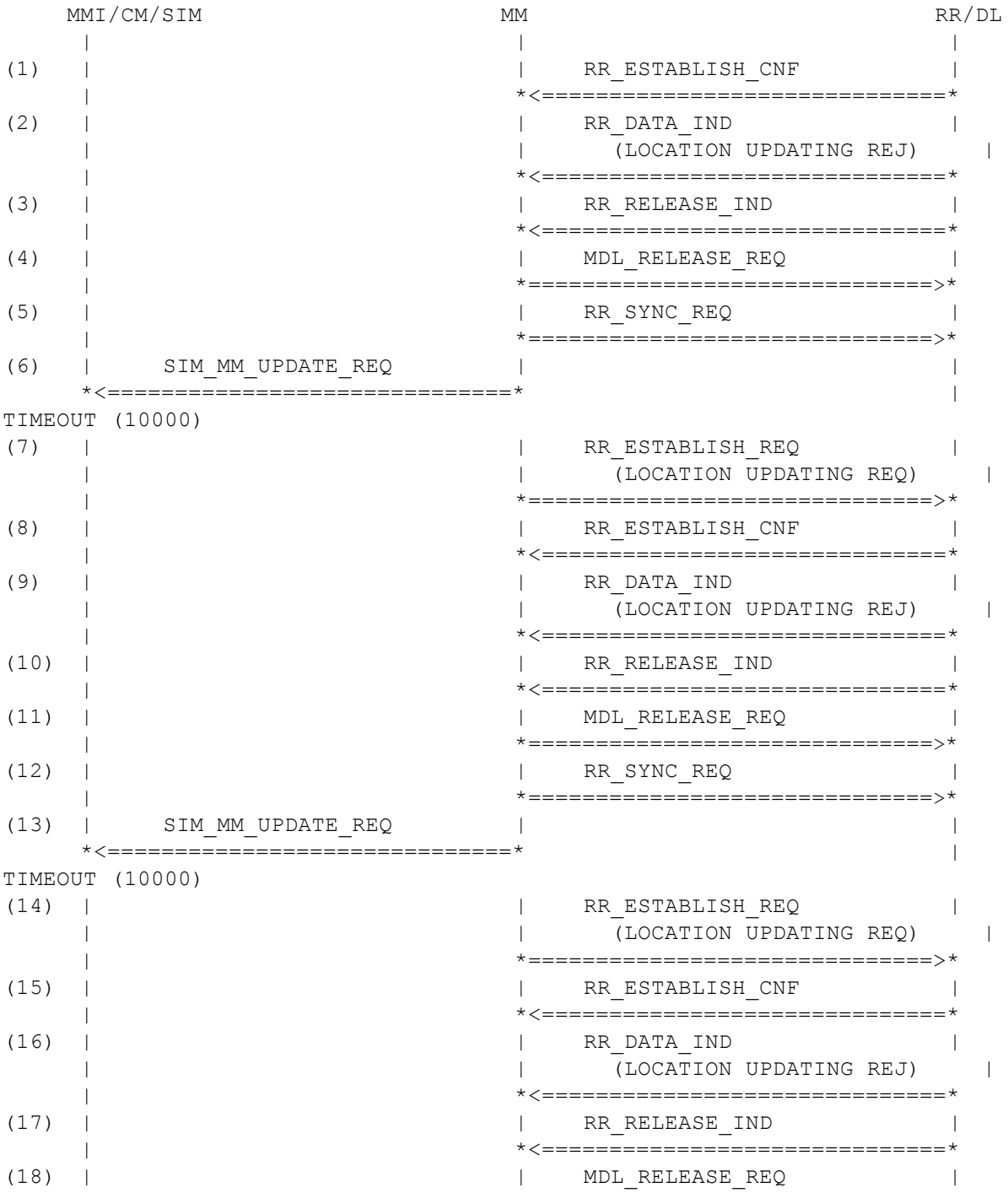
	plmn	PLMN_123_33
	lac	LAC_0001
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(8) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_0001
	cid	CELL_ID_1122
	resumption	NOT_USED
(9) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(10) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_0001_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(11) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

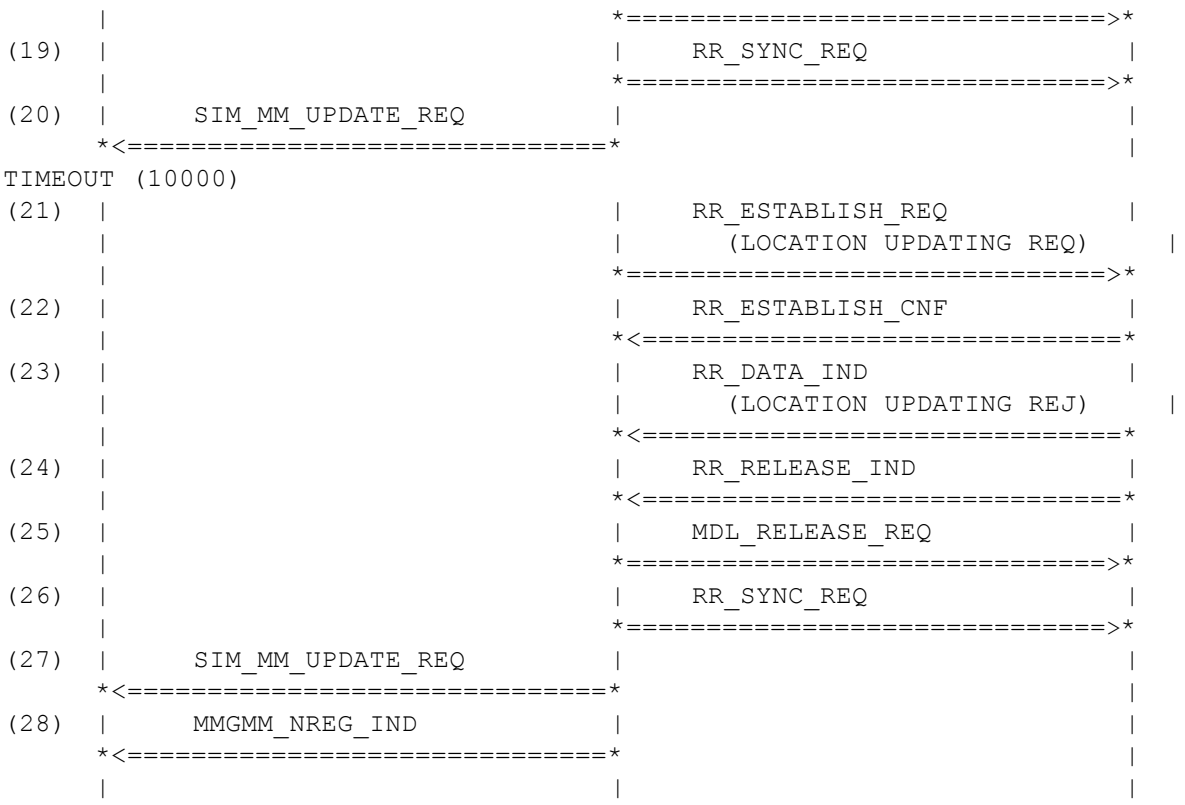
History:	09.07.97	HK	Initial
	17.01.02	HM	Revised

3.6.12 MMG0112: Normal Location Updating rejected four times

Description: A Normal Location Updating has been started in Update Status 2 (Idle not updated). A LOCATION UPDATING REJ message is received and MM releases the RR connection, initiates synchronization with RR and request SIM for an update . This sequence is carried out four times; each attempt is rejected (LOCATION UPDATING REJ message). Following the fourth attempt MM remains in Update Status 2 (Idle not Updated) and issues a MMR-NREG indication primitive.

Preamble: MMG0101





Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(3) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(5) RR_SYNC_REQ		
	op	NOT_USED

	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(6) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(7) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(8) RR_ESTABLISH_CNF		
	param	NOT_USED
(9) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(10) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

(12) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(13) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(14) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(15) RR_ESTABLISH_CNF

param	NOT_USED

(16) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_UNSPECIFIED
}	

(17) RR_RELEASE_IND

cause	RRCS_ABNORM_UNSPEC
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(18) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(19) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(20) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(21) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(22) RR_ESTABLISH_CNF

param	NOT_USED

(23) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_UNSPECIFIED
}	

(24) RR_RELEASE_IND

cause	RRCS_ABNORM_UNSPEC
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(25) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(26) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(27) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(28) MMGMM_NREG_IND

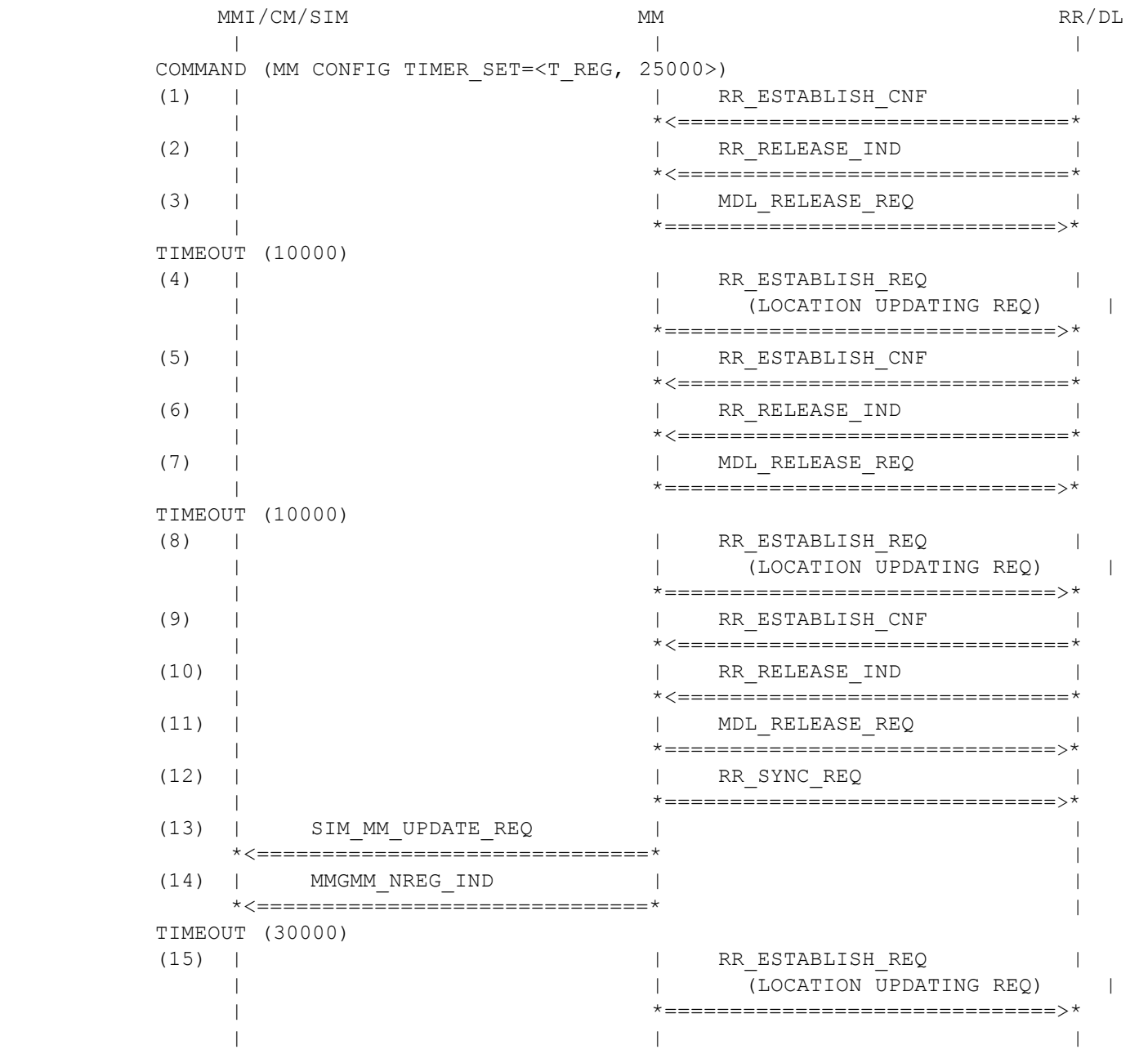
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_UNSPECIFIED

History:	09.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)

3.6.13 MMG0113: Re-attempt after time-out Location updating timer

Description: MM enters state 19.2 (Idle Attempting to Update). The registration timer is started. After expiry, a normal location update attempt is started.

Preamble: MMG0409



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF	param	NOT_USED

(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(11) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(12) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(13) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(14) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(15) RR_ESTABLISH_REQ

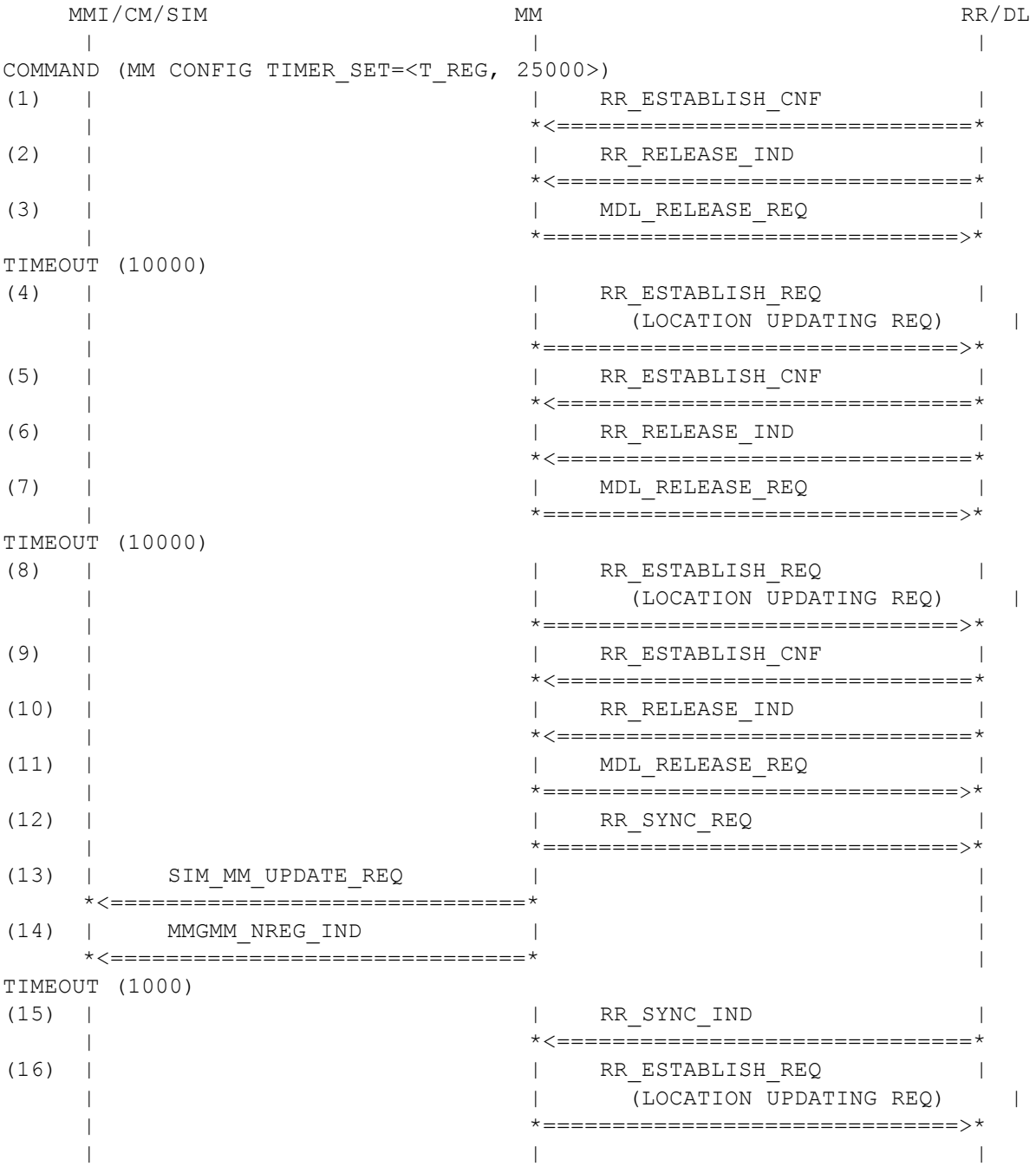
estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

History:			
	09.07.97	HK	Initial
	26.01.01	HM	Revised
	01.02.01	HM	Revised version copied from MM.DOC

3.6.14 MMG0114: Re-attempt after fieldstrength jump

Description: MM enters state 19.2 (Idle Attempting to Update). RR indicates a fieldstrength jump and a re-attempt is started, if a SIM card, but no Test-SIM card is inserted.

Preamble: MMG0409



Parametrization

Primitive	Parameter	Value

(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED

(10) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(11) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(12) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(13) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(14) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(15) RR_SYNC_IND

ciph	CIPH_NOT_PRES
mm_info	NOT_USED
bcch_info	NOT_USED
synccs	SYNCCS_LUP_RETRY
chm	CHM_NOT_PRESENT

(16) RR_ESTABLISH_REQ

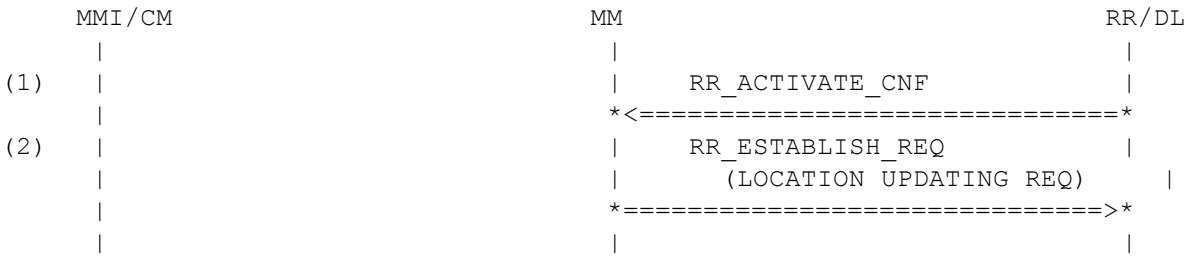
estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

History:	09.07.97	HK	Initial
	26.01.01	HM	Revised
	01.02.01	HM	Revised version copied from MM.DOC

3.6.15 MMG0115: MS in new Location Area (TEST SIM inserted)

Description: A new location area is signalled to MM in the form of a RR-ACTIVATE confirmation primitive. MM starts normal Location Updating by issuing a LOCATION UPDATING REQ message as part of a RR-ESTABLISH request primitive and enters State 13 (Wait for RR-Connection - Location Updating).

Preamble: MMG0023B



Parametrization

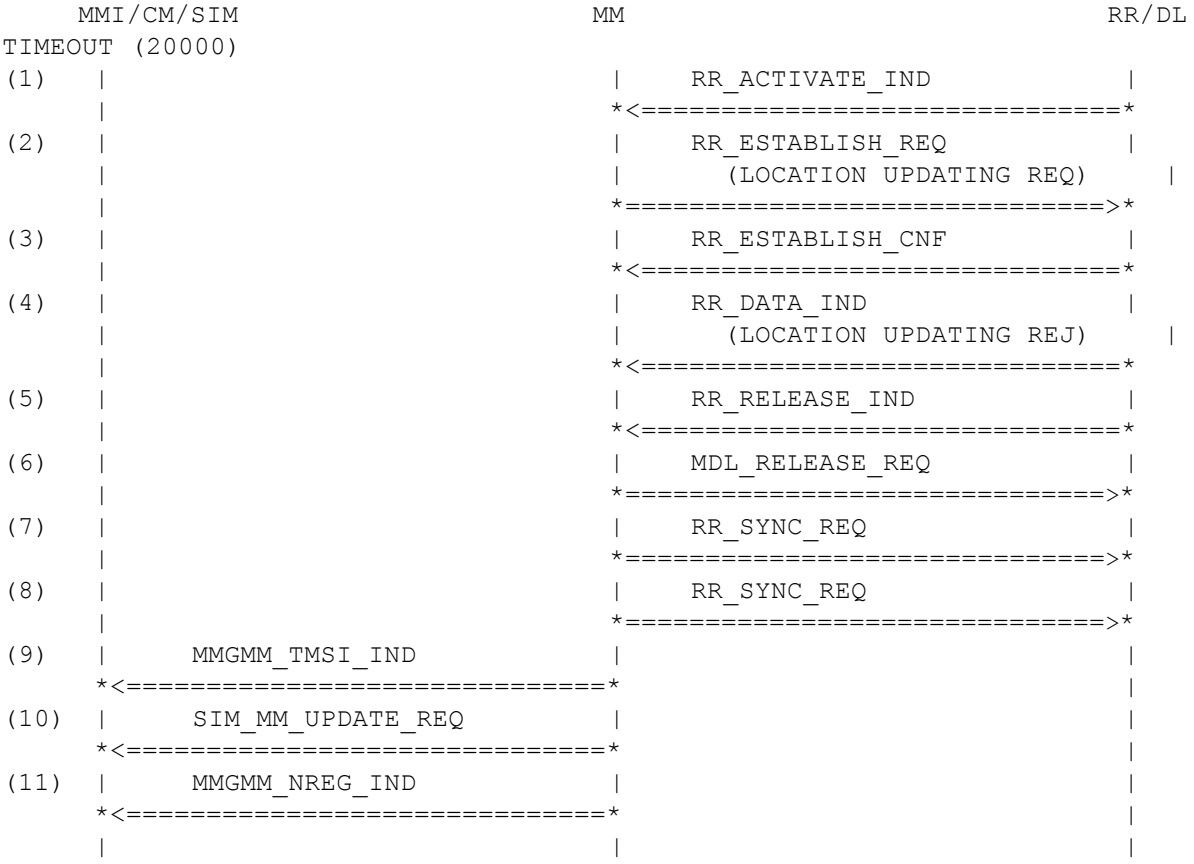
Primitive		Parameter	Value
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History: 15.02.00 HM Initial

3.6.16 MMG0116: Location Updating Reject (PLMN not allowed), not HPLMN

Description: A request for a RR connection for Location Updating is confirmed in the form of a RR-ESTABLISH confirmation primitive. MM changes to State 3 (Location Updating initiated). MM is then notified in the form of a LOCATION-UPDATING-REJECT message that PLMN roaming is not allowed for the mobile station. MM releases the RR connection by issuing a MDL-RELEASE request primitive and changes to State 11 (Idle Roaming not allowed). The PLMN for which the LOCATION UPDATING REJECT with cause PLMN NOT ALLOWED received is *not* the HPLMN, thus it *will* be added to the forbidden list.

Preamble: MMG0105



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM

		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_PLMN_NOT_ALLOWED
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_LIMITED_SERVICE
		accc	NOT_USED
		thplmn	NOT_USED
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL

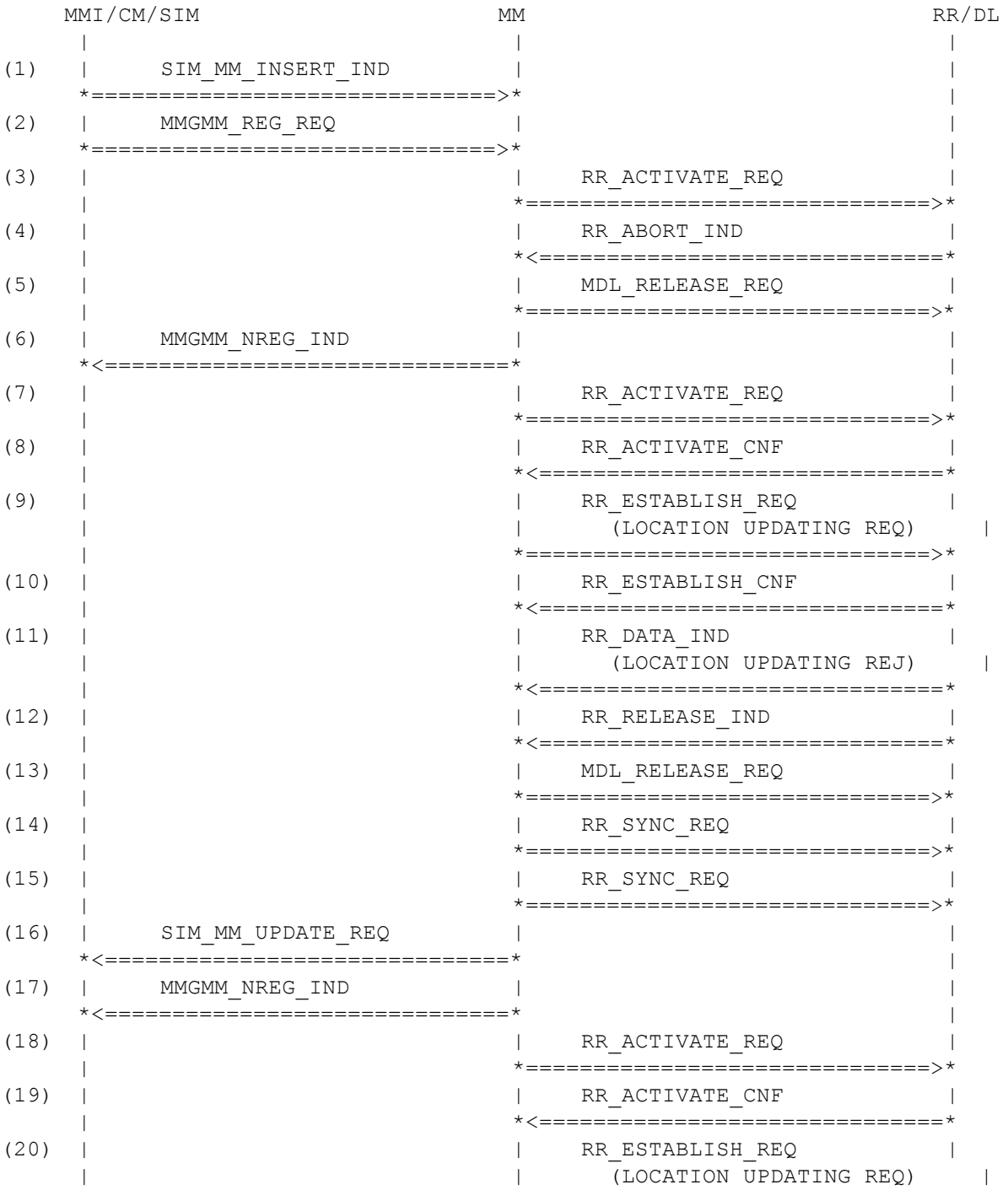
	accc	NOT_USED
	thplmn	NOT_USED
(9) MMGMM_TMSI_IND		
	tmsi	TMSI_INVALID_ULONG
(10) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(11) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_123_44
	cause	MMCS_PLMN_NOT_ALLOWED

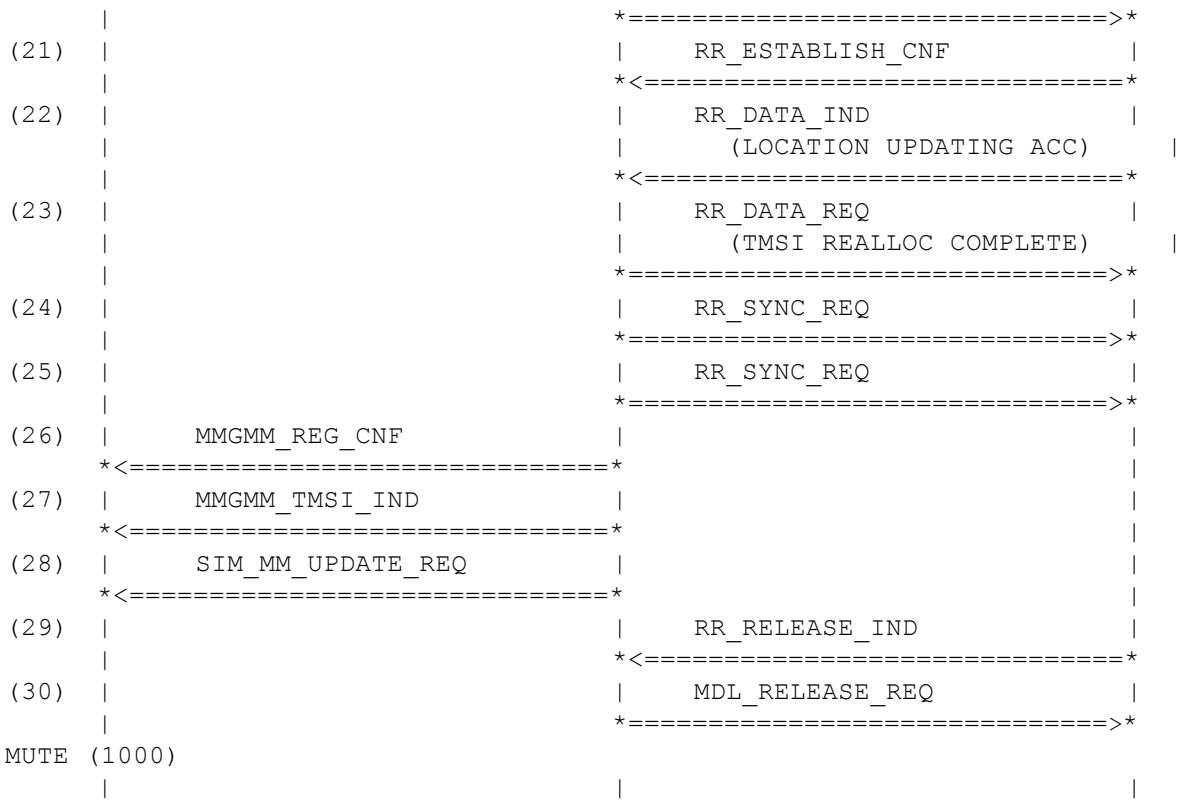
History:	30.05.00	HM	Initial
	06.12.00	HM	Copied from recent MMR test document
	18.01.02	HM	Revised

3.6.17 MMG0117: Location Updating Reject (PLMN not allowed), mode AUTO

Description: The mobile station is requested to register in automatic mode. The HPLMN is not present. The first PLMN the mobile station tries to register is forbidden and newly entered into the forbidden PLMN list. Then the second found PLMN is tried. It is expected that the registration attempt into the second found PLMN works and we enter full service state.
PLMN_123_44 First found PLMN, forbidden
PLMN_123_31 Second found PLMN, allowed

Preamble: MMG0001





Parametrization

Primitive		Parameter	Value
(6)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_34_35_36_37
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(7)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(8)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED

	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(9) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_44_31
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(10) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(11) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(12) RR_ACTIVATE_REQ		
	plmn	PLMN_123_44
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(13) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_44
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(14) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1

	mob_id	MOB_IDENT_IMSI
	}	
(15) RR_ESTABLISH_CNF		
	param	NOT_USED
(16) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_PLMN_NOT_ALLOWED
	}	
(17) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(18) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(19) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_LIMITED_SERVICE
	accc	NOT_USED
	thplmn	NOT_USED
(20) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(21) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW
	bcch_inf	NOT_USED
	forb_plmn	FORB_PLMN_35_36_37_44
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122

(22) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_RUNNING
new_forb_plmn	PLMN_123_44
cause	MMCS_PLMN_NOT_ALLOWED

(23) RR_ACTIVATE_REQ

plmn	PLMN_123_31
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(24) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_31
lac	LAC_0002
power	RF_CLASS_2
gprs_indication	GPRS_NO

(25) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(26) RR_ESTABLISH_CNF

param	NOT_USED

(27) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_ACCEPT
ti	TI_0
loc_area_ident	LOC_AREA_ID_123_31_0002

	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(28) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(29) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(30) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_31
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(31) MMGMM_REG_CNF		
	plmn	PLMN_123_31
	lac	LAC_0002
	cid	CELL_ID_1122
	resumption	NOT_USED
(32) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(33) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_31_0002_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	FORB_PLMN_35_36_37_44
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(34) RR_RELEASE_IND		
	cause	RRCS_NORM

sapi		SAPI_0
gprs_resumption		GPRS_RESUMPTION_NOT_ACK

(35) MDL_RELEASE_REQ

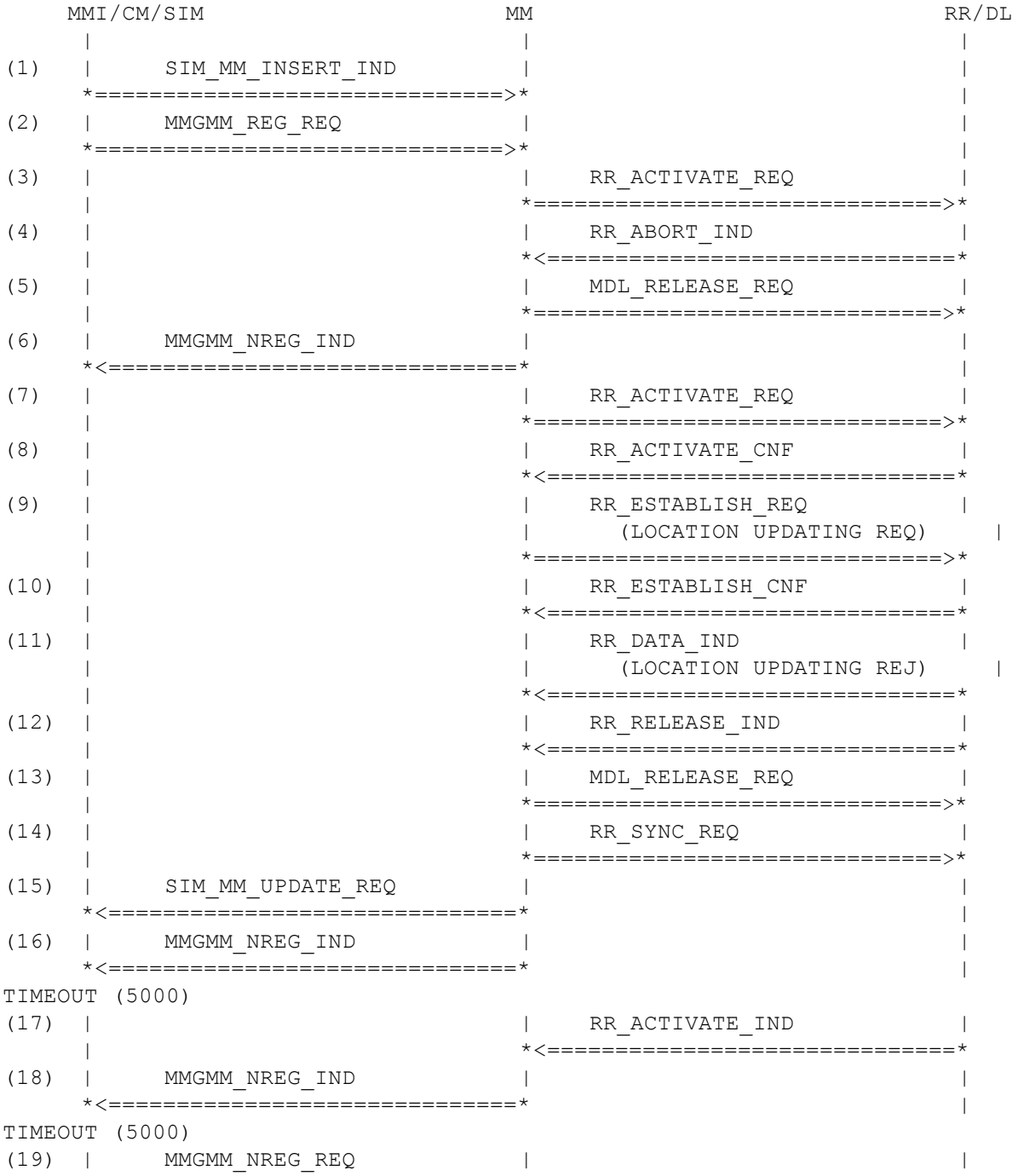
ch_type		NOT_PRESENT_8BIT
sapi		SAPI_0

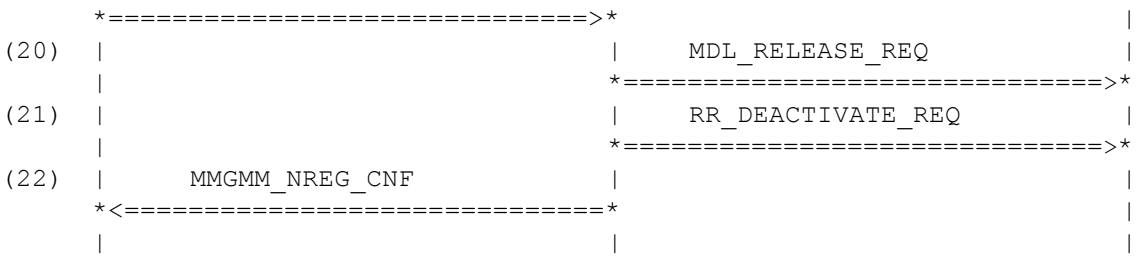
History:	30.05.00	HM	Initial
	06.12.00	HM	Adapted from recent MMR test document
	17.01.02	HM	Revised
	04.02.02	HM	Changed to make resusable as preamble

3.6.18 MMG0118: Location Updating Reject (IMSI unknown in HLR), mode AUTO

Description: The mobile station is requested to register in automatic mode. The HPLMN is not present. The first PLMN the mobile station tries to register sends LOCATION UPDATING REJECT with cause #2 (IMSI unknown in HLR). It is expected that no further registration attempt will be tried into the second found PLMN, even if an RR_ACTIVATE_IND with op_mode OP_SIM_AUTO_PLMNSRCH_FS will be received.
PLMN_123_44 First found PLMN, sends reject with cause #2
PLMN_123_31 Second found PLMN

Preamble: MMG0001





Parametrization

	Primitive	Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_44_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

(6) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(7) RR_ACTIVATE_REQ

plmn	PLMN_123_44
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(8) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_44
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(9) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(10) RR_ESTABLISH_CNF

param	NOT_USED

(11) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0

	rej_cause	RC_IMSI_IN_HLR
	}	
(12) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(13) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(14) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(16) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_IMSI_IN_HLR
(17) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0001
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(18) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_IMSI_IN_HLR
(19) MMGMM_NREG_REQ		
	detach_cause	CS_POW_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT

(20) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(21) RR_DEACTIVATE_REQ

param	NOT_USED

(22) MMGMM_NREG_CNF

detach_cause	CS_POW_OFF

History:	04.01.01	HM	Initia
	10.02.03	LOL	added lac_list l

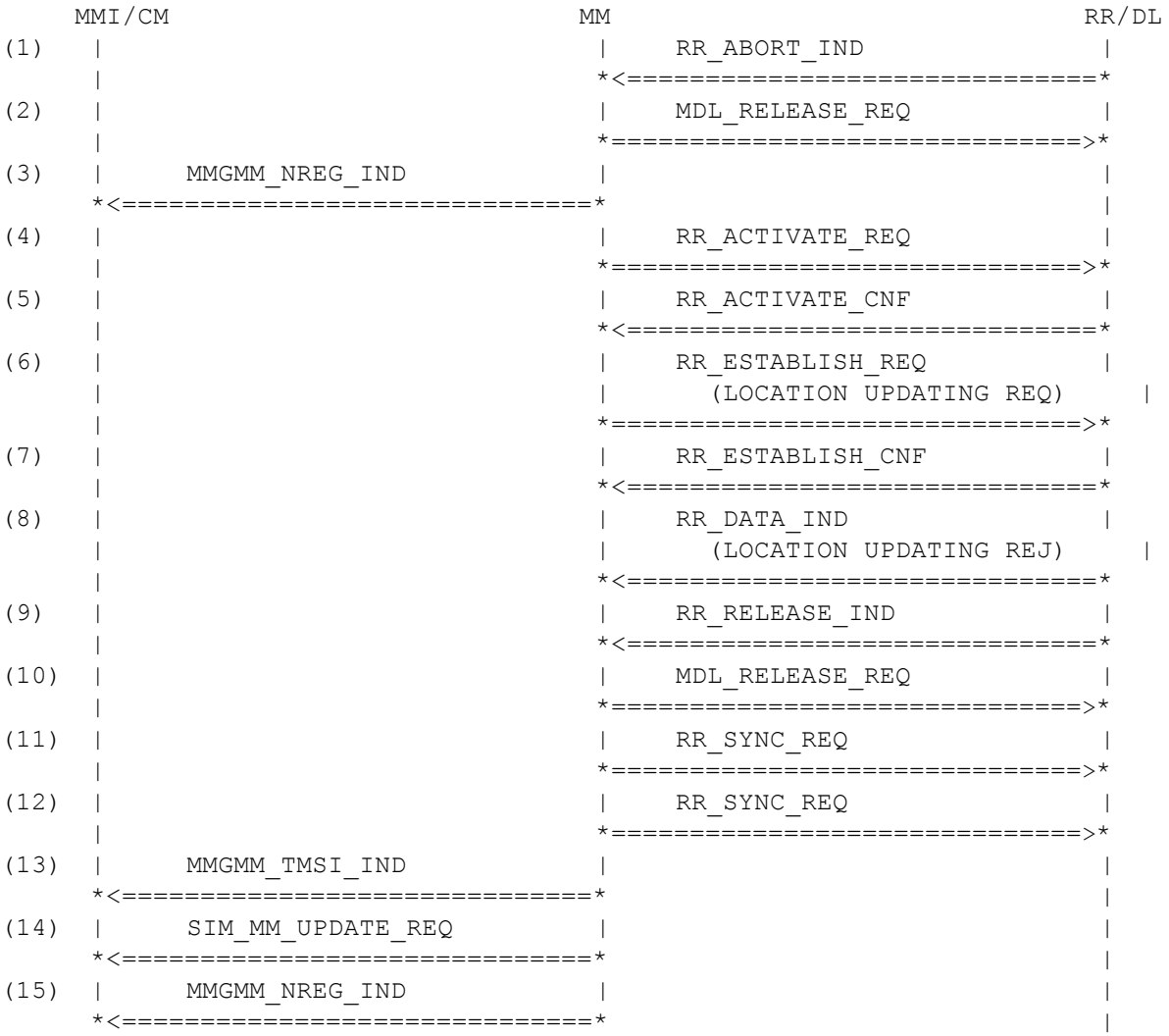
3.6.19 MMG0120: Receive LUP rejects with cause #11, 6 forbidden PLMNs total now

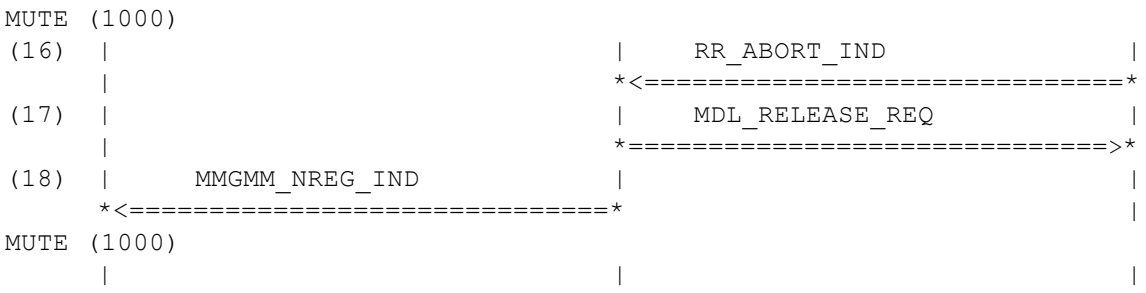
Description: The mobile is switched on, automatic mode. A SIM is inserted which contains 4 forbidden PLMNs. The mobile is switched on, 6 PLMNs are found, all forbidden. Two update attempts in automatic mode are done, in both cases reject cause #11 is received. It is checked that afterwards all forbidden PLMNs are stored in the forbidden PLMN list and no further updating attempt will be performed if the same list is offered again by RR.

Inital forbidden: MCC=123, MNC=34
MCC=123, MNC=35
MCC=123, MNC=36
MCC=123, MNC=37
MCC=123, MNC=44

Final forbidden: MCC=123, MNC=34
MCC=123, MNC=35
MCC=123, MNC=36
MCC=123, MNC=37
MCC=123, MNC=44
MCC=123, MNC=32

Preamble: MMG0117





Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	BYTE_6
		plmn	PLMN_LIST_32_34_35_36_37_44
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18_16_14_12_10
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_32
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_32
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO

(6) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_31_0002
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_NEW_TMSI
}	

(7) RR_ESTABLISH_CNF

param	NOT_USED

(8) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_PLMN_NOT_ALLOWED
}	

(9) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(10) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(11) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_LIMITED_SERVICE
accc	NOT_USED
thplmn	NOT_USED

(12) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED

	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(13) MMGMM_TMSI_IND		
	tmsi	TMSI_INVALID_ULONG
(14) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_31_NOT_ALLOW
	bcch_inf	NOT_USED
	forb_plmn	FORB_PLMN_36_37_44_32
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(15) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_123_32
	cause	MMCS_PLMN_NOT_ALLOWED
(16) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	BYTE_6
	plmn	PLMN_LIST_32_34_35_36_37_44
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20_18_16_14_12_10
	power	RF_CLASS_2
(17) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(18) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:			
	04.02.02	HM	Initial
	10.02.03	LOL	added lac_list

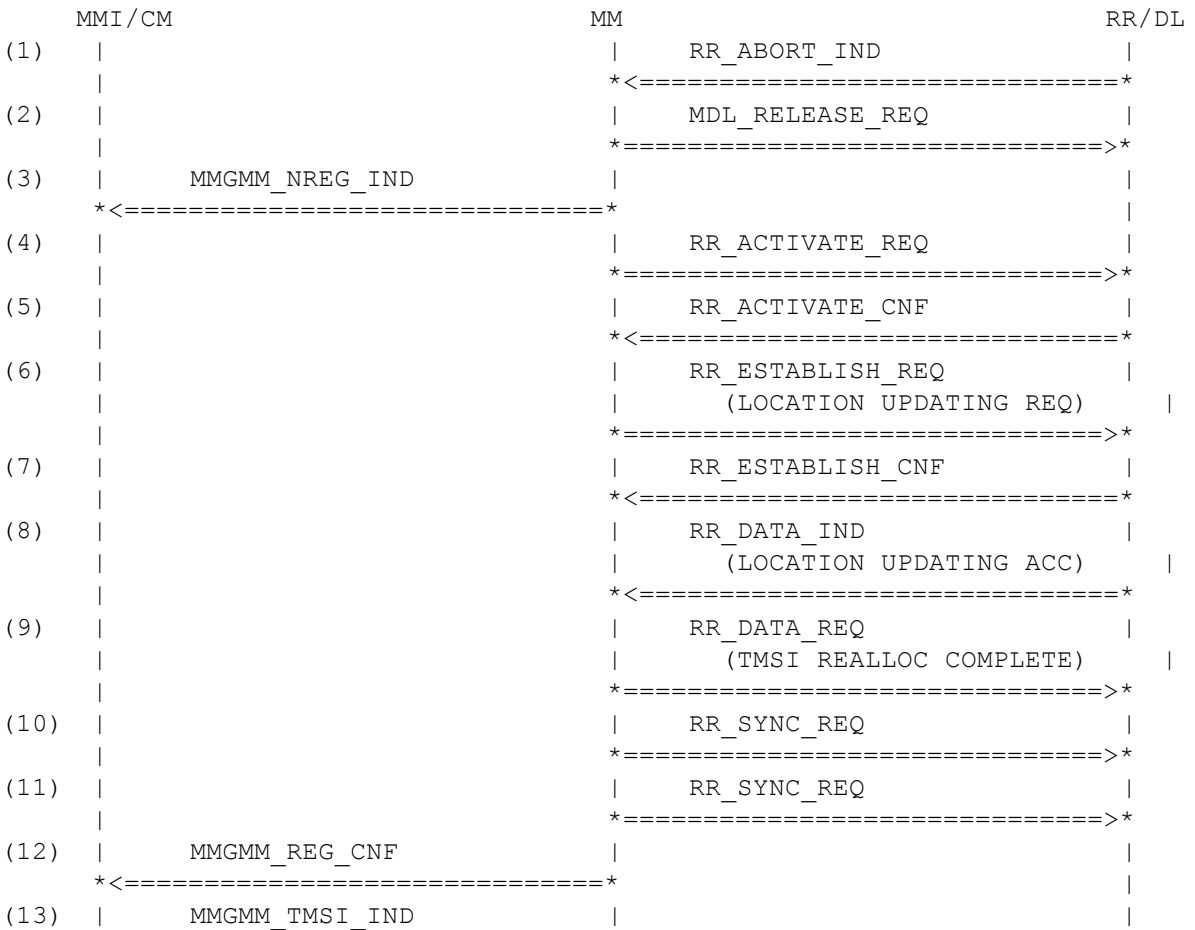
3.6.20 MMG0121: Non-forbidden PLMN offered in limited service

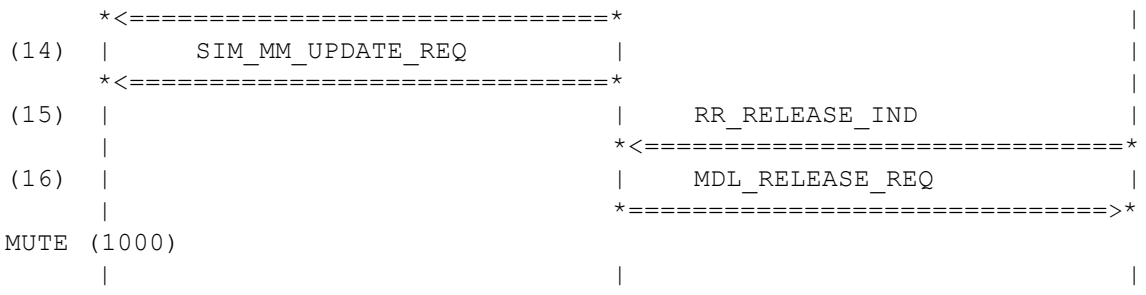
Description: The mobile has 5 forbidden PLMNs in the forbidden list. The first power campaign delivers a list of PLMNs, all of these are member of the forbidden list. It is checked that no update attempt is performed in automatic mode. The second power campaign delivers a list of PLMNs, the last PLMN offered by RR is not on any forbidden list, maybe suitable for full service. An update attempt is performed, the network answers by a LOCATION UPDATING REJECT message, cause #11, PLMN NOT ALLOWED. The PLMN is added to the forbidden PLMN list (in SIM). A third power campaign delivers the same list of PLMNs as the second power campaign, it is tested that now no update attempt is performed anymore.

Inital forbidden: MCC=123, MNC=34
MCC=123, MNC=35
MCC=123, MNC=36
MCC=123, MNC=37
MCC=123, MNC=44
MCC=123, MNC=32

Final forbidden: MCC=123, MNC=34
MCC=123, MNC=35
MCC=123, MNC=36
MCC=123, MNC=37
MCC=123, MNC=44
MCC=123, MNC=32

Preamble: MMG0120





Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	BYTE_7
		plmn	PLMN_LIST_32_34_35_36_37_44_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_31
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_31
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO

(6) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_31_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(7) RR_ESTABLISH_CNF

param	NOT_USED

(8) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_ACCEPT
ti	TI_0
loc_area_ident	LOC_AREA_ID_123_31_0002
mob_id	MOB_IDENT_NEW_TMSI
follow_proceed	NOT_USED
}	

(9) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_TMSI_REALLOC_COMP
ti	TI_0
}	

(10) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	MOB_ID_NEW_TMSI
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(11) RR_SYNC_REQ

op	NOT_USED

	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_31
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(12) MMGMM_REG_CNF		
	plmn	PLMN_123_31
	lac	LAC_0002
	cid	CELL_ID_1122
	resumption	NOT_USED
(13) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(14) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_31_0002_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	FORB_PLMN_36_37_44_32
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(15) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(16) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	05.02.02	HM	Initial
	10.02.03	LOL	added lac_list

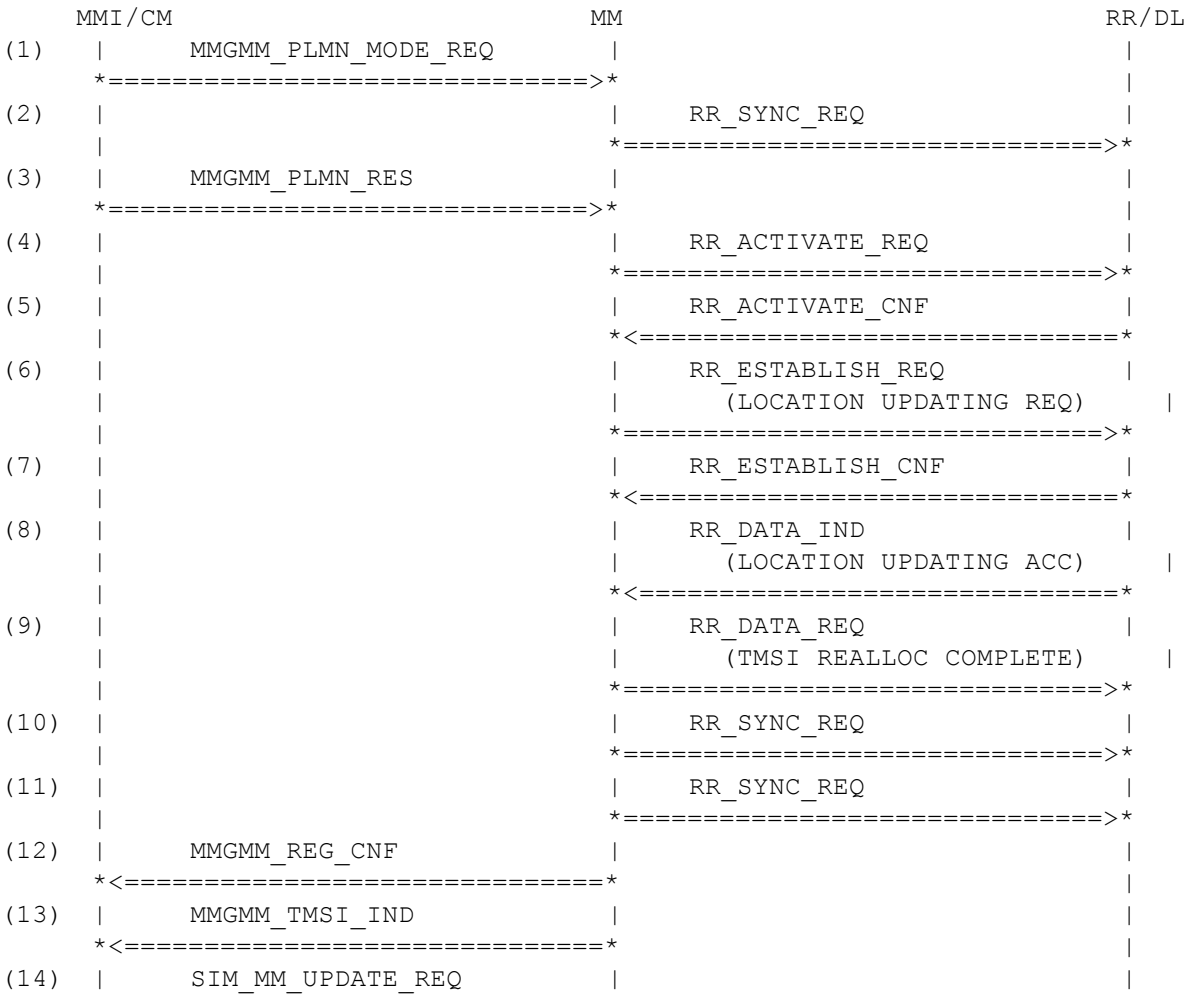
3.6.21 MMG0122: Manual selection forb. PLMN, success

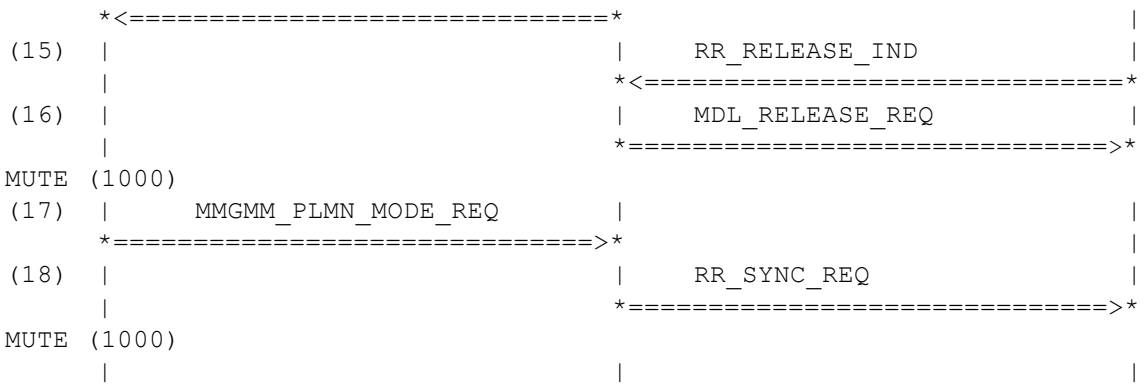
Description: Having 6 forbidden PLMNs in the list of forbidden PLMNs beeing in limited service condition, the user selects manually one of the forbidden PLMNs. The updating attempt is successful. It is checked that the resident part of the forbidden list on the SIM is not changed / changed properly. Switch back to automatic mode. [Why "NO SERVICE" in the last synch attempt?]

Inital forbidden:	MCC=123, MNC=34
	MCC=123, MNC=35
	MCC=123, MNC=36
	MCC=123, MNC=37
	MCC=123, MNC=44
	MCC=123, MNC=32
Final forbidden:	MCC=123, MNC=34
<B> only	MCC=123, MNC=35
	MCC=123, MNC=36
	MCC=123, MNC=37
<A> only	MCC=123, MNC=44
	MCC=123, MNC=32

Preamble: MMG0120

Variants: <A>....<B>





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_MODE_SIM_NO_SERV_M1
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_PLMN_RES		
<A>		plmn	PLMN_123_35
<B>		plmn	PLMN_123_44
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
<A>		plmn	PLMN_123_35
<B>		plmn	PLMN_123_44
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
<A>		plmn	PLMN_123_35

<B>		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_31_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
<A>		loc_area_ident	LOC_AREA_ID_123_35_0002
<B>		loc_area_ident	LOC_AREA_ID_123_44_0002
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(9)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(10)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED

		accc	NOT_USED
		thplmn	NOT_USED
(11)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
	<A>	plmn	PLMN_123_35
	<B>	plmn	PLMN_123_44
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(12)	MMGMM_REG_CNF		
	<A>	plmn	PLMN_123_35
	<B>	plmn	PLMN_123_44
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(13)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(14)	SIM_MM_UPDATE_REQ		
	<A>	loc_info	LOC_INFO_123_35_0002_34125708
	<B>	loc_info	LOC_INFO_123_44_0002_34125708
		bcch_inf	BCCH_INF_1
	<A>	forb_plmn	FORB_PLMN_36_37_44_32
	<B>	forb_plmn	FORB_PLMN_35_36_37_32
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(15)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(16)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(17)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_AUTO
(18)	RR_SYNC_REQ		
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED

History:	05.02.02	HM	Initial

3.6.22 MMG0123: Loss of service, non forb. PLMN offered in automatic mode, success

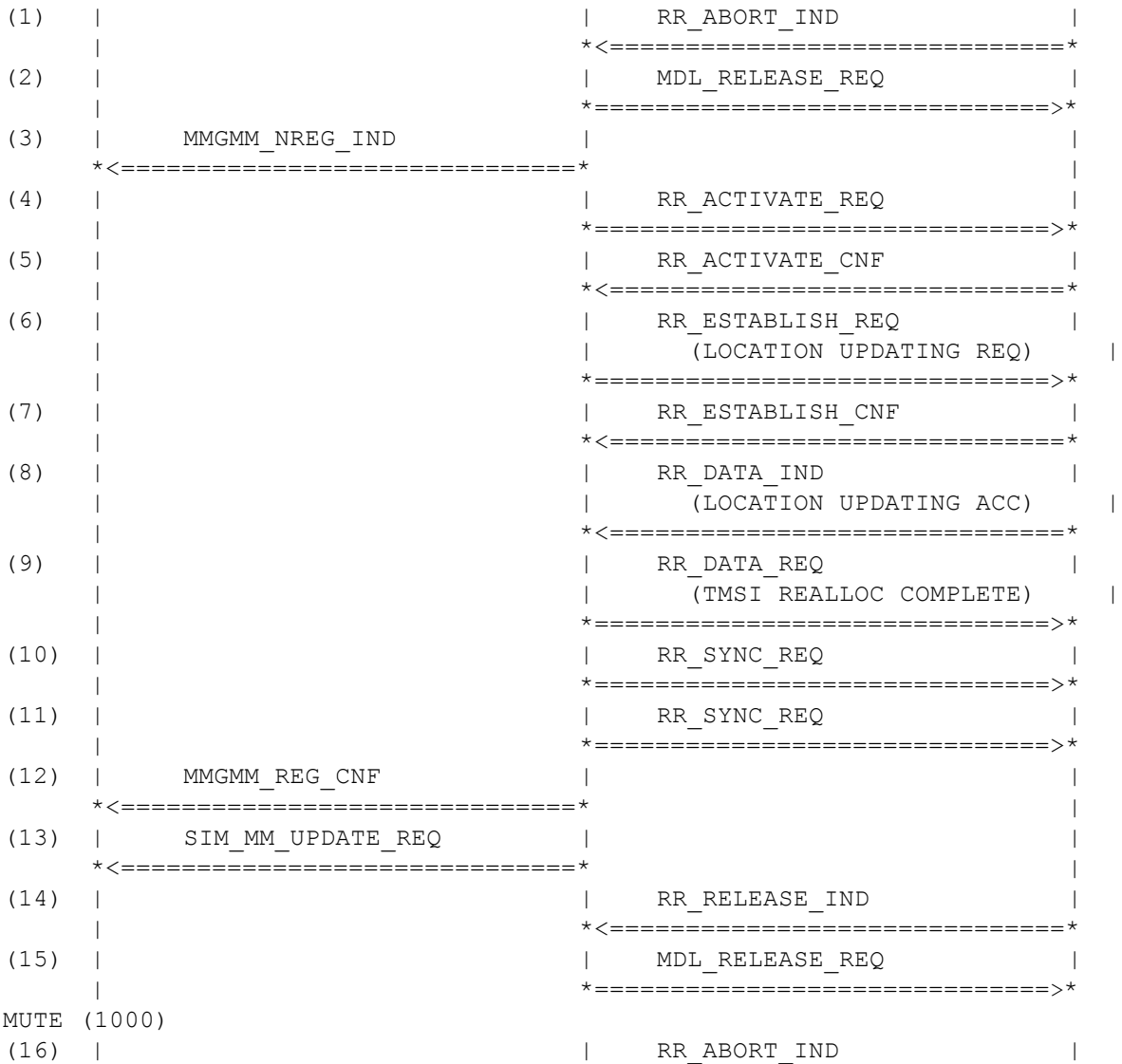
Description: Having 5 forbidden PLMNs in the list of forbidden PLMNs beeing in full service condition, service is lost, but a non-forbidden PLMN is found. The update attempt is successful. After a while, service is lost on this PLMN and RR offers a list of six PLMNs, one of them the former forbidden PLMN. It is expected that MM tries to update on this PLMN.

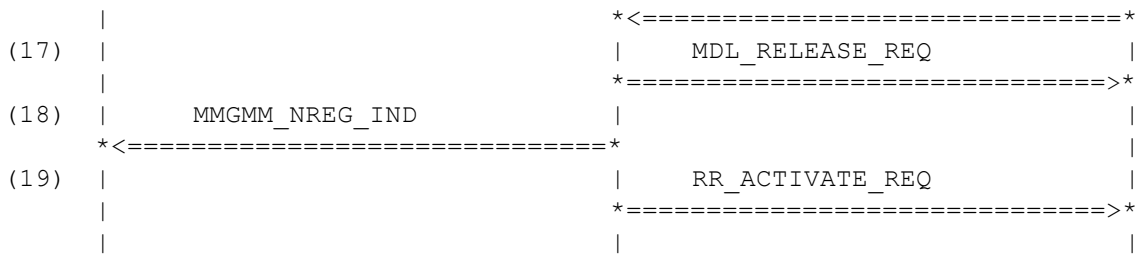
Initial forbidden: MCC=123, MNC=34
<B> only MCC=123, MNC=35
MCC=123, MNC=36
MCC=123, MNC=37
<A> only MCC=123, MNC=44
MCC=123, MNC=32

Final forbidden: same

Variants: <A>....<B>

Preamble: <A> MMG0122A
<B> MMG0122B





Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	BYTE_1
		plmn	PLMN_LIST_PLMN_123_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_31
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_31
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM

		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
	<A>	loc_area_ident	LOC_AREA_ID_123_35_0002
	<B>	loc_area_ident	LOC_AREA_ID_123_44_0002
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_31_0002
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(9)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(10)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(11)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED

	tmsi_struct	NOT_USED
	plmn	PLMN_123_31
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(12) MMGMM_REG_CNF		
	plmn	PLMN_123_31
	lac	LAC_0002
	cid	CELL_ID_1122
	resumption	NOT_USED
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_31_0002_34125708
	bcch_inf	BCCH_INF_1
<A>	forb_plmn	FORB_PLMN_36_37_44_32
<B>	forb_plmn	FORB_PLMN_35_36_37_32
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(16) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	BYTE_6
	plmn	PLMN_LIST_32_34_35_36_37_44
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20_18_16_14_12_10
	power	RF_CLASS_2
(17) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(18) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(19) RR_ACTIVATE_REQ		
<A>	plmn	PLMN_123_35
<B>	plmn	PLMN_123_44
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI

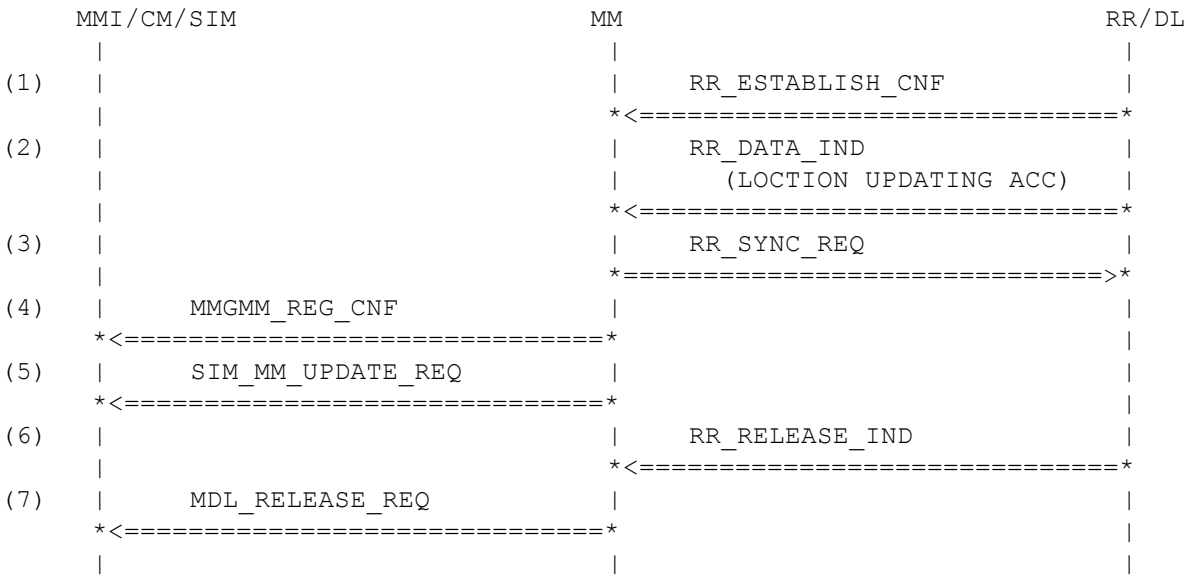
tmsi_struct	MOB_ID_NEW_TMSI
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

History:	05.02.02	HM	Initial
	10.02.03	LOL	added lac_list

3.6.23 MMG0124: Location Accept with empty Mobile Identity

Description: Same testcase as 106, but uses special coding of Anite-System, which shall be accepted by MM.

Preamble: MMG0101



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	LOC_UPD_ACCEPT_2
(3)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(4)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED

(5) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_0002_FFFFFFFF
bcch_inf	BCCH_INF_1
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(6) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(7) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

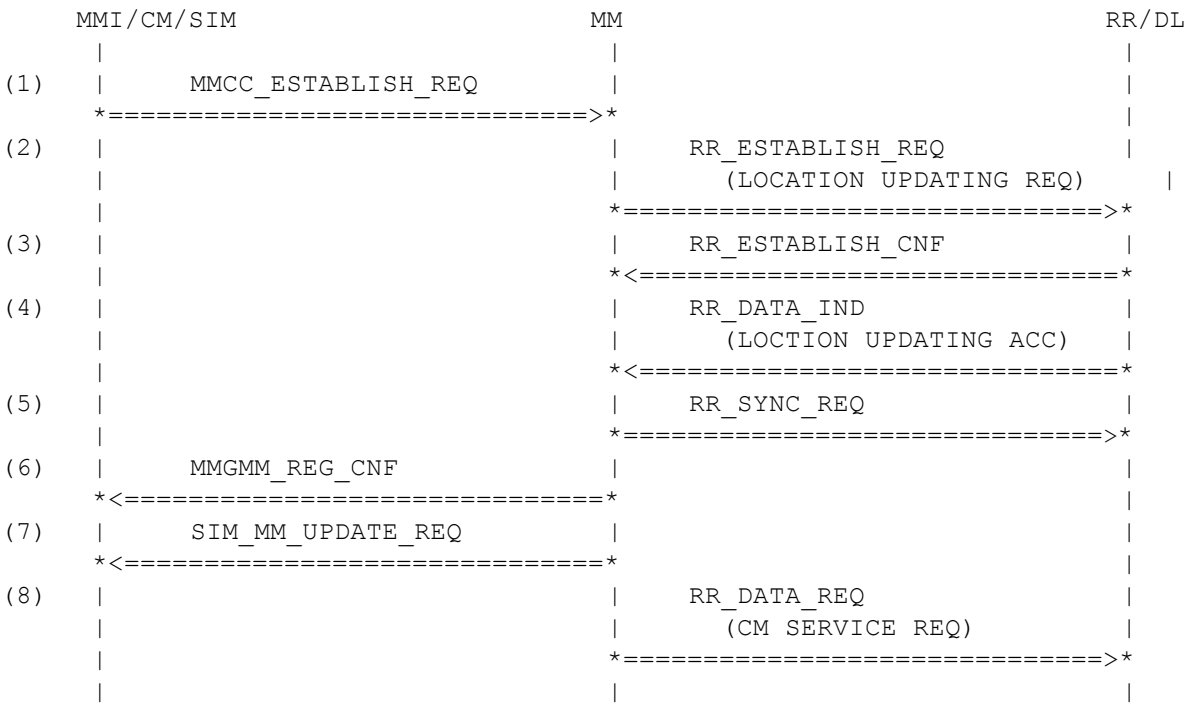
History:			
	10.07.97	HK	Initial
	04.02.02	HM	Revised

3.6.24 MMG0125: Location Updating triggered by Normal Call in Idle State 19.2

Description: MM receives an establishment request from CC while in State 19.2 (Idle Attempting to Update). It starts a location updating. The location updating accept does contain the follow on proceed indication and the call attempt is started.

Preamble: MMG0112

Variants: <A>...<D>



Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_MOB_ORIG_DATA
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
<A>		sdu	LOC_UPD_ACCEPT_3
<B>		sdu	LOC_UPD_ACCEPT_4
<C>		sdu	LOC_UPD_ACCEPT_5
<D>		sdu	LOC_UPD_ACCEPT_6
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_0002_FFFFFFFF
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(8)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	

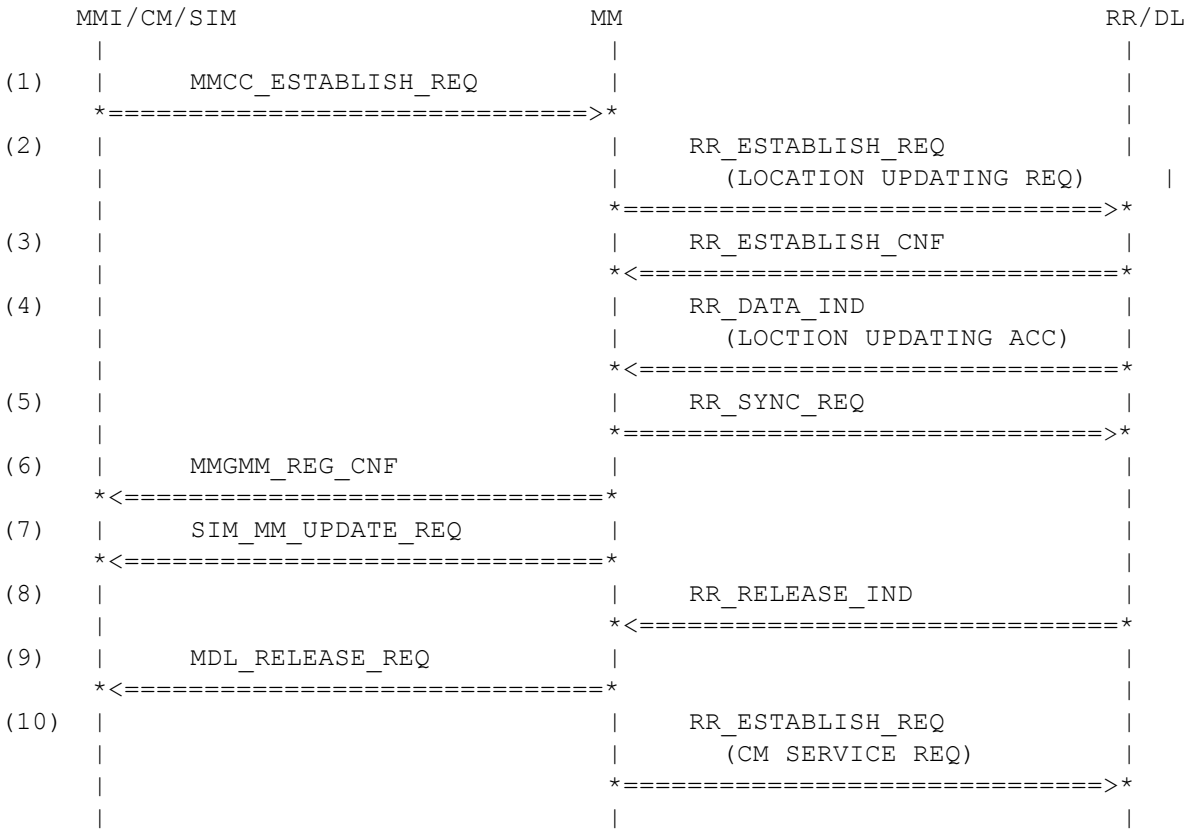
History:	09.07.97	HK	Initial

3.6.25 MMG0126: Location Updating triggered by Normal Call in Idle State 19.2

Description: MM receives an establishment request from CC while in State 19.2 (Idle Attempting to Update). It starts a location updating. The location updating accept does not contain the follow on proceed indication and the call attempt is released.

Preamble: MMG0112

Variants: <A>...<D>



Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_MOB_ORIG_DATA
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0

		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
<A>		sdu	LOC_UPD_ACCEPT_3_B
<B>		sdu	LOC_UPD_ACCEPT_4_B
<C>		sdu	LOC_UPD_ACCEPT_5_B
<D>		sdu	LOC_UPD_ACCEPT_6_B
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_0002_FFFFFFFF
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)		RR_ESTABLISH_REQ	
		estcs	ESTCS_MOB_ORIG_DATA
		sdu	
		{	
		component	MM

direction	UPLINK
pd	U_CM_SERV_REQ
ti	TI_0
cm_serv_type	ST_MOC
ciph_key_num	CIPH_KEY_NUM_RES
mob_class_2	MOB_CLASS_2
mob_id	MOB_IDENT_IMSI
}	

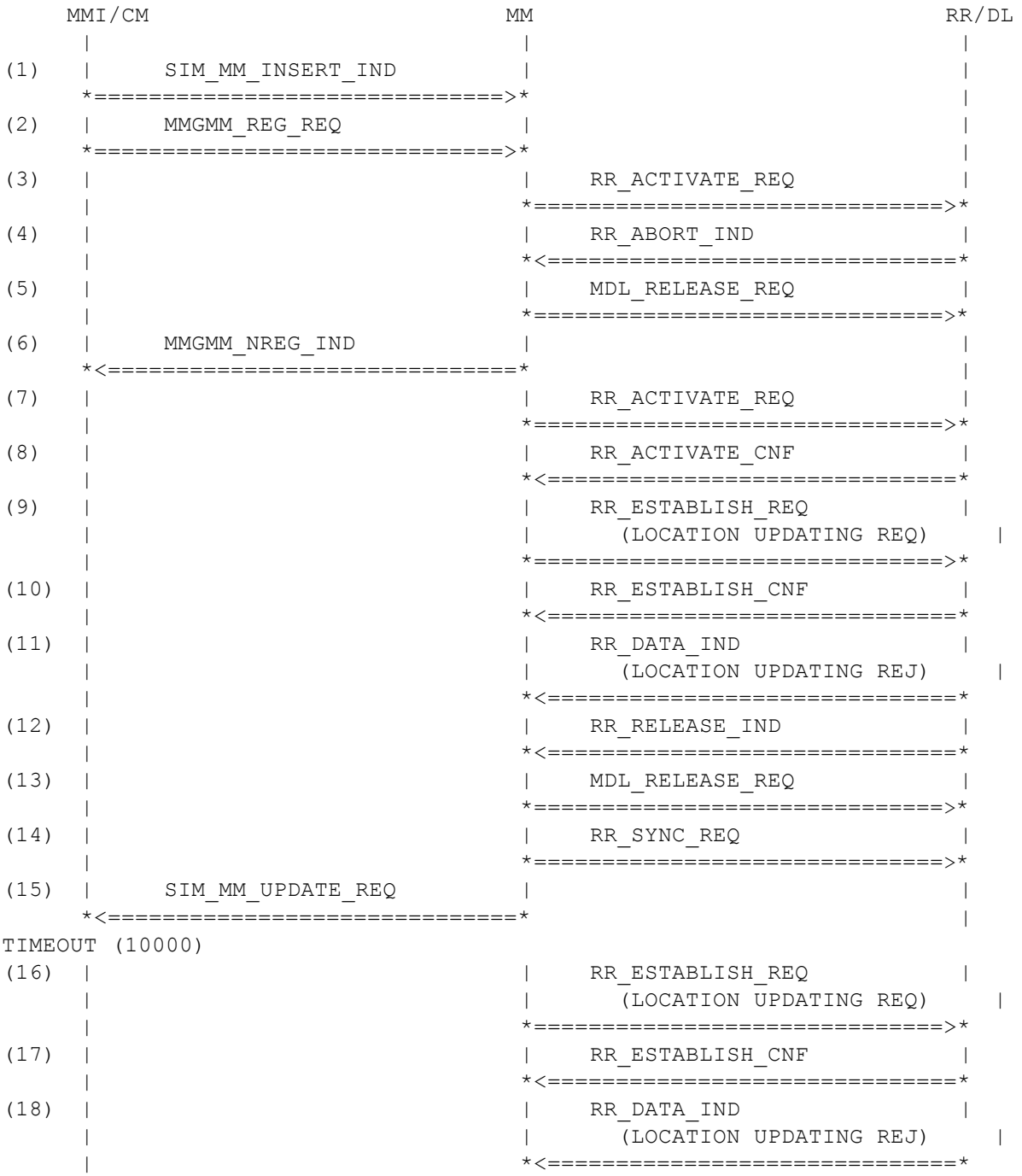
History:	09.07.97	HK	Initial

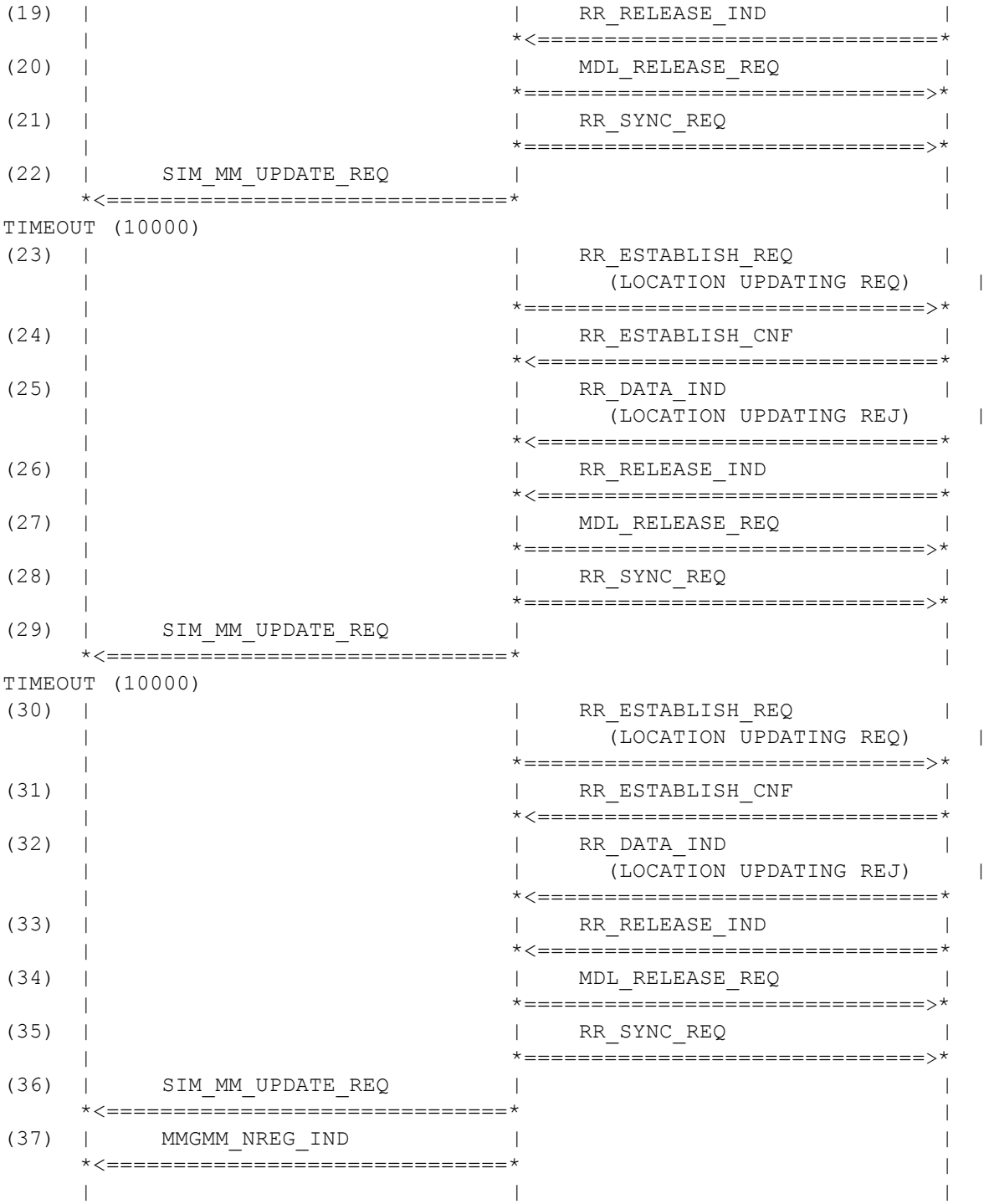
3.6.26 MMG0127: Normal update after switch on after arrival at airport, 4 * #17

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive. The cell selection process is successful (limited service), one or two non-forbidden PLMNs are offered. The update attempt is non-successful, four times #17 (network failure) error cause received.
<A> Only one PLMN found, no further attempt.
<B> Two PLMN found, further attempt on the other PLMN.

Preamble: MMG0022

Variants: <A>....<B>





Parametrization

	Primitive	Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF

		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
<A>		plmn_avail	ONE_PLMN_FOUND
<B>		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_44_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(7)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_44
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE

	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(8) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_44
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(9) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(10) RR_ESTABLISH_CNF		
	param	NOT_USED
(11) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(12) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(13) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(14) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED

	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(16) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(17) RR_ESTABLISH_CNF		
	param	NOT_USED
(18) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(19) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(20) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED

	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(22) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(23) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(24) RR_ESTABLISH_CNF		
	param	NOT_USED
(25) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(26) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(27) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(28) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED

	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(29) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(30) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(31) RR_ESTABLISH_CNF		
	param	NOT_USED
(32) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(33) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(34) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(35) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED

kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(36) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(37) MMGMM_NREG_IND

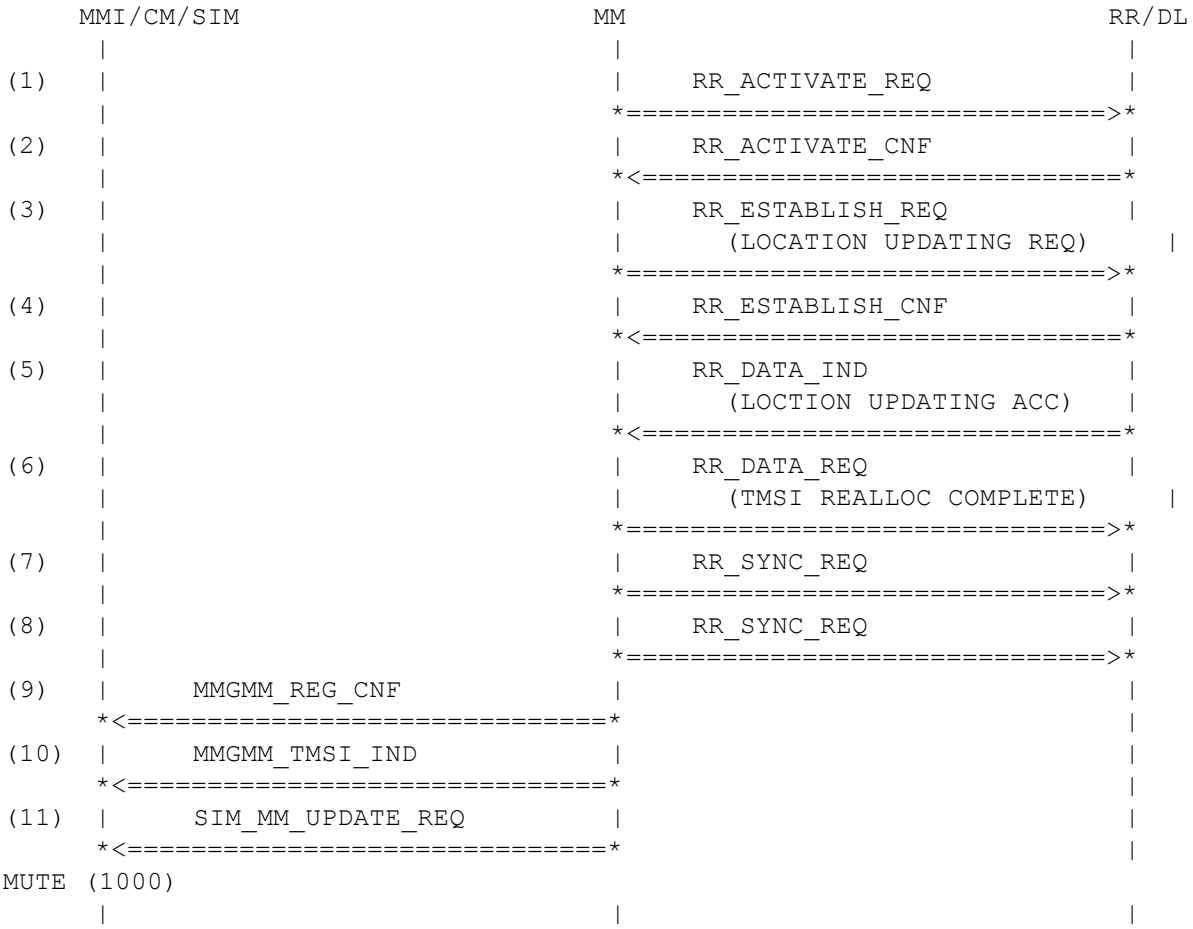
	service	NREG_LIMITED_SERVICE
<A>	search_running	SEARCH_NOT_RUNNING
<B>	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_NETWORK_FAILURE

History:	06.02.02	HM	Initial
	10.02.03	LOL	added lac_list

3.6.27 MMG0128: Updating continues on different PLMN after 4 * network failure

Description: After 4 * network failure on a different PLMN with a PLMN list present in MM which is not exhausted, MM tries to obtain full service in another available PLMN.

Preamble: MMG0127B



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

(2) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_31
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(3) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(4) RR_ESTABLISH_CNF

param	NOT_USED

(5) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_ACCEPT
ti	TI_0
loc_area_ident	LOC_AREA_ID_123_31_2147
mob_id	MOB_IDENT_NEW_TMSI
follow_proceed	NOT_USED
}	

(6) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_TMSI_REALLOC_COMP
ti	TI_0
}	

(7) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED

		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_31
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(9)	MMGMM_REG_CNF		
		plmn	PLMN_123_31
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(10)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(11)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_31_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	FORB_PLMN_NONE
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

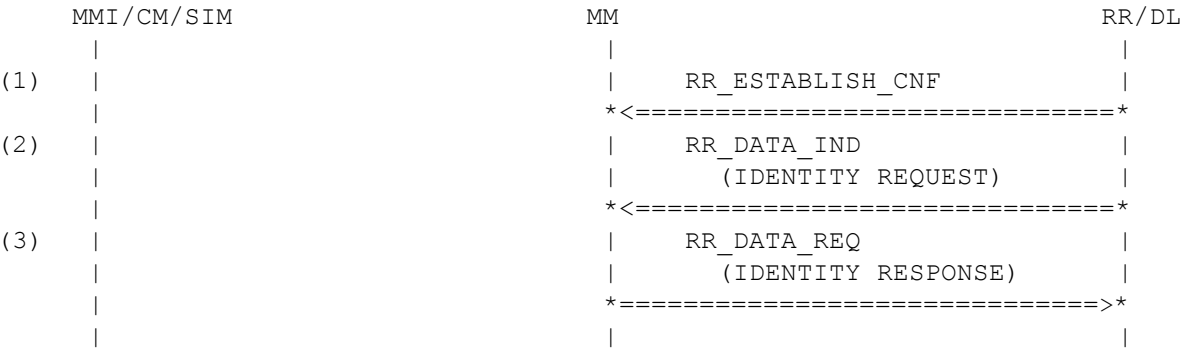
History:	07.02.02	HM	Initial

3.7 Identity Request

3.7.1 MMG0135: Identity Request during Location Updating

Description: Connection is confirmed in the form of a RR-ESTABLISH confirmation primitive, whereupon MM changes to State 3 (Location Updating Initiated). In the course of Location Updating the network requests the identity of the MS. MM responds by issuing an Identity Response message as part of a RR-DATA indication primitive.

Preamble: MMG0101



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_IDENT_REQ
	ti	TI_0
	ident	IDENT_TYPE_IMSI
	}	
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IDENT_RES
	ti	TI_0
	mob_id	MOB_IDENT_IMSI
	}	

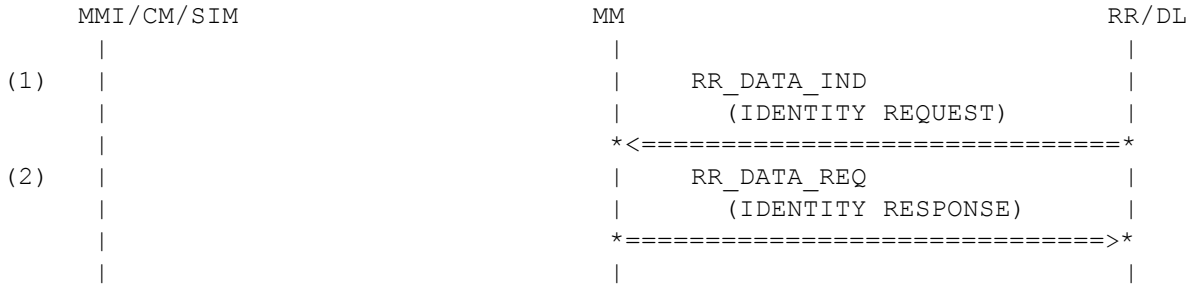
History:	09.07.97	HK	Initial

3.7.2 MMG0136: Identity Request during MTC

Description: The mobile station receives an IDENTITY REQUEST message for the IMSI or IMEI from the network and responds by issuing a IDENTITY RESPONSE message containing the IMEI or IMSI, accordingly as requested.

Preamble: MMG0043

Variants: <A>....<B>



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_IDENT_REQ
	ti	TI_0
<A>	ident	IDENT_TYPE_IMSI
<B>	ident	IDENT_TYPE_IMEI
	}	
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IDENT_RES
	ti	TI_0
<A>	mob_id	MOB_IDENT_IMSI
<B>	mob_id	MOB_IDENT_IMEI
	}	

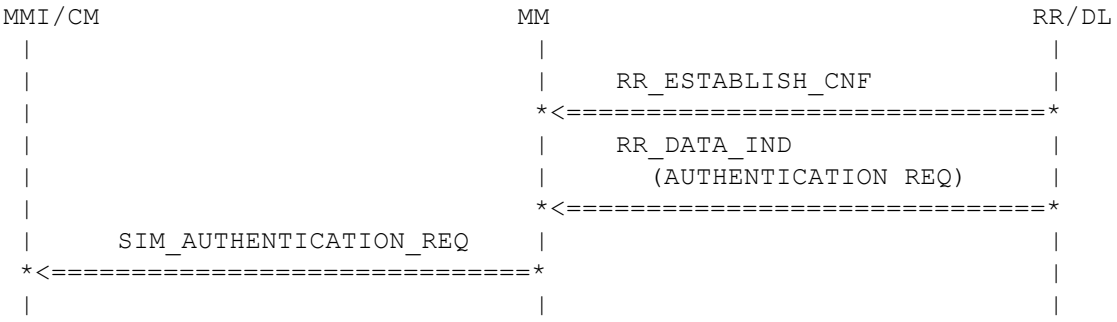
History:			
	07.07.97	HK	Initial
	31.07.97	DL	Revised
	18.04.01	HM	Revised

3.8 Authentication

3.8.1 MMG0141: Authentication Request

Description: The network confirms the request from the mobile station for a RR Connection in the form of a RR-ESTABLISH confirmation primitive. MM changes to State 3 ((Location Updating initiated) and issues an AUTHENTICATION REQ message and a SIM-AUTHENTICATION request primitive, initiating the authentication procedure with SIM.

Preamble: MMG0101



Parametrization

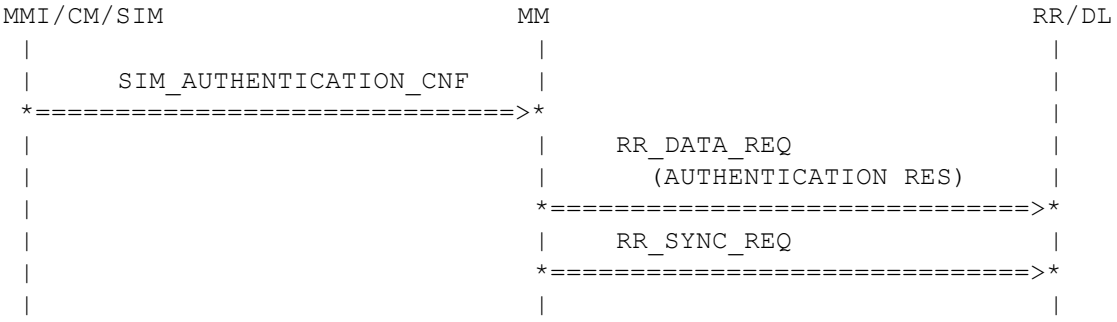
Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_AUTH_REQ
		ti	TI_0
		ciph_key_num	CIPH_KEY_NUM_01
		auth_rand	AUTH_RAND_1
		}	
(3)	SIM_AUTHENTICATION_REQ		
		source	SRC_MM
		rand	RAND_1
		cksn	CKSN_01

History:			
	07.07.97	HK	Initial
	31.07.97	DL	Revised

3.8.2 MMG0142: Authentication Response

Description: The authentication parameters are received from SIM in the form of a SIM-AUTHENTICATION confirmation primitive and are forwarded to the network as part of a AUTHENTICATION RES message. MM then commences synchronization with RR by issuing a RR-SYNC request primitive.

Preamble: MMG0141



Parametrization

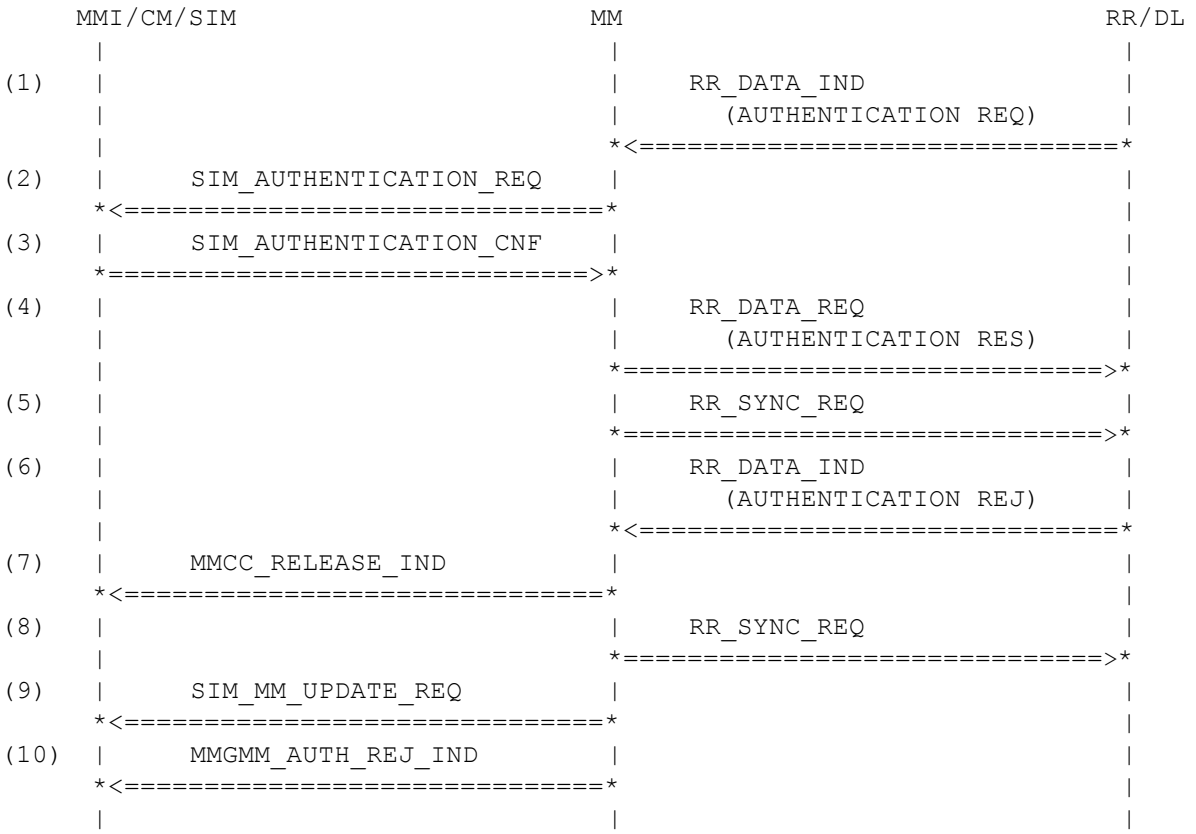
Primitive	Parameter	Value
(1) SIM_AUTHENTICATION_CNF		
	sres	SRES_1
	kc	KC_11223344
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_AUTH_RES
	ti	TI_0
	auth_sres	SRES_1_CODED
	}	
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	CKSN_01
	kcv	KCV_11223344
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED

History:			
	07.07.97	HK	Initial
	31.07.97	DL	Revised

3.8.3 MMG0143: Authentication Request in State 6

Description: Authentication is requested by the network in the form of a AUTHENTICATION REQ message while the mobile station is in State 6 (MM Connection Active). Authentication is then sought and received form SIM (SIM-AUTHENTICATION request and confirmation primitives). MM sends this data to the network as part of a AUTHENTICATION RES message.

Preamble: MMG0043



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REQ
	ti	TI_0
	ciph_key_num	CIPH_KEY_NUM_01
	auth_rand	AUTH_RAND_1
	}	
(2) SIM_AUTHENTICATION_REQ		
	source	SRC_MM

	rand	RAND_1
	cksn	CKSN_01
(3) SIM_AUTHENTICATION_CNF		
	sres	SRES_1
	kc	KC_11223344
(4) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_AUTH_RES
	ti	TI_0
	auth_sres	SRES_1_CODED
	}	
(5) RR_SYNC_REQ		
	op	NOT_USED
	cksn	CKSN_01
	kcv	KCV_11223344
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(6) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REJ
	ti	TI_0
	}	
(7) MMCC_RELEASE_IND		
	ti	TI_2
	cause	MMCS_AUTHENTICATION_REJECTED
(8) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED

(9) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

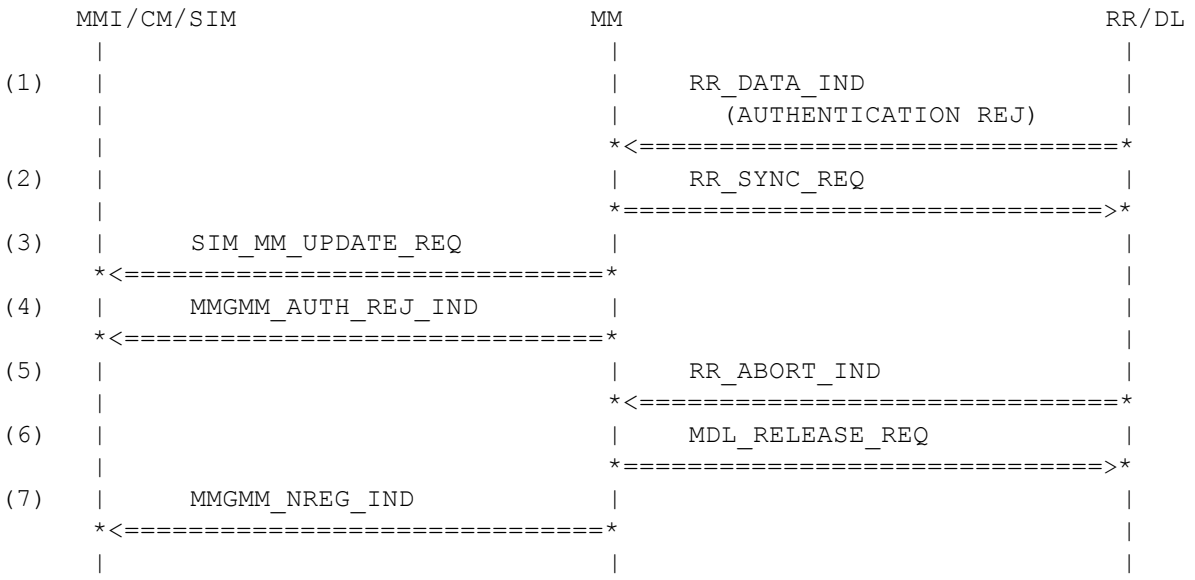
(10) MMGMM_AUTH_REJ_IND

History:	08.07.97	HK	Initial
	02.02.01	HM	Revised
	27.04.01	HM	Revised

3.8.4 MMG0144: Authentication Reject in State 3

Description: Authentication is rejected by the network in the form of a AUTHENTICATION REJ message followed by a RR-ABORT indication primitive while the mobile station is in State 3 (Location Updating Initiated). MM releases the RR connection and signals failure to MMI in the form of a MMR-NREG indication primitive with the negative registration cause set to 'authentication failure'.

Preamble: MMG0142



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REJ
	ti	TI_0
	}	
(2) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED
(3) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW

bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(4) MMGMM_AUTH_REJ_IND

(5) RR_ABORT_IND

op	OP_MODE_TEST_SIM
cause	RRCS_DATA_LINK_FAIL
plmn_avail	NOT_USED
plmn	NOT_USED
lac_list	NOT_USED
rxlevel	NOT_USED
power	RF_CLASS_2

(6) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(7) MMGMM_NREG_IND

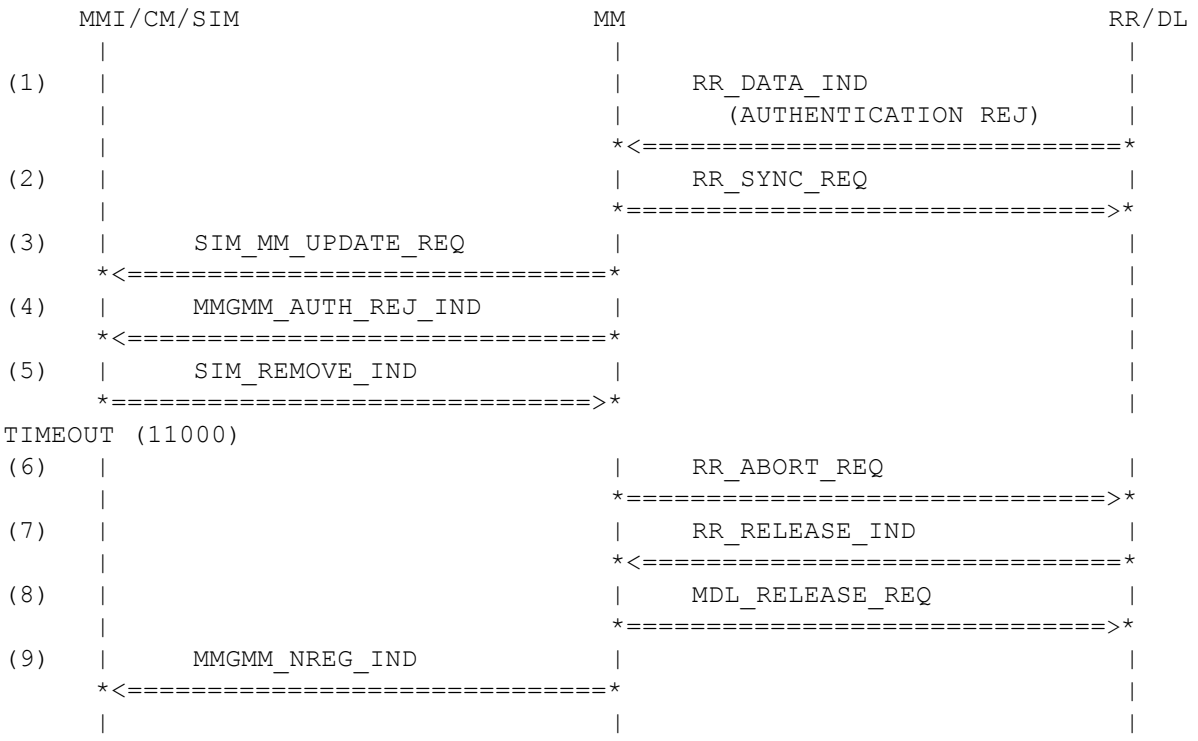
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_AUTHENTICATION_REJECTED

History:			
	09.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	27.04.01	HM	Changed order of primitives
	10.02.03	LOL	added lac_list

3.8.5 MMG0145: Authentication Reject and SIM Removal in State 3

Description: Authentication is rejected by the network in the form of a AUTHENTICATION REJ message while the mobile station is in State 3 (Location Updating Initiated). This is followed by the receipt of a SIM-REMOVE indication primitive. MM releases the RR connection and signals failure to MMI in the form of a MMR-NREG indication primitive with the negative registration cause set to 'authentication failure'.

Preamble: MMG0142



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REJ
	ti	TI_0
	}	
(2) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED

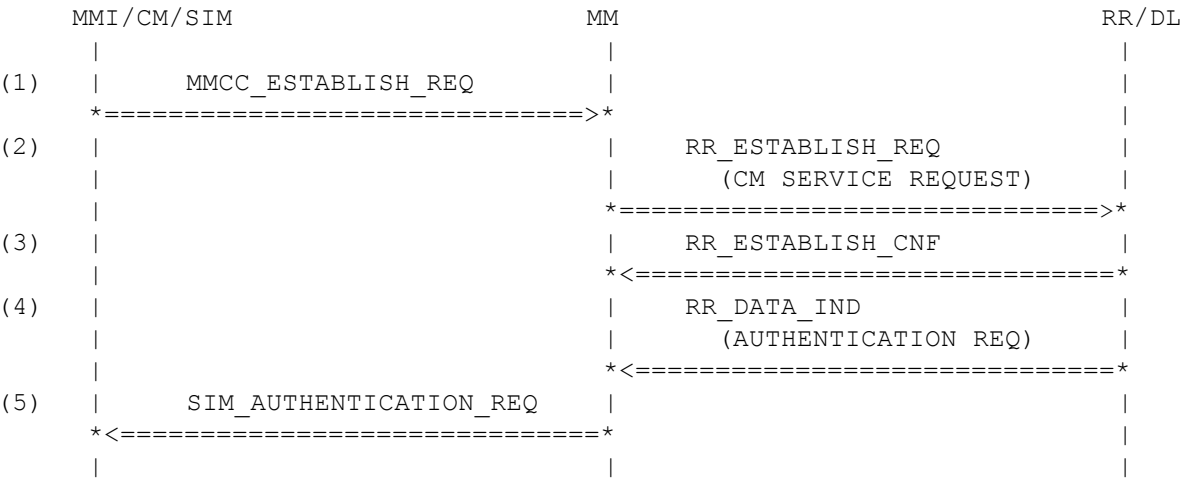
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
		accc	NOT_USED
		thplmn	NOT_USED
(3)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_PLMN_NOT_ALLOW
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(4)	MMGMM_AUTH_REJ_IND		
(5)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(6)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(7)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	08.07.97	HK	Initial
	03.03.00	HM	Revised (search_running)
	26.10.00	HM	Revised
	08.11.00	HM	Adapted for GPRS
	27.04.01	HM	Revised

3.8.6 MMG0146: Authentication Request in State 5

Description: In State 5 (Wait for Outgoing MM Connection) MM receives an establishment request from CC and sends CM SERVICE REQUEST message as part of a RR-ESTABLISH request primitive. The network commences the Authentication procedure in by sending a AUTHENTICATION REQ message and MM issues a SIM-AUTHENTICATION request primitive.

Preamble: MMG0024



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_5
	estcs	ESTCS_MOB_ORIG_SPCH
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	

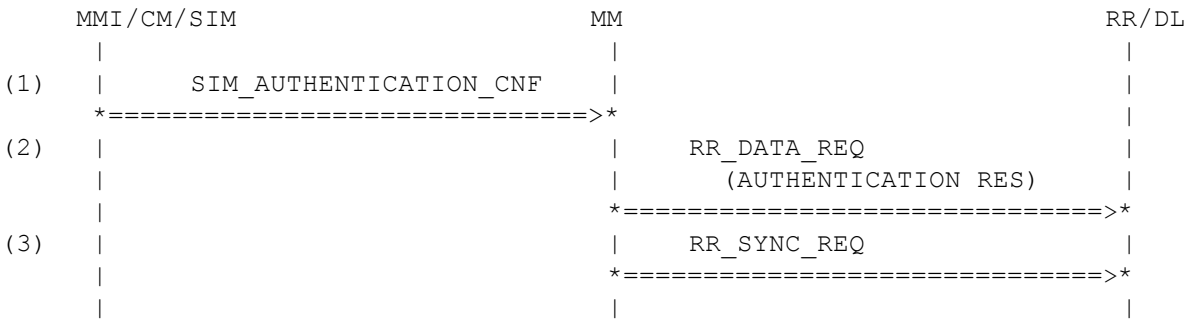
		component	MM
		direction	DOWNLINK
		pd	D_AUTH_REQ
		ti	TI_0
		ciph_key_num	CIPH_KEY_NUM_04
		auth_rand	AUTH_RAND_1
		}	
(5)	SIM_AUTHENTICATION_REQ		
		source	NOT_USED
		rand	RAND_1
		cksn	CKSN_04

History:	08.07.97	HK	Initial

3.8.7 MMG0147: Response to Authentication Request in State 5

Description: In State 5 (Wait for outgoing MM Connection to the Network) MM receives a SIM-AUTHENTICATION confirmation primitive and sends the authentication parameters to the network in the form of an AUTHENTICATION RES message.

Preamble: MMG0146



Parametrization

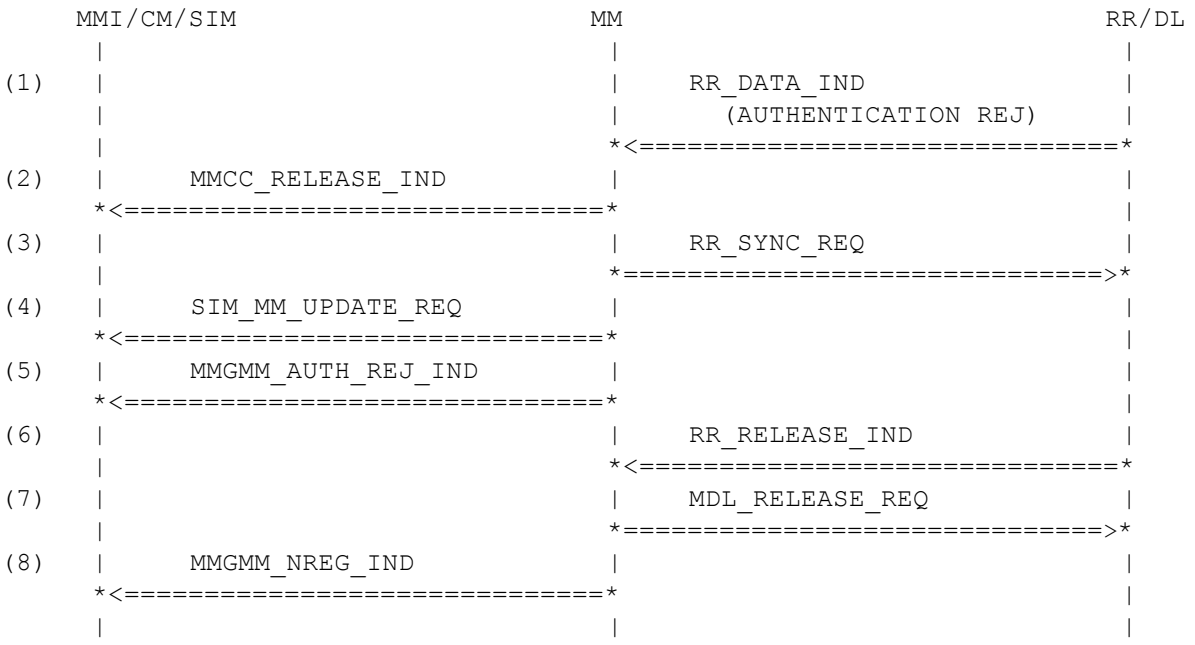
Primitive	Parameter	Value
(1) SIM_AUTHENTICATION_CNF		
	sres	SRES_1
	kc	KC_11223344
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_AUTH_RES
	ti	TI_0
	auth_sres	SRES_1_CODED
	}	
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	CKSN_04
	kcv	KCV_11223344
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED

History: 08.07.97 HK Initial

3.8.8 MMG0148: Authentication Reject in State 5

Description: Authentication is rejected by the network in the form of a AUTHENTICATION REJ message while the mobile station is in State 5 (Wait for outgoing MM Connection). This is followed by the receipt of a SIM-REMOVE indication primitive. MM releases the RR connection and signals failure to MMI in the form of a MMR-NREG indication primitive with the negative registration cause set to 'authentication failure'.

Preamble: MMG0147



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REJ
	ti	TI_0
	}	
(2) MMCC_RELEASE_IND		
	ti	TI_5
	cause	MMCS_AUTHENTICATION_REJECTED
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED

	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED

(4) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(5) MMGMM_AUTH_REJ_IND

(6) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(7) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(8) MMGMM_NREG_IND

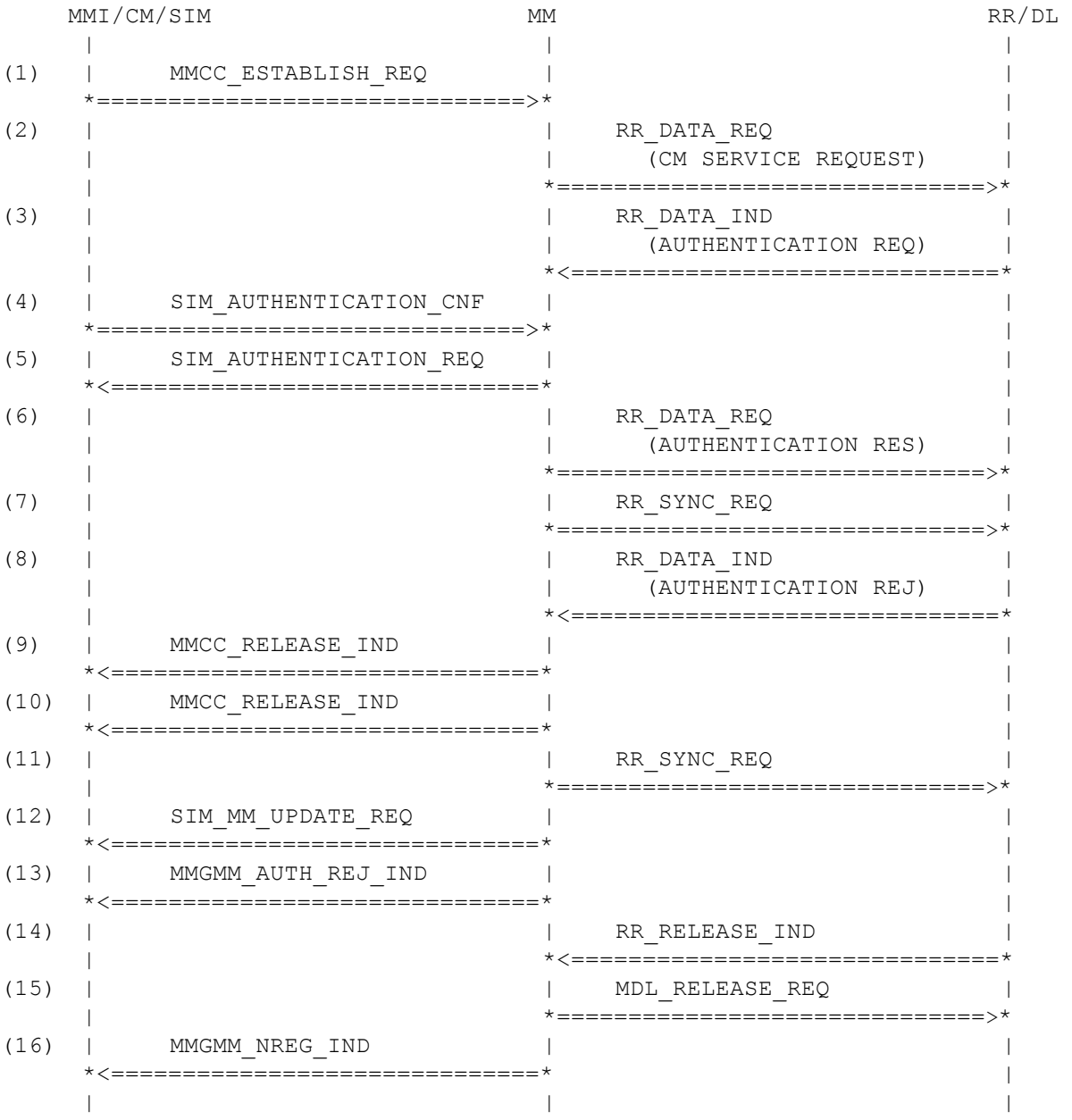
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_AUTHENTICATION_REJECTED

History:			
	08.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	02.02.01	HM	Revised
	27.04.01	HM	Changed ordering of primitives

3.8.9 MMG0149: Authentication Reject during request for a second connection

Description: MM receives a second connection request from CC and sends a CM SERVICE REQUEST message to the network. This is followed by a AUTHENTICATION REQ message from the network; MM receives authentication confirmation for the previous authentication request (SIM-AUTHENTICATION confirmation primitive) and then seeks authentication for the second request. The data for the first authentication confirmation is forwarded to the network in the form of a AUTHENTICATION RES message. Authentication is rejected by the network in the form of a AUTHENTICATION REJ message. MM releases the RR connection and signals failure to MMI in the form of a MMR-NREG indication primitive with the negative registration cause set to 'authentication failure'. The reaction of MM to an Authentication failure during the Establishment of a second Connection is tested.

Preamble: MMG0045A



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_5
	estcs	ESTCS_MOB_ORIG_SPCH
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(3) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REQ
	ti	TI_0
	ciph_key_num	CIPH_KEY_NUM_04
	auth_rand	AUTH_RAND_1
	}	
(4) SIM_AUTHENTICATION_CNF		
	sres	SRES_1
	kc	KC_11223344
(5) SIM_AUTHENTICATION_REQ		
	source	NOT_USED
	rand	RAND_1
	cksn	CKSN_04
(6) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_AUTH_RES
	ti	TI_0
	auth_sres	SRES_1_CODED
	}	

(7) RR_SYNC_REQ

op	NOT_USED
cksn	CKSN_04
kcv	KCV_11223344
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(8) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_AUTH_REJ
ti	TI_0
}	

(9) MMCC_RELEASE_IND

ti	TI_2
cause	MMCS_AUTHENTICATION_REJECTED

(10) MMCC_RELEASE_IND

ti	TI_5
cause	MMCS_AUTHENTICATION_REJECTED

(11) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
accc	NOT_USED
thplmn	NOT_USED

(12) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(13) MMGMM_AUTH_REJ_IND

(14) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(15) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(16) MMGMM_NREG_IND

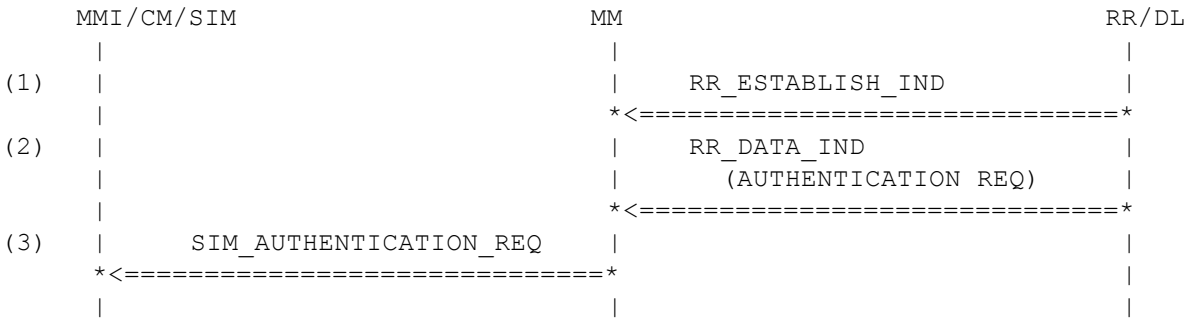
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_AUTHENTICATION_REJECTED

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	02.02.01	HM	Revised
	27.04.01	HM	Changed ordering of primitives

3.8.10 MMG0150: Authentication in State 9

Description: In State 9 (Wait for Network Command) MM receives RR-ESTABLISH indication primitive and an AUTHENTICATION REQ message from the network. MM forwards the authentication request to SIM in the form of a SIM-AUTHENTICATION request primitive containing the ciphering key data received from the network.

Preamble: MMG0024



Parametrization

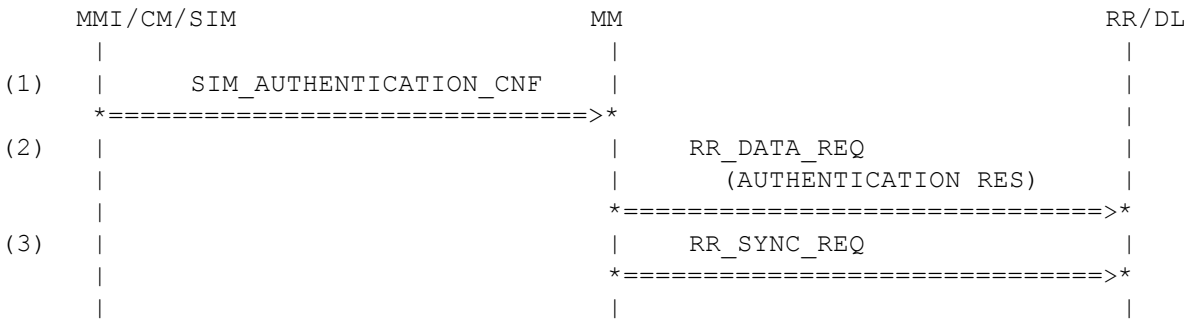
Primitive	Parameter	Value
(1) RR_ESTABLISH_IND		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REQ
	ti	TI_0
	ciph_key_num	CIPH_KEY_NUM_01
	auth_rand	AUTH_RAND_1
	}	
(3) SIM_AUTHENTICATION_REQ		
	source	NOT_USED
	rand	RAND_1
	cksn	CKSN_01

History:	10.07.97	HK	Initial

3.8.11 MMG0151: Response to Authentication Request in State 9

Description: In State 9 (Wait for Network Command) MM receives a SIM-AUTHENTICATION confirmation primitive and sends the authentication parameters to the network in the form of an AUTHENTICATION RES message.

Preamble: MMG0150



Parametrization

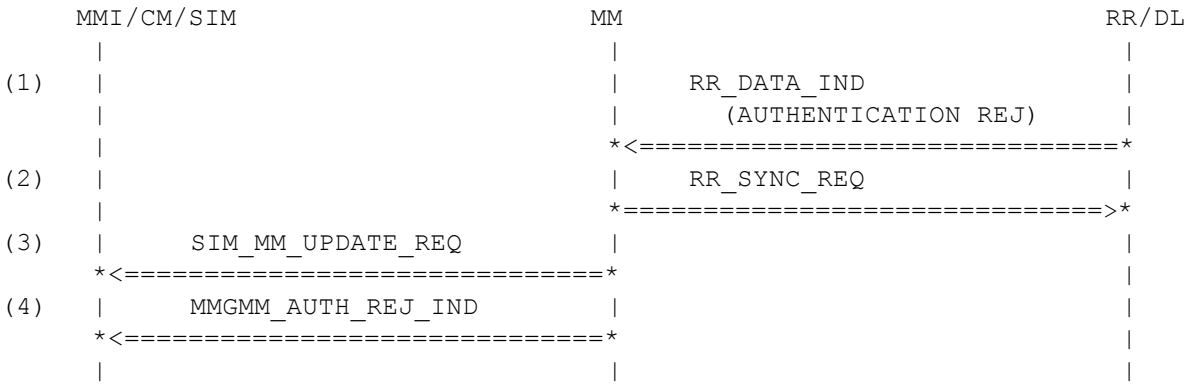
Primitive	Parameter	Value
(1) SIM_AUTHENTICATION_CNF		
	sres	SRES_1
	kc	KC_11223344
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_AUTH_RES
	ti	TI_0
	auth_sres	SRES_1_CODED
	}	
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	CKSN_01
	kcv	KCV_11223344
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED

History: 10.07.97 HK Initial

3.8.12 MMG0152: Authentication Reject in State 9

Description: In State 9 Wait for Network command MM receives RR_DATA_IND with an Authentication Reject message. MM sets the flag "Authentication fail", informs RR and the SIM entity about the loss of registration, considers the SIM as not present anymore and stays in State 9 (WAIT FOR NETWORK COMMAND) until the RR connection is released.

Preamble: MMG0151



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REJ
	ti	TI_0
	}	
(2) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED
(3) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

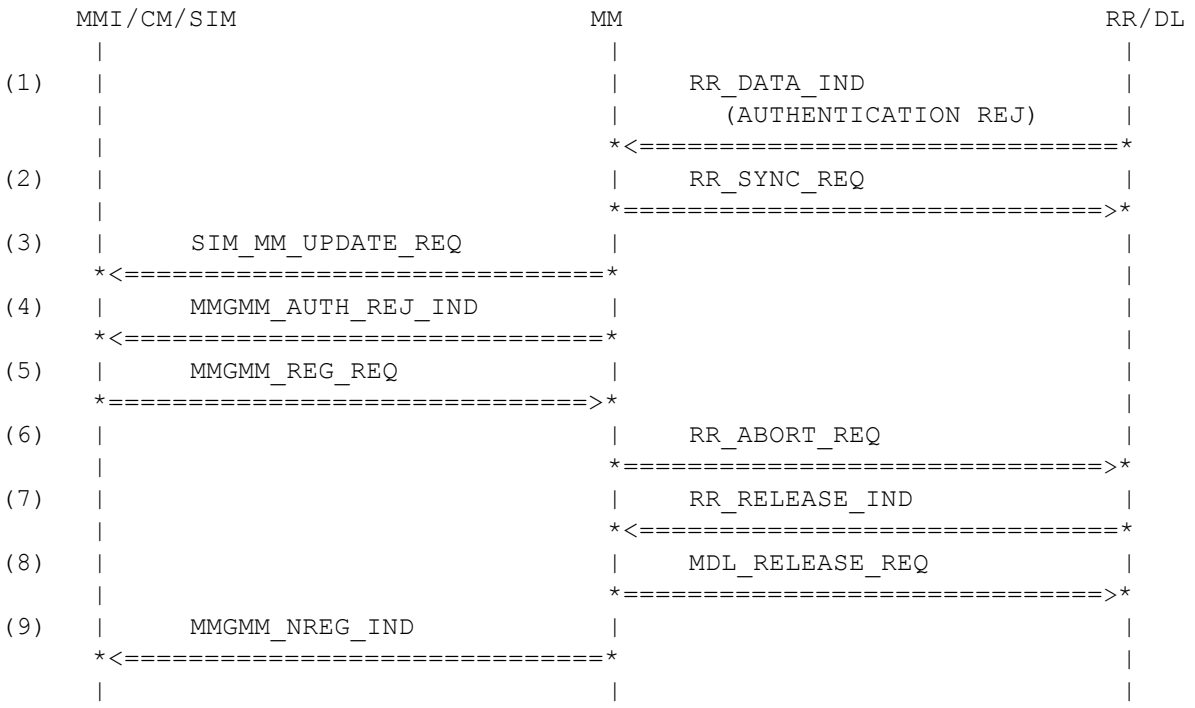
(4) MMGMM_AUTH_REJ_IND

History:	10.07.97	HK	Initial
	30.04.01	HM	Revised

3.8.13 MMG0153: Registration request following authorization failure

Description: Authentication is rejected by the network in the form of a AUTHENTICATION REJ message followed by a RR-ABORT indication primitive while the mobile station is in State 3 (Location Updating Initiated). MM releases the RR connection and signals failure to MMI in the form of a MMR-NREG indication primitive with the negative registration cause set to 'authentication failure'.

Preamble: MMG0142



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_AUTH_REJ
	ti	TI_0
	}	
(2) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED

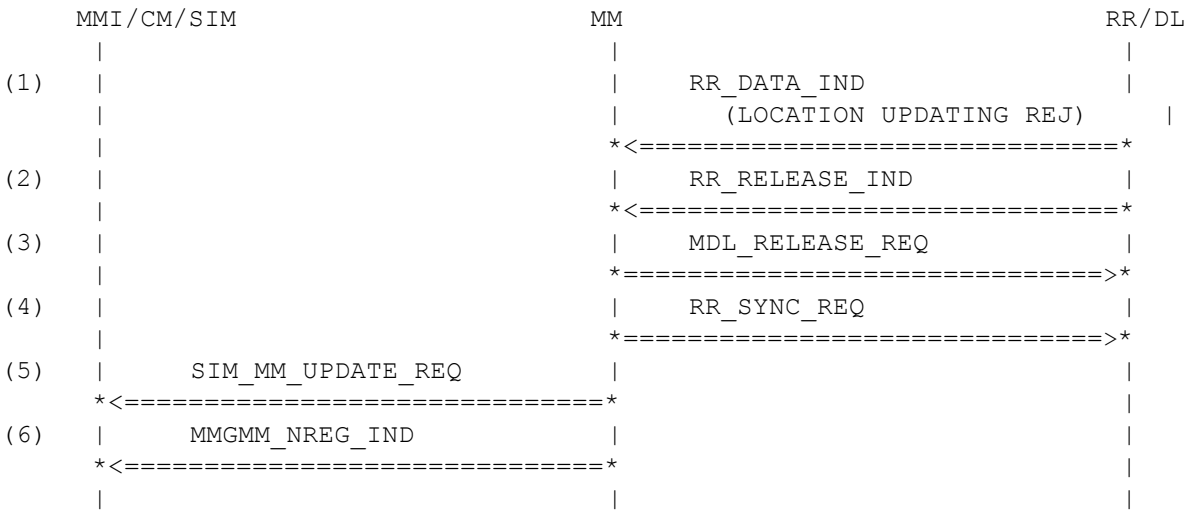
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED
(3) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(4) MMGMM_AUTH_REJ_IND		
(5) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(6) RR_ABORT_REQ		
	abcs	ABCS_NORM
(7) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(9) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_AUTHENTICATION_REJECTED

History:			
	21.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	27.04.01	HM	Revised

3.8.14 MMG0154: LUP Rej following AUTHENTICATION RESPONSE in State 3

Description: In State 3 (Location Updating Initiated) MM receives a LOCATION UPDATING REJ message. MM releases the RR connection and signals failure to MMI in the form of a MMR-NREG indication primitive. The PLMN for which the LOCATION UPDATING REJECT with cause PLMN NOT ALLOWED received is the HPLMN, thus it will *not* be added to the forbidden list.

Preamble: MMG0142



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_PLMN_NOT_ALLOWED
	}	
(2) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(4) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED

tmsi_struct	NOT_USED	
plmn	NOT_USED	
lac	NOT_USED	
synccs	SYNCCS_TMSI_CKSN_KC_INVAL	
accc	NOT_USED	
thplmn	NOT_USED	

(5) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(6) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_PLMN_NOT_ALLOWED

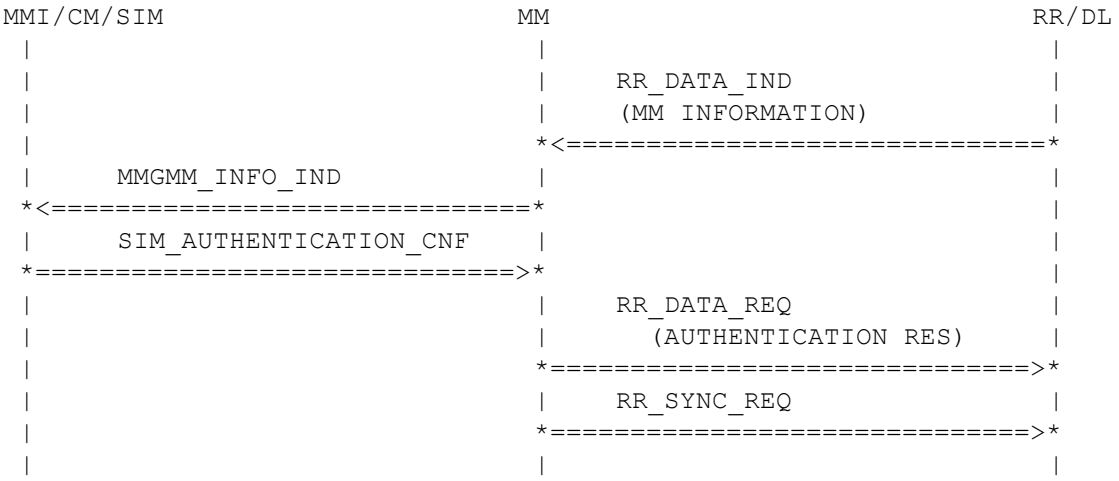
History:	21.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	23.11.00	HM	Revised

3.8.15 MMG0155: LUP with MM INFORMATION - I

Description: The SIM card needs some time to process the SRES. This time may be used by the network to transfer some information to the mobile station, which is forawrded transparently to upper layers. The authentication parameters are received from SIM in the form of a SIM-AUTHENTICATION confirmation primitive and are forwarded to the network as part of a AUTHENTICATION RES message. MM then commences synchronization with RR by issuing a RR-SYNC request primitive. The purpose of this testcase is to test that all parameters of the MM INFORMATION message are correctly transmitted to the ACI. Derived from testcase MMG0142.

Preamble: MMG0141

Variants: <A>....<B>



Parametrization

Primitive		Parameter	Value
(1)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_MM_INFORMATION
		full_net_name	FULL_NET_NAME
		short_net_name	SHORT_NET_NAME
<A>		net_tz	NET_TZ
<A>		net_tz_and_time	NOT_USED
<B>		net_tz	NOT_USED
<B>		net_tz_and_time	MSG_NET_TZ_AND_TIME_1
		}	
(2)	MMGMM_INFO_IND		
		plmn	PLMN_123_33
		full_name	FULL_NAME
		short_name	SHORT_NAME

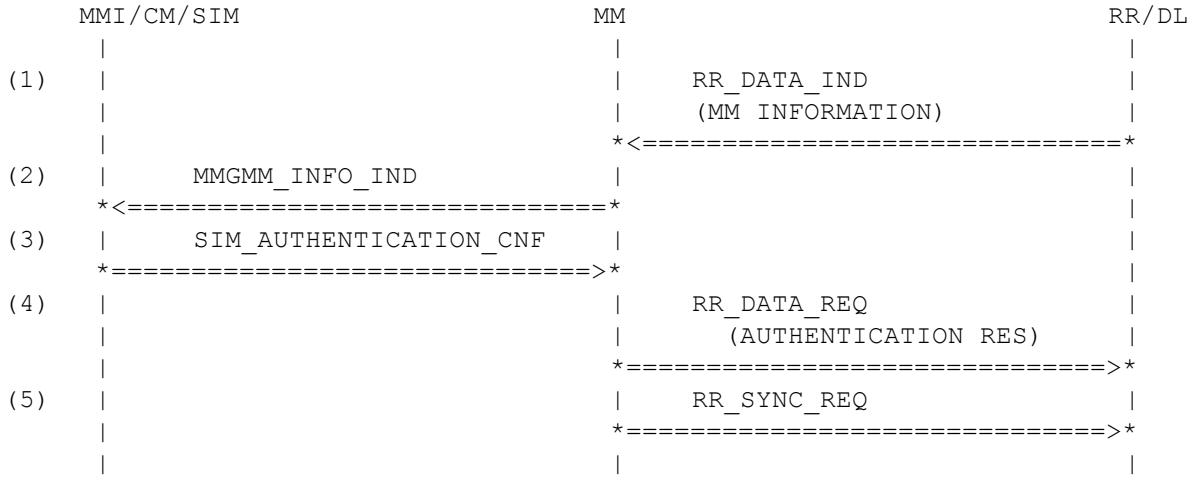
		ntz	NTZ_CET
	<A>	time	NOT_USED
	<B>	time	NET_TZ_AND_TIME_1
(3)	SIM_AUTHENTICATION_CNF		
		sres	SRES_1
		kc	KC_11223344
(4)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_AUTH_RES
		ti	TI_0
		auth_sres	SRES_1_CODED
		}	
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	CKSN_01
		kcv	KCV_11223344
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED

History:	08.03.00	HM	Initial
	19.02.02	HM	Revised

3.8.16 MMG0156: LUP with MM INFORMATION - II

Description: The SIM card needs some time to process the SRES. This time may be used by the network to transfer some information to the mobile station, which is forawrded transparently to upper layers. The authentication parameters are received from SIM in the form of a SIM-AUTHENTICATION confirmation primitive and are forwarded to the network as part of a AUTHENTICATION RES message. MM then commences synchronization with RR by issuing a RR-SYNC request primitive. The purpose of this testcase is to test that all parameters of the MM INFORMATION message are correctly transmitted to the ACI. Derived from testcase MMG0142.

Preamble: MMG0141



Parametrization

Primitive		Parameter	Value
(1)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	MM_INFORMATION_1
(2)	MMGMM_INFO_IND		
		plmn	PLMN_123_33
		full_name	NOT_USED
		short_name	NOT_USED
		ntz	NTZ_CET
		time	NET_TZ_AND_TIME_1
(3)	SIM_AUTHENTICATION_CNF		
		sres	SRES_1
		kc	KC_11223344
(4)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM

		direction	UPLINK
		pd	U_AUTH_RES
		ti	TI_0
		auth_sres	SRES_1_CODED
		}	
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	CKSN_01
		kcv	KCV_11223344
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED

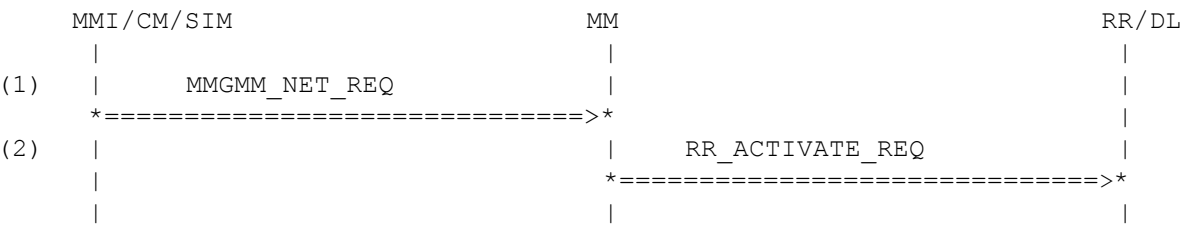
History:	19.02.02	HM	Initial

3.9 Net Request

3.9.1 MMG0161: Net Request in State 19.4

Description: MM receives a MMR-NET request primitive in State 19.4 (Idle No IMSI). A RR-ACTIVATE request with an empty IMSI is issued and MM enters State 19.8 (Idle, PLMN Search, Normal Service). [To be checked.]

Preamble: MMG0024



Parametrization

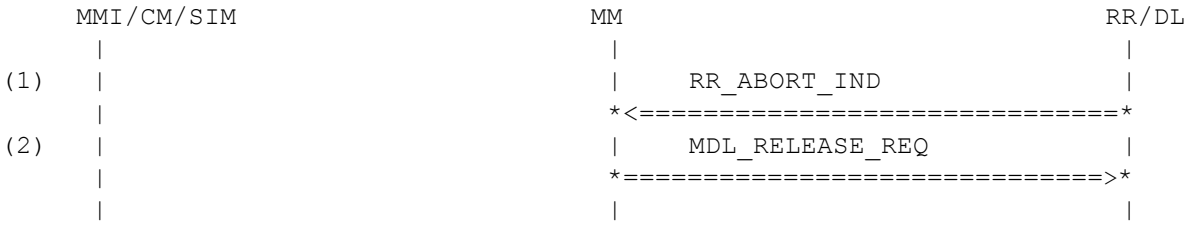
Primitive	Parameter	Value
(1) MMGMM_NET_REQ		
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:			
	10.07.97	HK	Initial
	17.09.97	DL	revised

3.9.2 MMG0162: RR_ABORT_IND in State 19

Description: MM receives a RR-ABORT indication primitive in State 19 (MM Idle). MM enters the limited service state.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	NOT_USED
	plmn	PLMN_LIST_PLMN_123_44
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

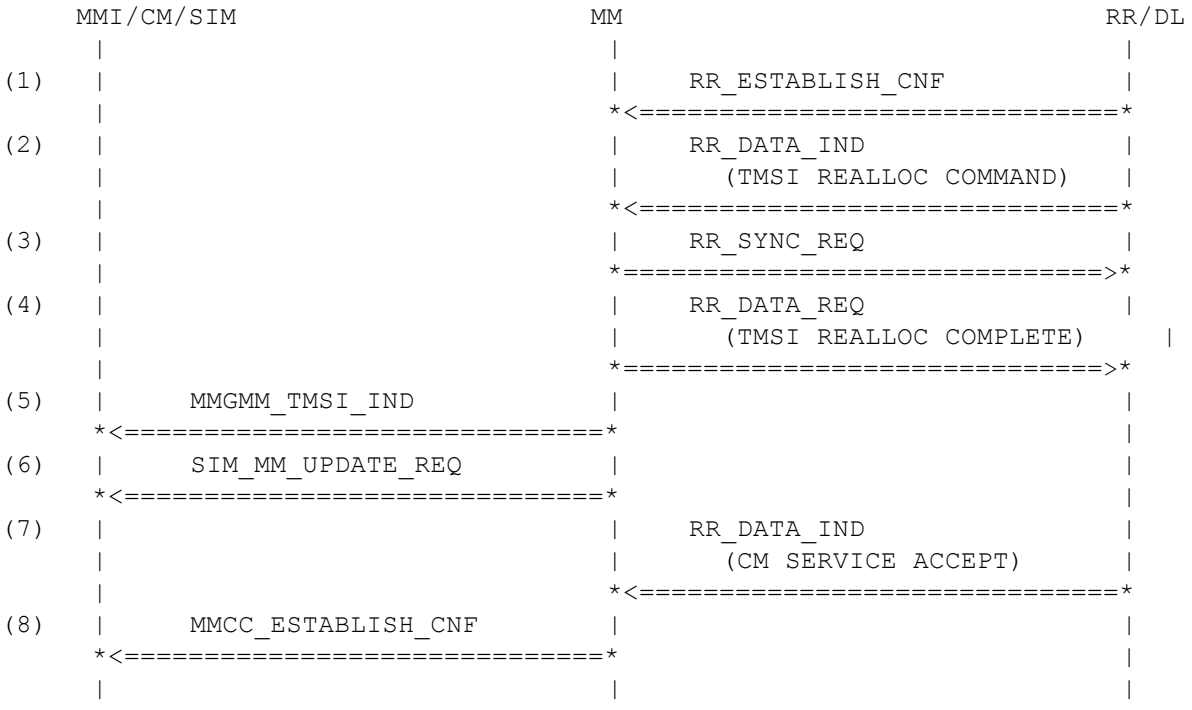
History:			
	10.07.97	HK	Initial
	17.02.00	HM	Revised
	10.02.03	LOL	added lac_list

3.10 TMSI Reallocation

3.10.1 MMG0181: TMSI Reallocation in State 5

Description: RR connection is confirmed in the form of a RR-ESTABLISH confirmation primitive. This is followed by a TMSI REALLOCATION COMMAND message. MM issues a TMSI REALLOC COMPLETE message and begins synchronization with RR (RR-SYNC request primitive). On receiving a CM SERVICE ACCEPT message MM issues a MMCC-ESTABLISH confirmation primitive.

Preamble: MMG0041



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_TMSI_REALLOC_CMD
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147

	mob_id	MOB_IDENT_NEW_TMSI
	}	
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(4) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(5) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(6) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(7) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(8) MMCC_ESTABLISH_CNF		
	ti	TI_2

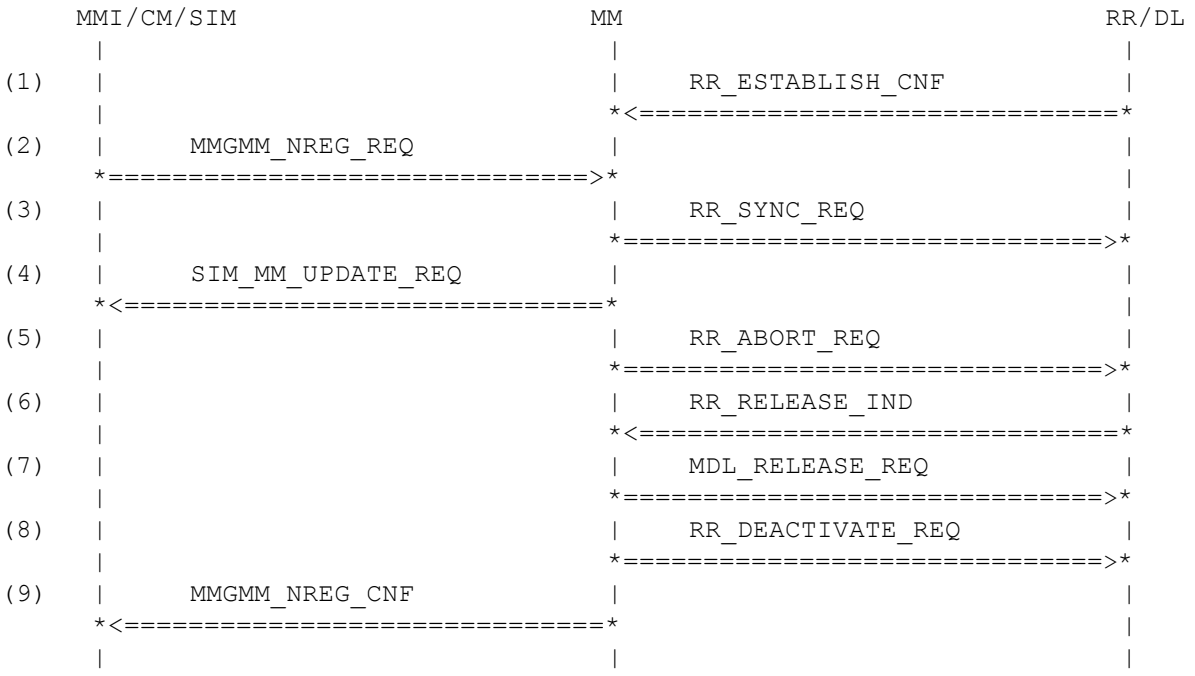
History:	09.07.97	HK	Initial
	17.01.02	HM	Revised
	23.01.02	HM	Revised
	03.02.03	HM	Back to the roots

3.11 Deregistration

3.11.1 MMG0201: MMGMM_NREG_REQ in State 3

Description: MM receives a RR-ESTABLISH confirmation primitive in State 3 (Location updating initiated). This is followed by a MMR-NREG request primitive. MM releases the RR connection and issues a MMR-NREG confirmation primitive with cause set to 'Power off'.

Preamble: MMG0101



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(3)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_INVAL
		accc	NOT_USED
		thplmn	NOT_USED

(4)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(5)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(6)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(9)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	09.07.97	HK	Initial
	15.09.97	DL	revised
	10.04.01	HM	Revised
	25.04.01	HM	Revised

3.11.2 MMG0202: MMGMM_NREG_REQ in Upate Status U1

Description: MM receives a a MMR-NREG request primitive. MM issues a RR-DEACTIVATE request primitive and a MMR-NREG confirmation primitive with cause set to 'Power off' and changes to changes to State 0 (Null).
<A> Switch Off with deletion of SIM data
<B> Switch Off without SIM invalidation

Preamble: MMG0023A

Variants: <A>....<B>

Parametrization

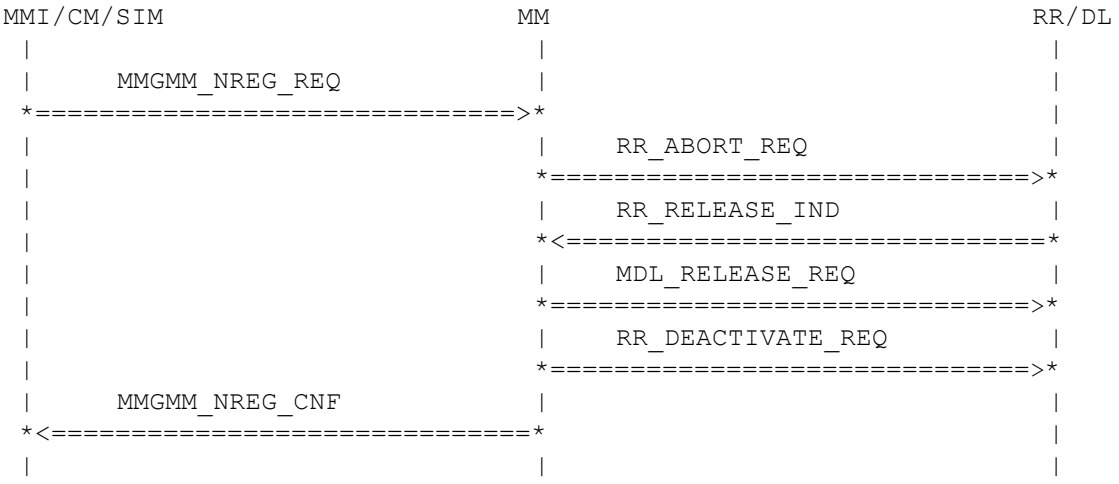
Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
<A>	detach_cause	CS_POW_OFF
<B>	detach_cause	CS_SOFT_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_DEACTIVATE_REQ		
	param	NOT_USED
(4) MMGMM_NREG_CNF		
<A>	detach_cause	CS_POW_OFF
<B>	detach_cause	CS_SOFT_OFF

History:			
	08.07.97	HK	Initial
	27.06.01	HM	Revised

3.11.3 MMG0203: Authentication Reject and Power off in State 6

Description: MM receives a MMR-NREG request primitive in State 6 (MM Connection Active) and commences a shutdown.

Preamble: MMG0143



Parametrization

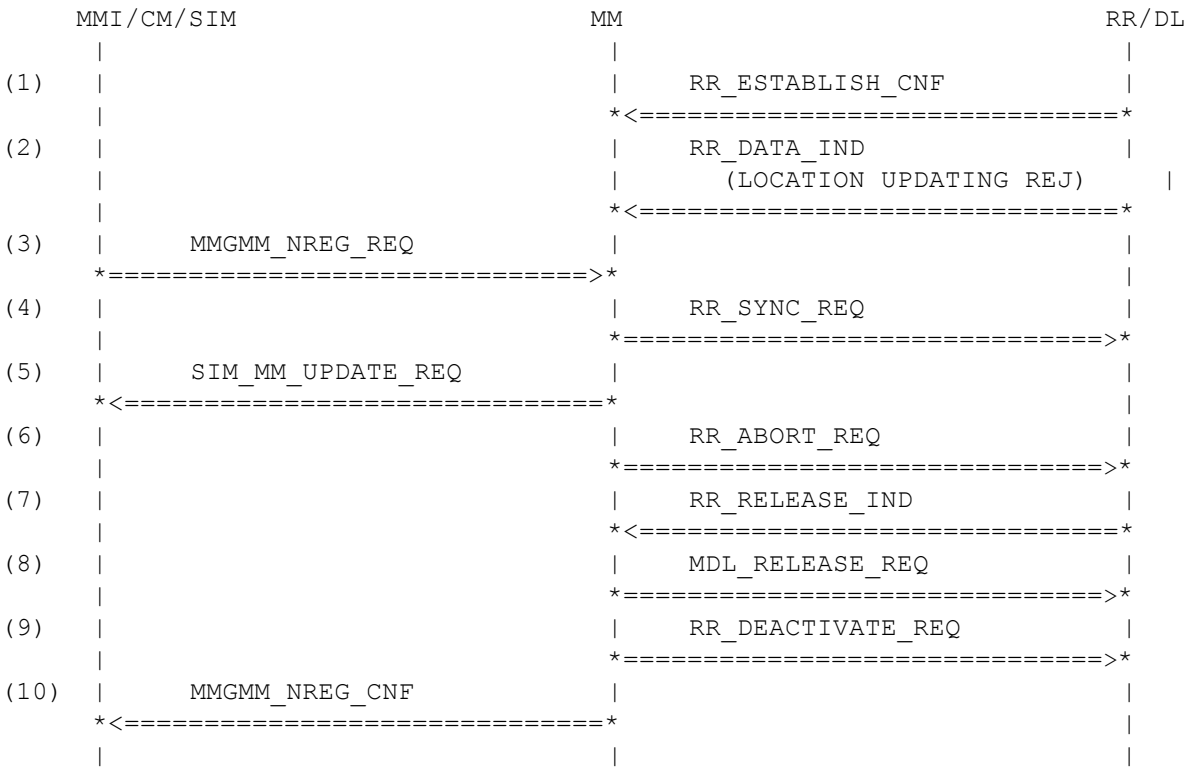
	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(6)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:			
	09.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	02.02.01	HM	Revised

3.11.4 MMG0204: Power Off in State 10

Description: MM receives a MMR-NREG request primitive in State 10 (Location Update Rejected) and commences a shutdown.

Preamble: MMG0101



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_UNSPECIFIED
		}	
(3)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT

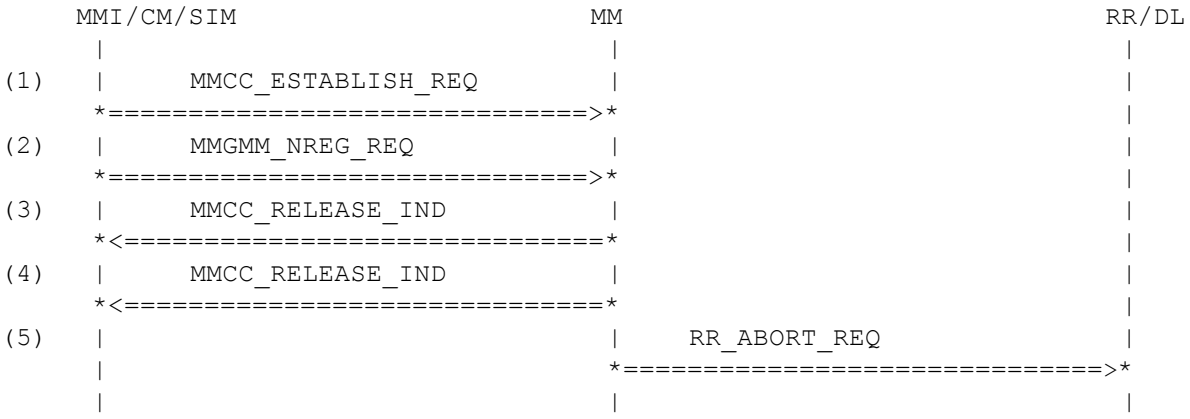
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(5)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(6)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(7)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(10)		MMGMM_NREG_CNF	
		detach_cause	CS_POW_OFF

History:	10.07.97	HK	Initial
	16.09.97	DL	revised
	10.04.01	HM	Revised
	25.04.01	HM	Revised

3.11.5 MMG0205: Power Off in State 14

Description: MM receives a MMR-NREG request primitive in State 14(Wait for RR Connection) and commences a shutdown.

Preamble: MMG0041



Parametrization

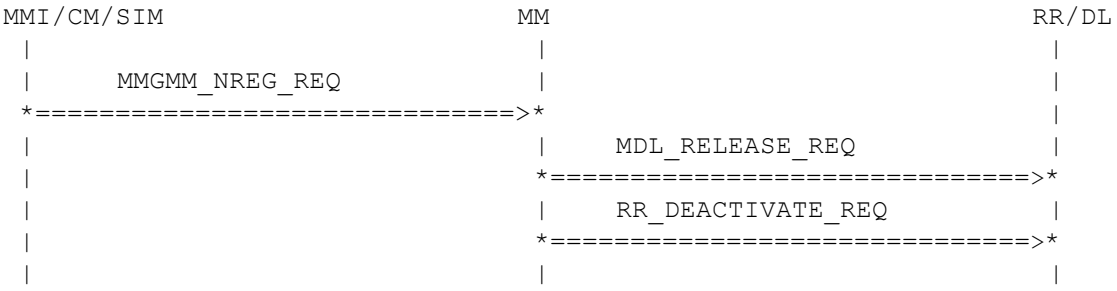
Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_MOB_ORIG_DATA
(2) MMGMM_NREG_REQ		
	detach_cause	CS_POW_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(3) MMCC_RELEASE_IND		
	ti	TI_2
	cause	MMCS_NO_REGISTRATION
(4) MMCC_RELEASE_IND		
	ti	TI_3
	cause	MMCS_NO_REGISTRATION
(5) RR_ABORT_REQ		
	abcs	ABCS_NORM

History:			
	10.07.97	HK	Initial
	16.09.97	DL	revised

3.11.6 MMG0206: Power Off in State 18

Description: MM receives a a MMR-NREG request primitive in State 18 (Wait for RR Active) and issues a RR-DEACTIVATE request primitive.

Preamble: MMG0023A



Parametrization

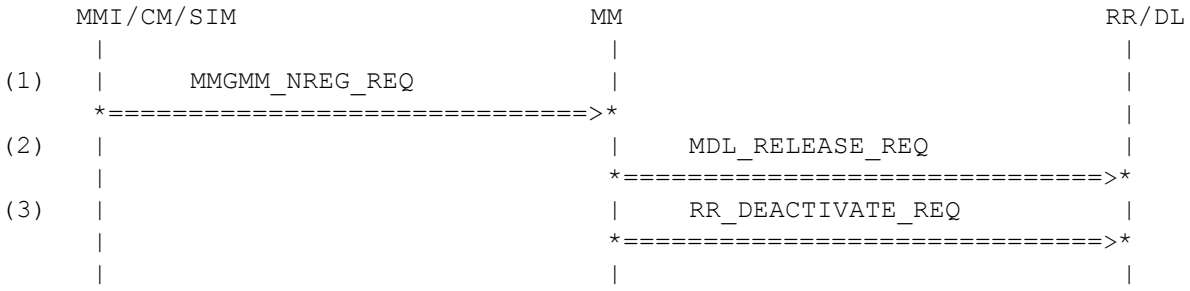
Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_POW_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_DEACTIVATE_REQ		
	param	NOT_USED

History: 10.07.97 HK Initial

3.11.7 MMG0207: Power Off Remove in State 19

Description: MM receives a a MMR-NREG request primitive in State 19 (MM Idle) and issues a RR-DEACTIVATE request primitive.

Preamble: MMG0161



Parametrization

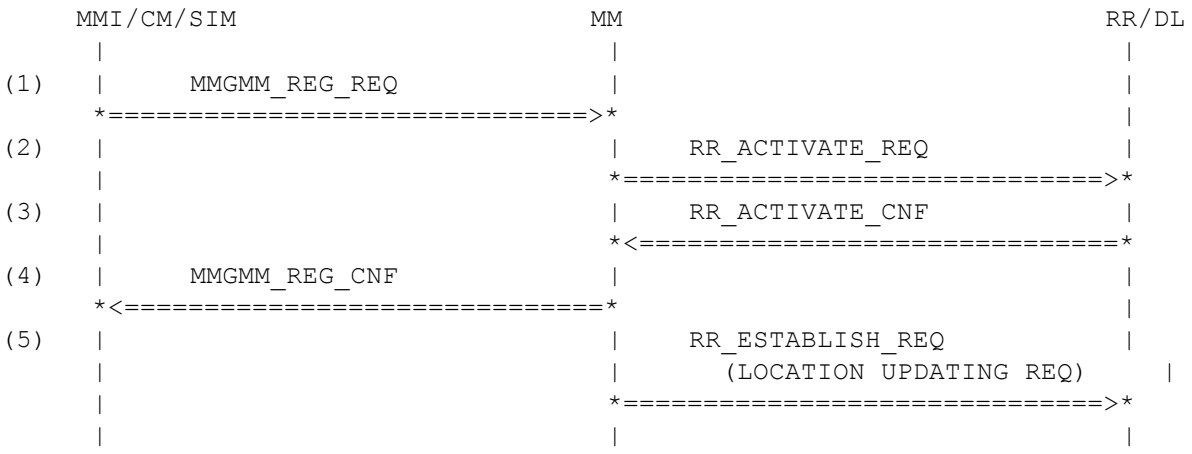
Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_POW_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_DEACTIVATE_REQ		
	param	NOT_USED

History: 10.07.97 HK Initial

3.11.8 MMG0208: Switch on after soft power off, IMSI ATTACH needed

Description: The mobile was switched off logically, but the power was not removed physically. This is the behaviour expected with the AT command AT+CFUN=4. The SIM data should have been preserved. After reactivation in the same location area, an IMSI ATTACH is needed.

Preamble: MMG0202B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_REG_CNF		
		plmn	PLMN_123_33

		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

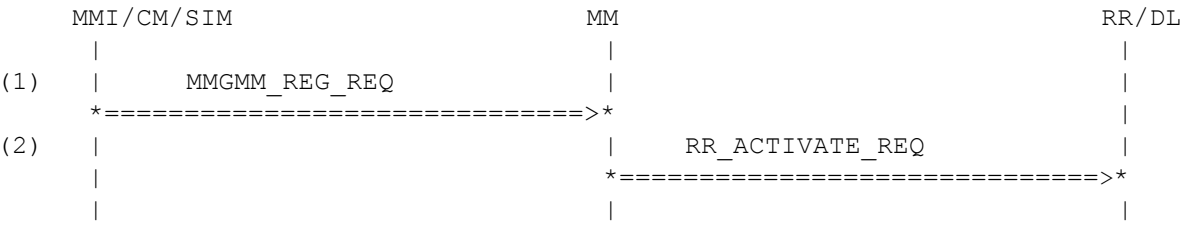
History:	11.04.01	HM	Initial

3.12 Registration (REG_MS_OFF, no SIM Card)

3.12.1 MMG0300: Registration

Description: The reaction of MM to a request for registration with unplugged SIM card is tested. MM receives a MMR-REG request primitive and responds by issuing a RR-ACTIVATE request primitive in which the op field is set to 'limited service, no SIM'.

Preamble: MMG0001



Parametrization

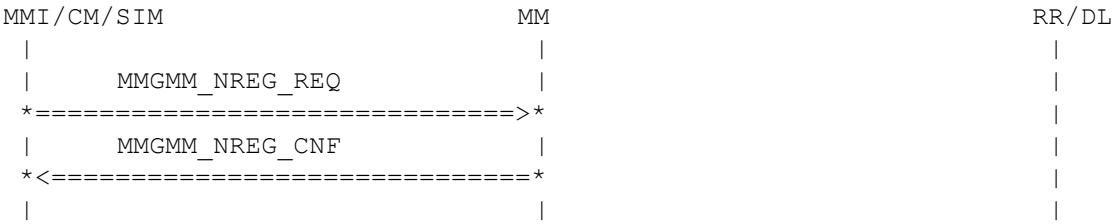
Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_MODE_NO_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.12.2 MMG0301: Deregistration

Description: MM receives a MMR-NREG request primitive. issues a MMR-NREG confirmation primitive with cause set to 'Power off'.

Preamble: MMG0001



Parametrization

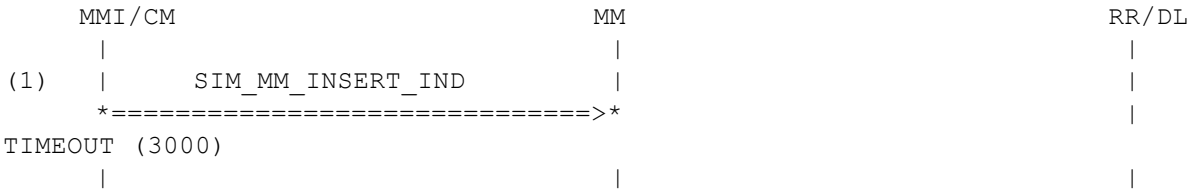
	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:			
	09.07.97	HK	Initial
	15.09.97	DL	revised
	27.10.00	HM	Revised

3.12.3 MMG0302: SIM Insertion

Description: MM receives a SIM-INSERT indication primitive. It stores the parameters and waits for registration start by MMI.

Preamble: MMG0001



Parametrization

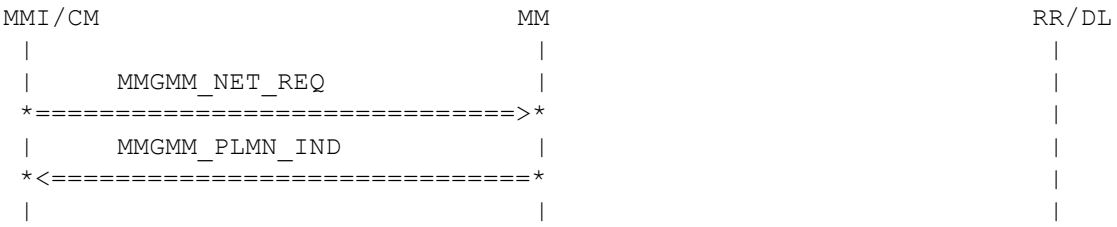
Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.12.4 MMG0352: PLMN Available Request

Description: MMI requests a PLMN available list. There is no SIM inserted. This is not allowed.

Preamble: MMG0001



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NET_REQ		
(2) MMGMM_PLMN_IND		
	cause	MMCS_SIM_REMOVED
	plmn	NOT_USED
	forb_ind	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	gprs_status	NOT_USED

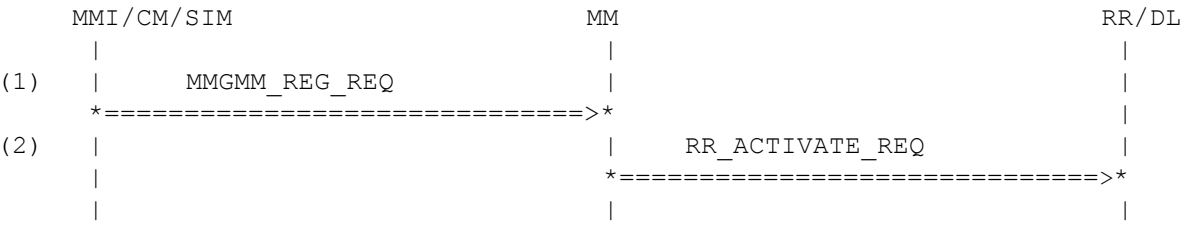
History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	10.02.03	LOL	added lac_list

3.13 Registration (REG_NO_SERVICE, no SIM Card)

3.13.1 MMG0303: Registration

Description: The reaction of MM to a request for registration with unplugged SIM card is tested. MM receives a MMR-REG request primitive and responds by issuing a RR-ACTIVATE request primitive in which the op field is set to 'limited service, no SIM'.

Preamble: MMG0300



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.13.2 MMG0304: Deregistration

Description: MM receives a a MMR-NREG request primitive. MM issues a RR-DEACTIVATE request primitive and a MMR-NREG confirmation primitive with cause set to 'Power off' and changes to changes to State 0 (Null).

Preamble: MMG0300

Parametrization

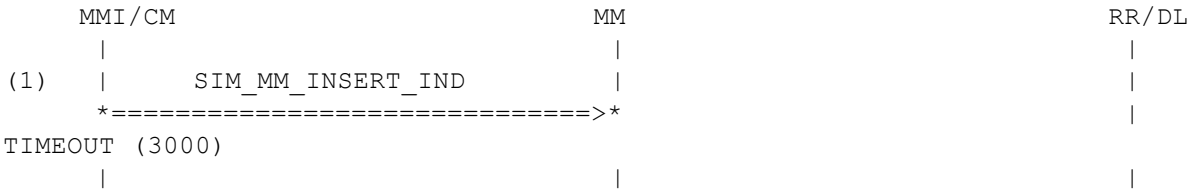
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 08.07.97 HK Initial

3.13.3 MMG0305: SIM Insertion

Description: MM receives a SIM-INSERT indication primitive. It stores the parameters and waits for registration start by MMI.

Preamble: MMG0300



Parametrization

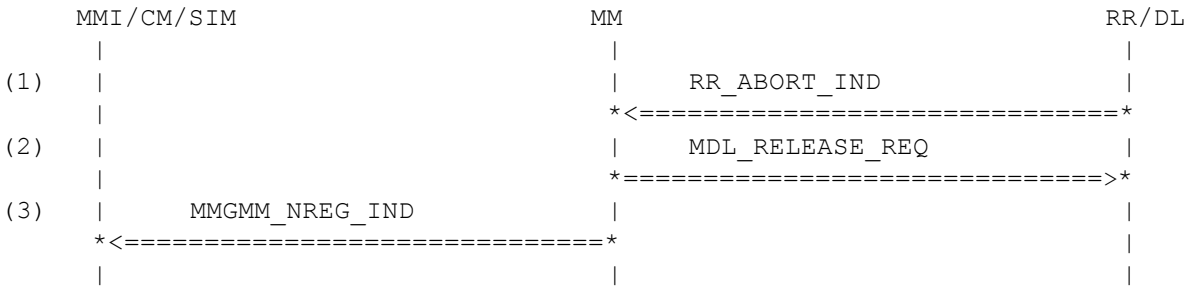
Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.13.4 MMG0306: RR failure (No Service)

Description: MM receives a RR-ABORT indication primitive indicating No Service.

Preamble: MMG0300



Parametrization

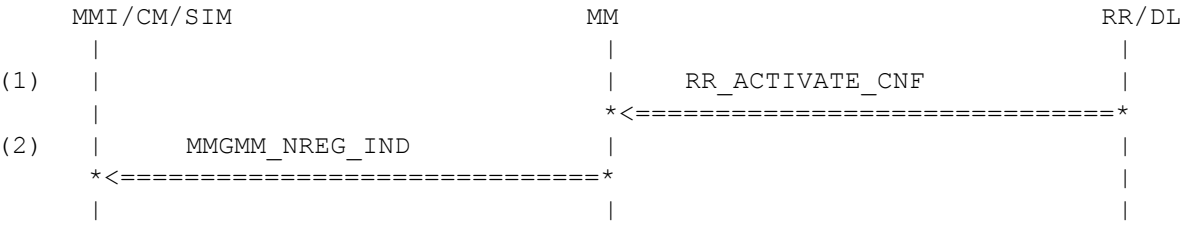
	Primitive	Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_MODE_NO_SIM_NO_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_FOUND
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.13.5 MMG0307: MM Success (Limited Service)

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell.

Preamble: MMG0300



Parametrization

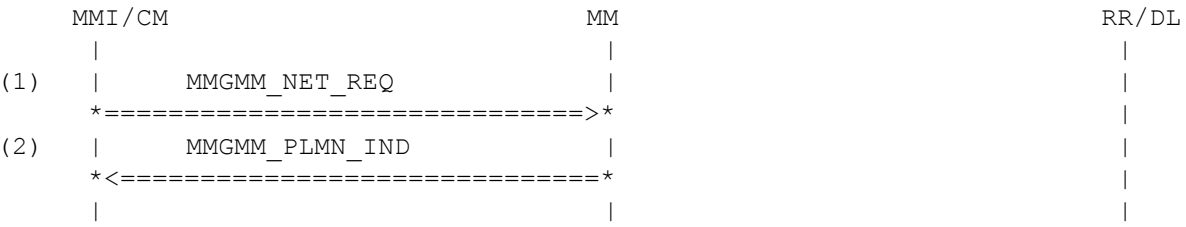
Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)

3.13.6 MMG0353: PLMN Available Request

Description: MMI requests a PLMN available list. There is no SIM inserted. This is not allowed.

Preamble: MMG0300



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NET_REQ		
(2) MMGMM_PLMN_IND		
	cause	MMCS_SIM_REMOVED
	plmn	NOT_USED
	forb_ind	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	gprs_status	NOT_USED

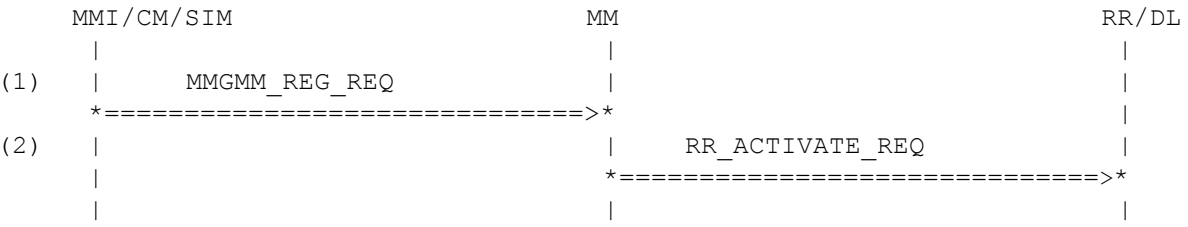
History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	10.02.03	LOL	added lac_list

3.14 Registration (REG_LIMITED_SERVICE, no SIM Card)

3.14.1 MMG0308: Registration

Description: The reaction of MM to a request for registration with unplugged SIM card is tested. MM receives a MMR-REG request primitive and responds by issuing a RR-ACTIVATE request primitive in which the op field is set to 'limited service, no SIM'.

Preamble: MMG0307



Parametrization

Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_MODE_NO_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.14.2 MMG0309: Deregistration

Description: MM receives a a MMR-NREG request primitive. MM issues a RR-DEACTIVATE request primitive and a MMR-NREG confirmation primitive with cause set to 'Power off' and changes to changes to State 0 (Null).

Preamble: MMG0307

Parametrization

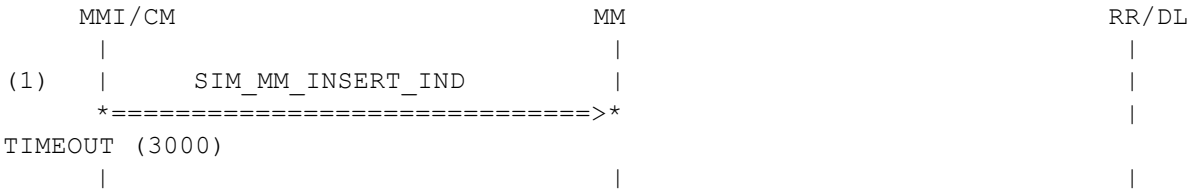
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 08.07.97 HK Initial

3.14.3 MMG0310: SIM Insertion

Description: MM receives a SIM-INSERT indication primitive. It stores the parameters and waits for registration start by MMI.

Preamble: MMG0307



Parametrization

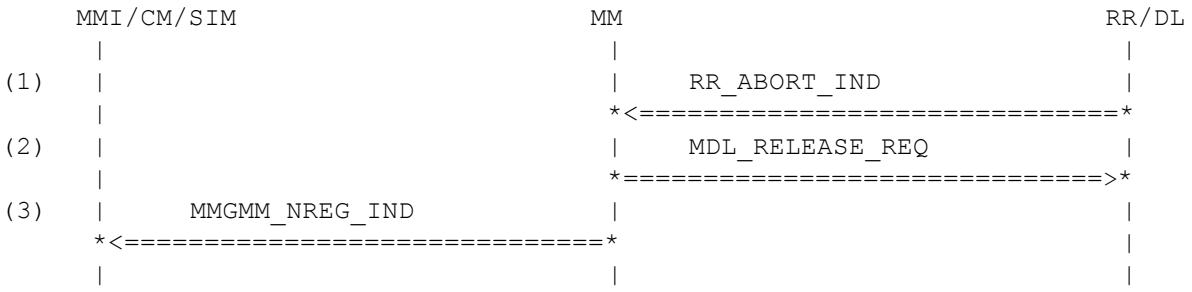
Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.14.4 MMG0311: RR failure (No Service)

Description: MM receives a RR-ABORT indication primitive indicating No Service.

Preamble: MMG0307



Parametrization

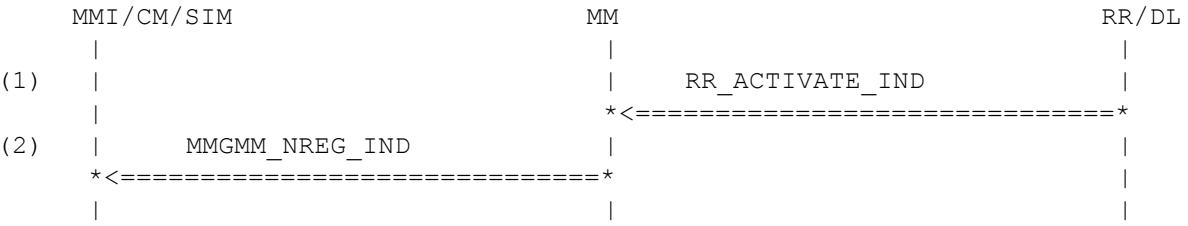
Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_MODE_NO_SIM_NO_SERV
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	NO_PLMN_FOUND
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMGMM_NREG_IND		
	service	NREG_NO_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_SIM_REMOVED

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.14.5 MMG0312: MM Success (Limited Service)

Description: MM is informed by means of a RR-ACTIVATE indication primitive that the mobile station is synchronous to a cell.

Preamble: MMG0307



Parametrization

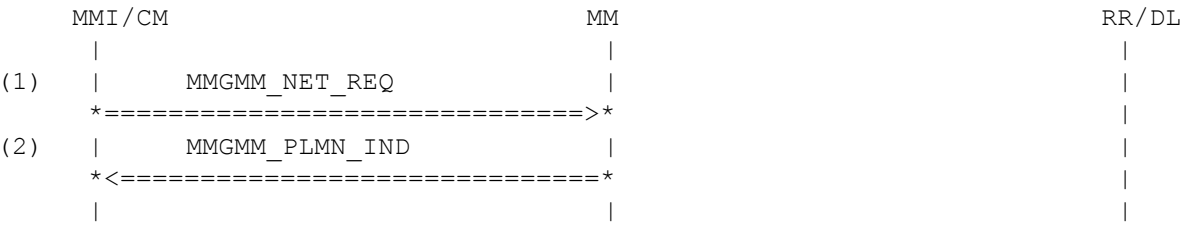
Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_MODE_NO_SIM_LIM_SERV
	mm_info	MM_INFO
	cid	CELL_ID_0045
	plmn	PLMN_123_44
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_SIM_REMOVED

History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)

3.14.6 MMG0354: PLMN Available Request

Description: MMI requests a PLMN available list. There is no SIM inserted. This is not allowed.

Preamble: MMG0307



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NET_REQ		
(2)	MMGMM_PLMN_IND		
		cause	MMCS_SIM_REMOVED
		plmn	NOT_USED
		forb_ind	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		gprs_status	NOT_USED

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	10.02.03	LOL	added lac_list

3.15 Registration (REG_MS_OFF, with SIM card)

3.15.1 MMG0313: Registration

Description: MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Variant A:	not updated	start with HPLMN
Variant B:	updated, HPLMN	start with HPLMN
Variant C:	updated, not HPLMN	start with LPLMN

Preamble: MMG0001

Variants: <A>....<C>

Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
<A>	loc_info	LOC_INFO_NOT_UPD_LPLMN
<B>	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>	loc_info	LOC_INFO_UPDATED_LPLMN
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
<A>	forb_plmn	FORB_PLMN_NONE
<B>	forb_plmn	FORB_PLMN_123_32
<C>	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
<A>	plmn	PLMN_123_33X
<B>	plmn	PLMN_123_33X
<C>	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES

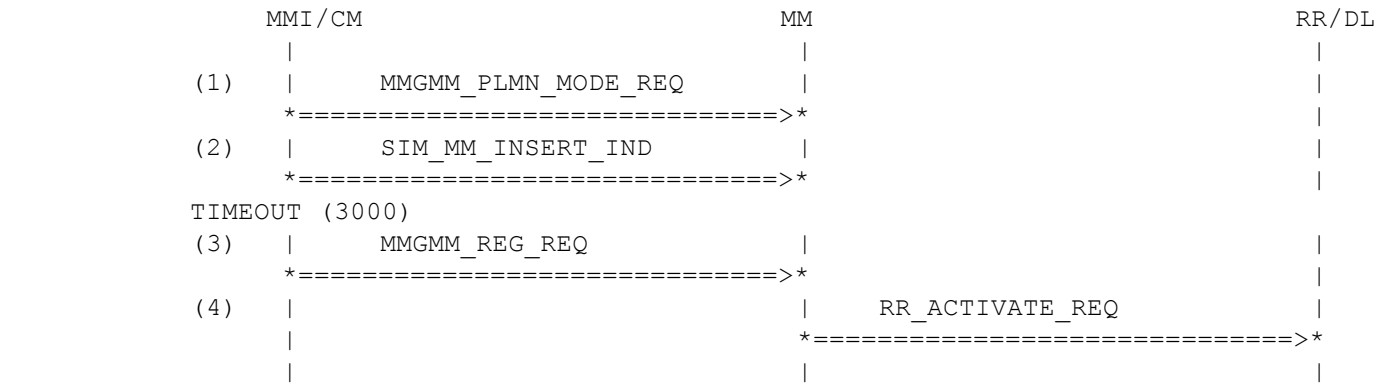
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
<A>	bcch_info	BCCH_INFO_NONE
<B>	bcch_info	BCCH_INFO_ECL
<C>	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.02.00	HM	Revised

3.15.2 MMG0314: PLMN Mode Change

Description: MMI changes the PLMN mode from automatic to manual. MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Preamble: MMG0001



Parametrization

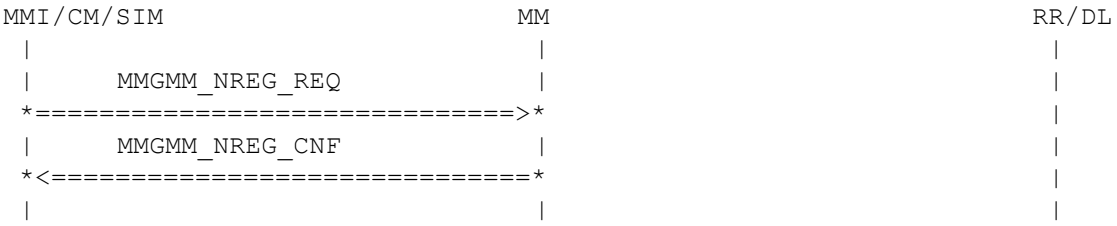
Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	SIM_MM_INSERT_IND		
		op_mode	OP_NORMAL_SIM
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_NOT_UPD_LPLMN
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_MAN_NETSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.15.3 MMG0315: Deregistration (Power Off)

Description: MM receives a MMR-NREG request primitive. issues a MMR-NREG confirmation primitive with cause set to 'Power off'.

Preamble: MMG0302



Parametrization

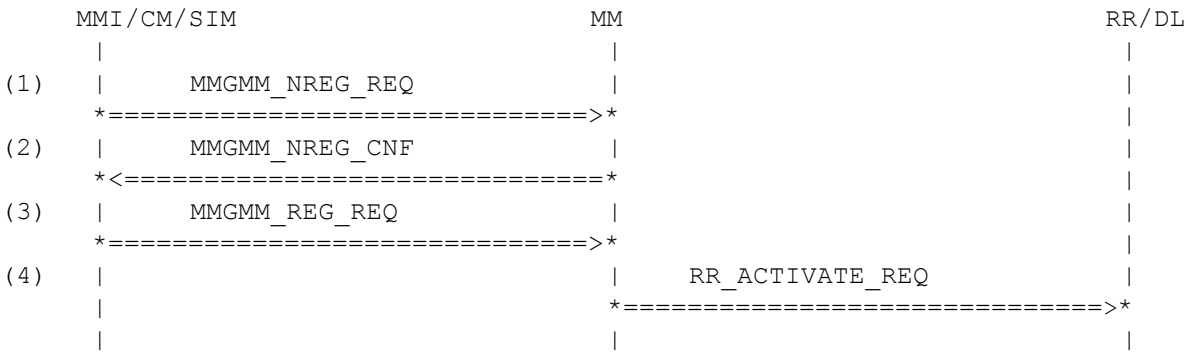
	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:			
	09.07.97	HK	Initial
	15.09.97	DL	revised

3.15.4 MMG0316: Deregistration (SIM invalid)

Description: MM receives a MMR-NREG request primitive. issues a MMR-NREG confirmation primitive with cause set to 'SIM Remove'. This doesn't erase SIM data in MM, but MM now considers the SIM as invalid until MMGMM_REG_REQ with SERVICE_MODE_FULL is received.

Preamble: MMG0302



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_LIMITED
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	15.09.97	DL	Revised
	26.04.00	HM	Revided

3.15.5 MMG0317: SIM Removal

Description: The SIM card is removed before starting with registration. MM is in NULL state, no lower layers are active in this state.

Preamble: MMG0302

Parametrization

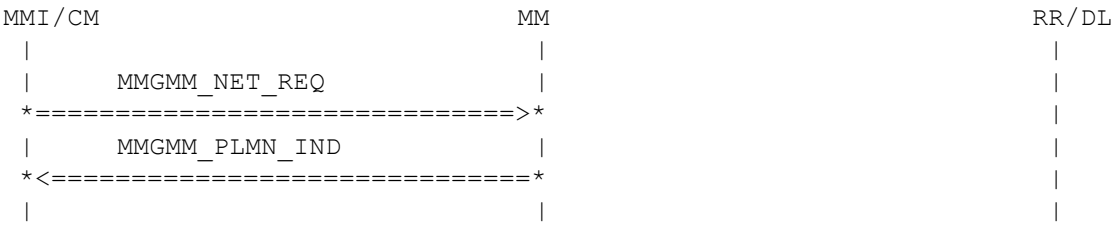
Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	08.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	27.10.00	HM	Revised

3.15.6 MMG0351: PLMN Available Request

Description: MMI requests a PLMN available list before starting registration. This is not allowed.

Preamble: MMG0302



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NET_REQ		
(2)	MMGMM_PLMN_IND		
		cause	MMCS_PLMN_NOT_IDLE_MODE
		plmn	NOT_USED
		forb_ind	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		gprs_status	NOT_USED

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	10.02.03	LOL	added lac_list

3.16 Registration (REG_NO_SERVICE, with SIM card, automatic mode)

3.16.1 MMG0318: Registration

Description: MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Variant A:	not updated	start with HPLMN
Variant B:	updated, HPLMN	start with HPLMN
Variant C:	updated, not HPLMN	start with LPLMN

Preamble: MMG0300

Variants: <A>....<C>

Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
<A>	loc_info	LOC_INFO_NOT_UPD_LPLMN
<B>	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>	loc_info	LOC_INFO_UPDATED_LPLMN
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
<A>	forb_plmn	FORB_PLMN_NONE
<B>	forb_plmn	FORB_PLMN_123_32
<C>	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
<A>	plmn	PLMN_123_33X
<B>	plmn	PLMN_123_33X
<C>	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES

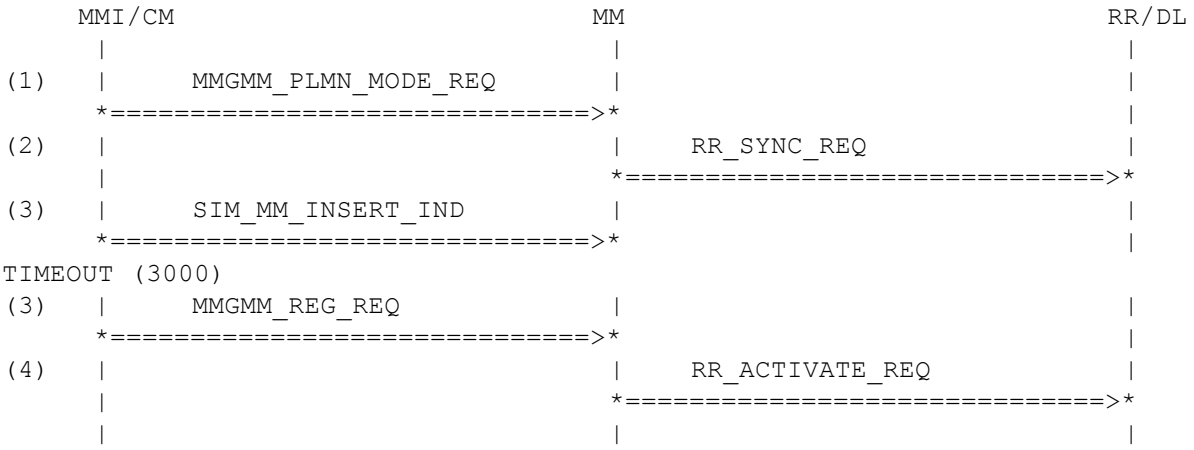
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
<A>	bcch_info	BCCH_INFO_NONE
<B>	bcch_info	BCCH_INFO_ECL
<C>	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.02.00	HM	Revised

3.16.2 MMG0319: PLMN Mode Change

Description: MMI changes the PLMN mode from automatic to manual. MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Preamble: MMG0300



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_MODE_NO_SIM_NO_SERV_M
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	SIM_MM_INSERT_IND		
		op_mode	OP_NORMAL_SIM
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_NOT_UPD_LPLMN
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC

(5) RR_ACTIVATE_REQ

plmn	PLMN_NO_ID
op	OP_SIM_MAN_NETSRCH_NS
cksn	CKSN_RES
kcv	KCV_DELETED
accc	ACC_CLASS_0000
imsi_struct	MOB_ID_NO_ID
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	NOT_USED
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.16.3 MMG0320: Deregistration (Power Off)

Description: MM receives a a MMR-NREG request primitive. MM issues a RR-DEACTIVATE request primitive and a MMR-NREG confirmation primitive with cause set to 'Power off' and changes to changes to State 0 (Null).

Preamble: MMG0313A

Parametrization

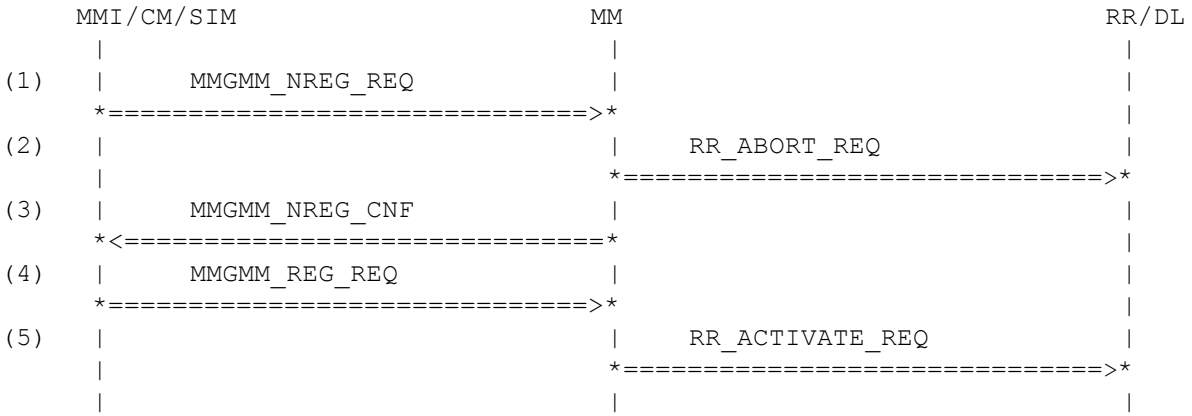
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 08.07.97 HK Initial

3.16.4 MMG0321: Deregistration (SIM invalid)

Description: MM receives a MMR_NREG request primitive. After RR abortion, MM issues a MMR-NREG confirmation primitive with cause set to 'SIM Remove'.

Preamble: MMG0313A



Parametrization

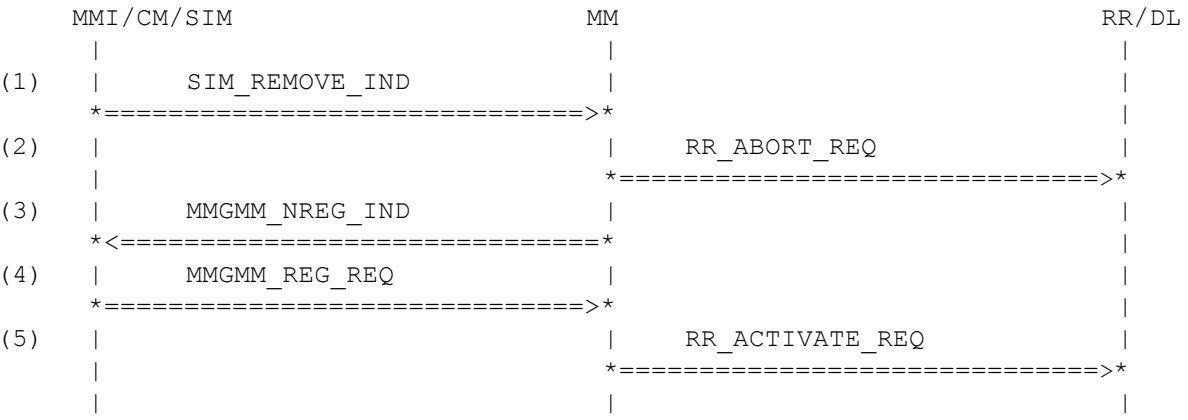
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(3)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	15.09.97	DL	revised
	27.10.00	HM	Revised
	24.11.00	HM	Revised

3.16.5 MMG0322: SIM Removal

Description: The SIM card is removed before starting with registration.

Preamble: MMG0313A



Parametrization

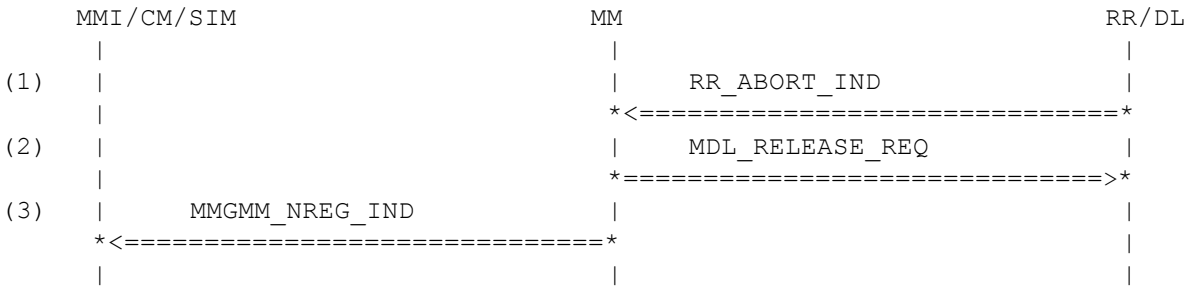
Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(3)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	08.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	23.11.00	HM	Revised

3.16.6 MMG0323: RR failure (No Service)

Description: MM receives a RR-ABORT indication primitive indicating No Service.

Preamble: MMG0313A



Parametrization

	Primitive	Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_FOUND
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.16.7 MMG0324: RR failure (Limited Service, no further PLMNs)

Description: MM receives a RR-ABORT indication primitive indicating Limited Service. The one PLMN which was found is in the forbidden PLMN list and cannot be used.

Preamble: MMG0313B

Parametrization

	Primitive	Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_FORB
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:			
	10.07.97	HK	Initial
	03.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.16.8 MMG0325: RR failure (Limited Service, further PLMNs available)

Description: MM receives a RR-ABORT indication primitive indicating Limited Service. The one PLMN which was found is not in the forbidden PLMN list and can be used.

Preamble: MMG0313A

Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_PLMN_123_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_31
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.16.9 MMG0326: MM Success

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell.

Preamble: MMG0313B

Parametrization

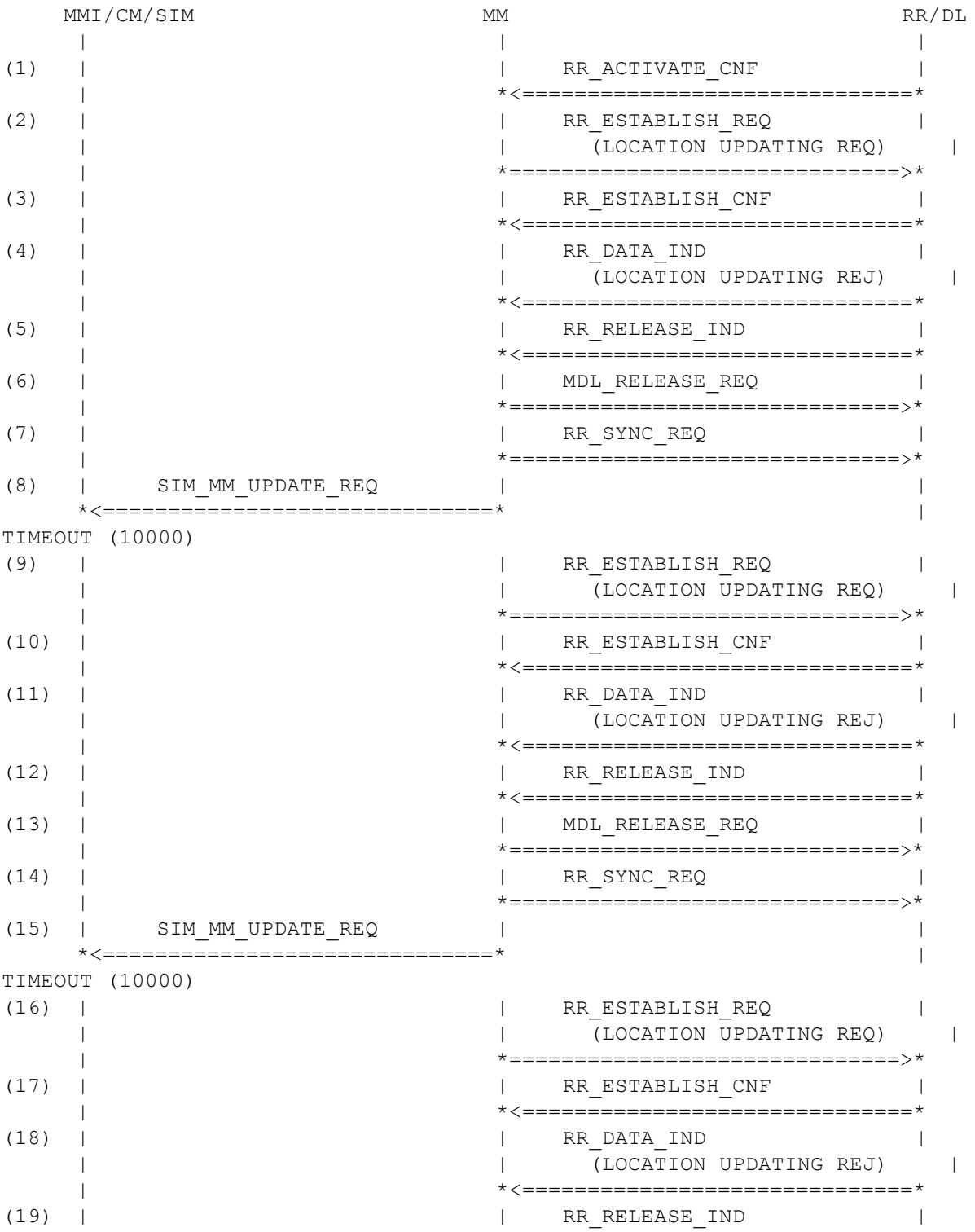
Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(3) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

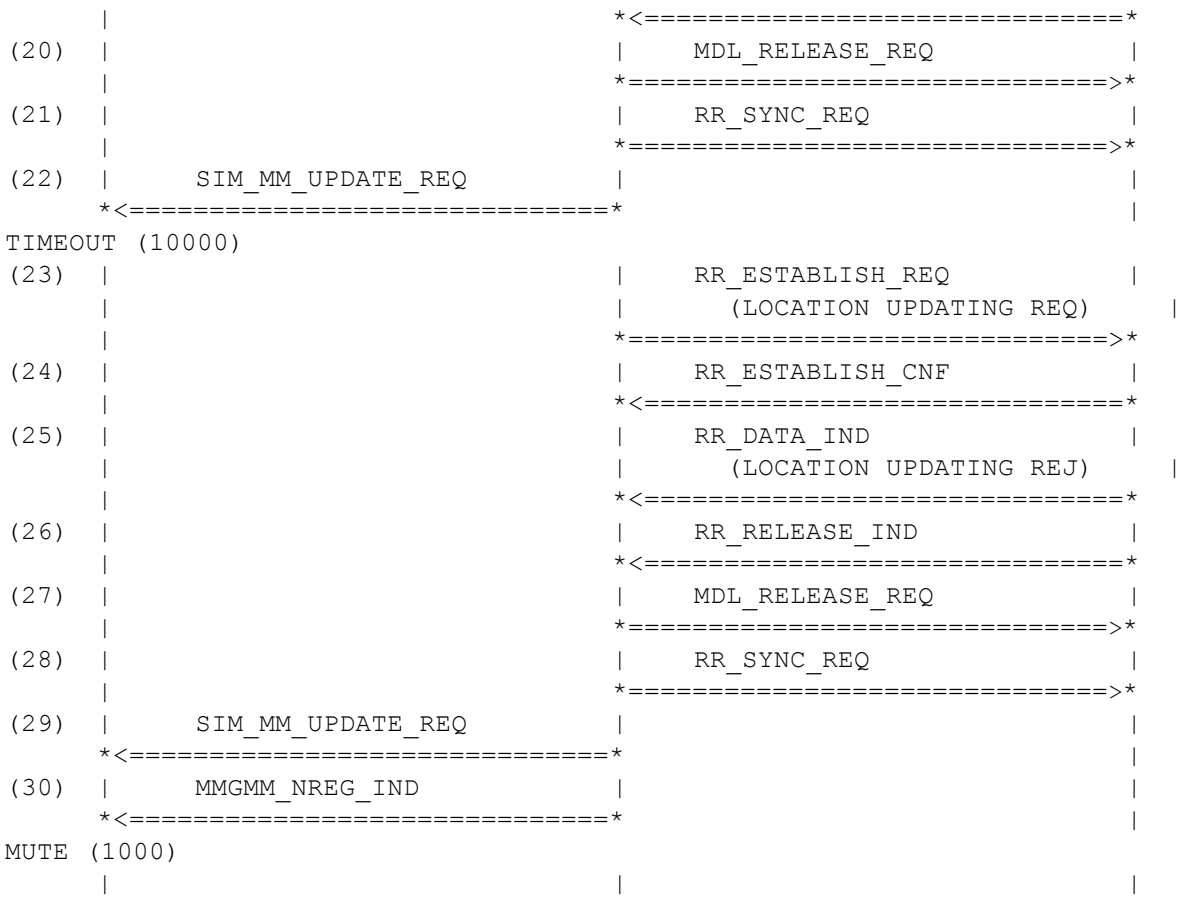
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	31.01.02	HM	Revised

3.16.10 MMG0327: MM Failure

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. A location updating is started. After four rejections limitied service is indicated to the user.

Preamble: MMG0313B





Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_UNSPECIFIED
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	BCCH_INF_2
		forb_plmn	NOT_USED
		cksn	CKSN_NO_KEY
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF

	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(10) RR_ESTABLISH_CNF		
	param	NOT_USED
(11) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(12) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(13) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(14) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(16) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES

	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(17) RR_ESTABLISH_CNF		
	param	NOT_USED
(18) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(19) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(20) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(22) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(23) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL

	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(24) RR_ESTABLISH_CNF		
	param	NOT_USED
(25) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(26) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(27) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(28) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(29) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(30) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_UNSPECIFIED

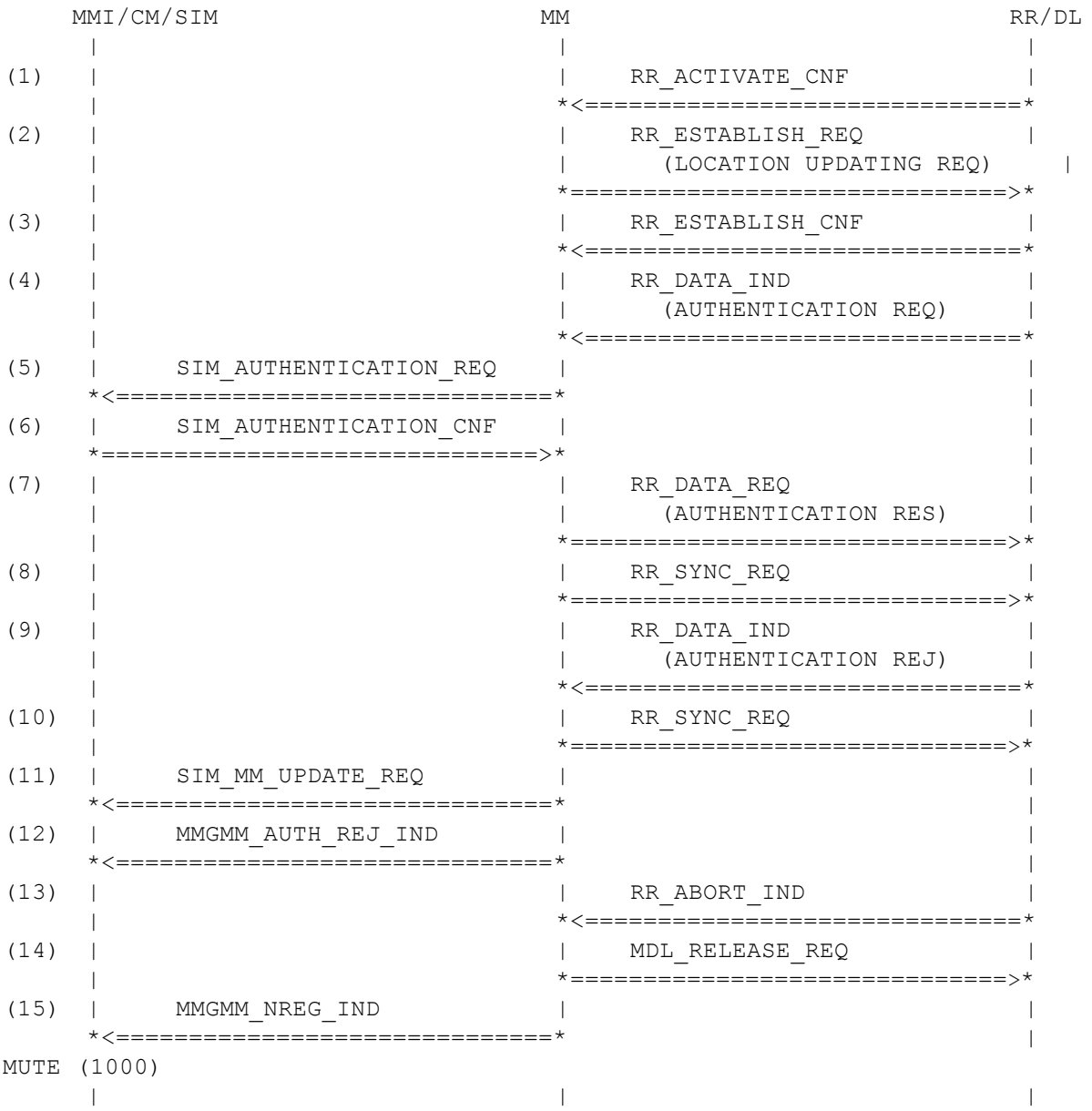
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

02.03.00	HM	Revised (search_running)
30.01.02	HM	Revised

3.16.11 MMG0328: MM Authentication Failure

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. A location updating is started. After authentication failure only limited service shall be allowed.

Preamble: MMG0313B



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122

		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_AUTH_REQ
		ti	TI_0
		ciph_key_num	CIPH_KEY_NUM_01
		auth_rand	AUTH_RAND_1
		}	
(5)	SIM_AUTHENTICATION_REQ		
		source	SRC_MM
		rand	RAND_1
		cksn	CKSN_01
(6)	SIM_AUTHENTICATION_CNF		
		sres	SRES_1
		kc	KC_11223344
(7)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_AUTH_RES
		ti	TI_0
		auth_sres	SRES_1_CODED
		}	

(8) RR_SYNC_REQ

op	NOT_USED
cksn	CKSN_01
kcv	KCV_11223344
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(9) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_AUTH_REJ
ti	TI_0
}	

(10) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
accc	NOT_USED
thplmn	NOT_USED

(11) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(12) MMGMM_AUTH_REJ_IND

(13) RR_ABORT_IND

op	OP_MODE_TEST_SIM
cause	RRCS_ABORT_RAD_LNK_FAIL
plmn_avail	NOT_USED
plmn	NOT_USED
lac_list	NOT_USED
rxlevel	NOT_USED
power	RF_CLASS_2

(14) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(15) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_AUTHENTICATION_REJECTED

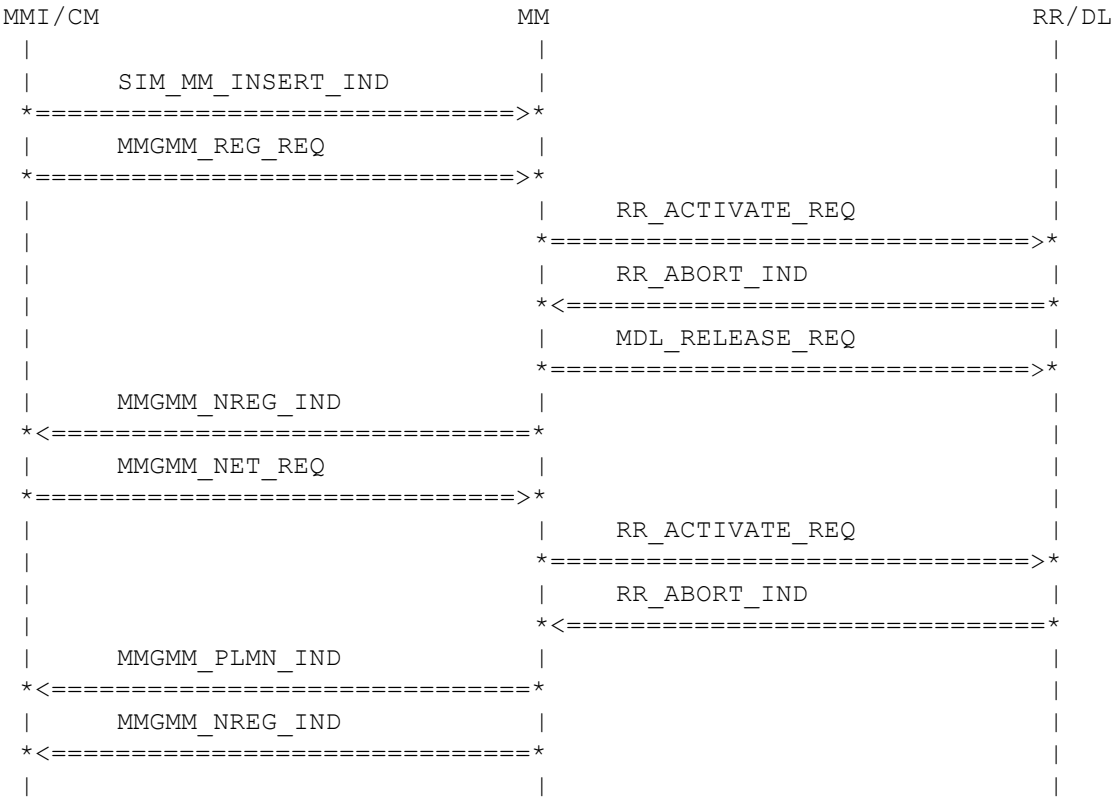
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	27.04.01	HM	Changed ordering of primitives
	30.01.02	HM	Revised
	10.02.03	LOL	added lac_list

3.16.12 MMG0355: PLMN Available Request

Description: MM is in no service condition. MMI requests a PLMN available request and starts a PLMN search in RR. The result is forwarded to MMI.

Preamble: MMG0300

Variants: <A>...<C>



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
<A>	loc_info	LOC_INFO_NOT_UPD_LPLMN
<B>	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>	loc_info	LOC_INFO_UPDATED_LPLMN
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
<A>	forb_plmn	FORB_PLMN_NONE
<B>	forb_plmn	FORB_PLMN_NONE
<C>	forb_plmn	FORB_PLMN_123_32
	phase	PHASE_2_SIM
	hplmn	THPLMN_01

(2) MMGMM_REG_REQ

	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC

(3) RR_ACTIVATE_REQ

<A>	plmn	PLMN_123_33X
<B>	plmn	PLMN_123_33X
<C>	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
<A>	bcch_info	BCCH_INFO_NONE
<B>	bcch_info	BCCH_INFO_ECL
<C>	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

(4) RR_ABORT_IND

op	OP_SIM_AUTO_PLMNSRCH_NS
cause	RRCS_ABORT_CEL_SEL_FAIL
plmn_avail	NO_PLMN_FOUND
plmn	NOT_USED
lac_list	NOT_USED
rxlevel	NOT_USED
power	RF_CLASS_2

(5) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(6) MMGMM_NREG_IND

service	NREG_NO_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(7) MMGMM_NET_REQ

(8) RR_ACTIVATE_REQ

plmn	PLMN_NO_ID
op	OP_SIM_AUTO_NETSRCH_NS
cksn	CKSN_NO_KEY
kcv	KCV_DELETED
accc	ACC_CLASS_0000
imsi_struct	MOB_ID_NO_ID
tmsi_struct	NOT_USED
thplmn	NOT_USED
bcch_info	NOT_USED
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(9) RR_ABORT_IND

	op	OP_SIM_AUTO_NETSRCH_NS
	cause	RRCS_ABORT_CEL_SEL_FAIL
<A>	plmn_avail	NO_PLMN_FOUND
<B>	plmn_avail	TWO_PLMN_FOUND
<C>	plmn_avail	TWO_PLMN_FOUND
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN
<C>	plmn	PLMN_LIST_2_PLMN_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18
<C>	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2

(10) MMGMM_PLMN_IND

	cause	MMCS_SUCCESS
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN_0XFF
<C>	plmn	PLMN_LIST_2_PLMN_F_0XFF
<A>	forb_ind	NOT_USED
<B>	forb_ind	FORB_PLMN_ID
<C>	forb_ind	FORB_PLMN_ID_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18_A
<C>	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED

(11) MMGMM_NREG_IND

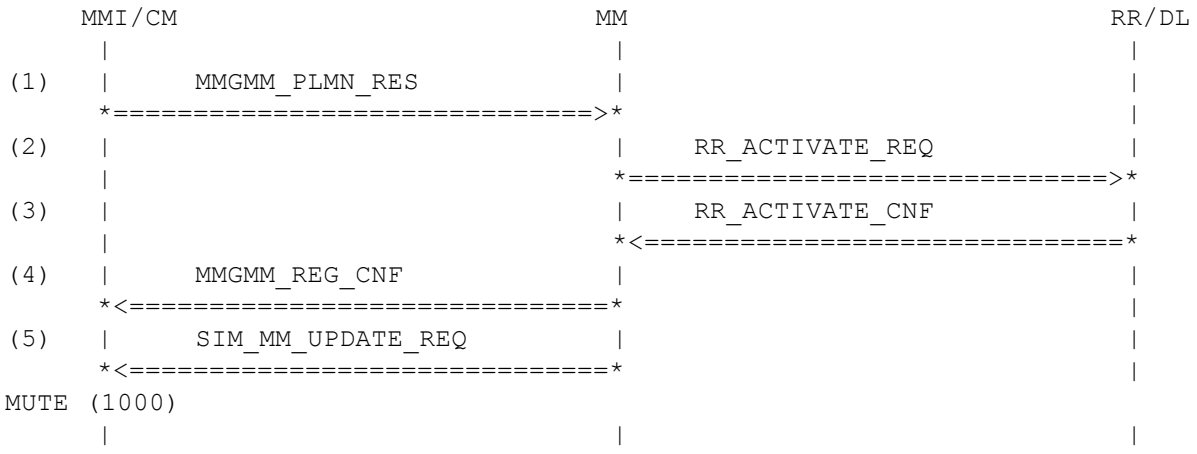
	service	NREG_NO_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.02.00	HM	Revised
	03.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.16.13 MMG0358: PLMN Selection successful

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is successfull.

Preamble: MMG0355B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147

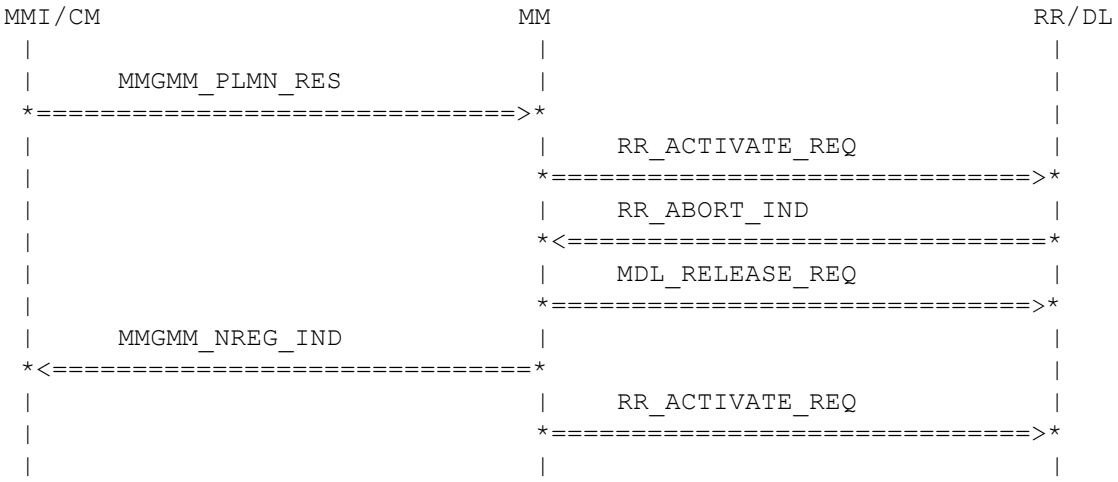
	cid	CELL_ID_1122
	resumption	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.11.01	HM	Revised
	31.01.02	HM	Revised

3.16.14 MMG0359: PLMN Selection unsuccessful

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is unsuccessfull.

Preamble: MMG0355B



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_FORB
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2

(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(6)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_32
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

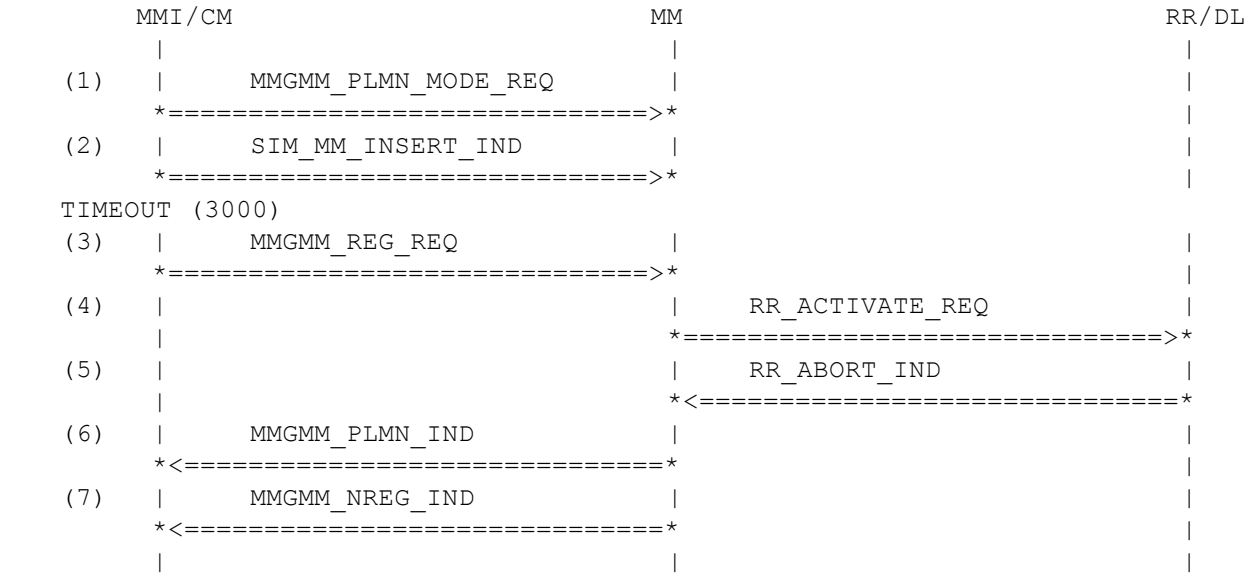
History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	03.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.16.15 MMG0364: PLMN Available List to MMI

Description: MM has requested the list of available PLMNs. This list is forwarded to MMI.

Preamble: MMG0001

Variants: <A>...<C>



Parametrization

Primitive	Parameter	Value
(1) MMGMM_PLMN_MODE_REQ		
	mode	MODE_MAN
(2) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
<A>	forb_plmn	FORB_PLMN_NONE
<B>	forb_plmn	FORB_PLMN_NONE
<C>	forb_plmn	FORB_PLMN_123_32
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(3) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(4) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_MAN_NETSRCH_NS

	cksn	CKSN_RES
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

(5) RR_ABORT_IND

	op	OP_SIM_MAN_NETSRCH_NS
	cause	RRCS_ABORT_CEL_SEL_FAIL
<A>	plmn_avail	NO_PLMN_FOUND
<B>	plmn_avail	TWO_PLMN_FOUND
<C>	plmn_avail	TWO_PLMN_FOUND
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN
<C>	plmn	PLMN_LIST_2_PLMN_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18
<C>	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2

(6) MMGMM_PLMN_IND

	cause	MMCS_SUCCESS
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN_0XFF
<C>	plmn	PLMN_LIST_2_PLMN_F_0XFF
<A>	forb_ind	NOT_USED
<B>	forb_ind	FORB_PLMN_ID
<C>	forb_ind	FORB_PLMN_ID_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18_A
<C>	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED

(7) MMGMM_NREG_IND

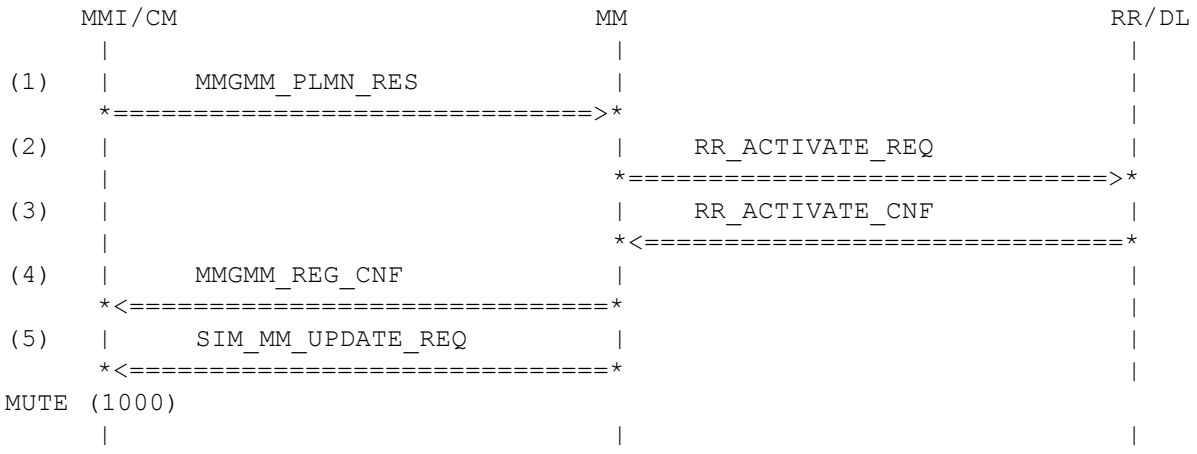
	service	NREG_NO_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.16.16 MMG0365: PLMN Selection successful (manual Mode)

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is successfull.

Preamble: MMG0364B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_SIM_MAN_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147

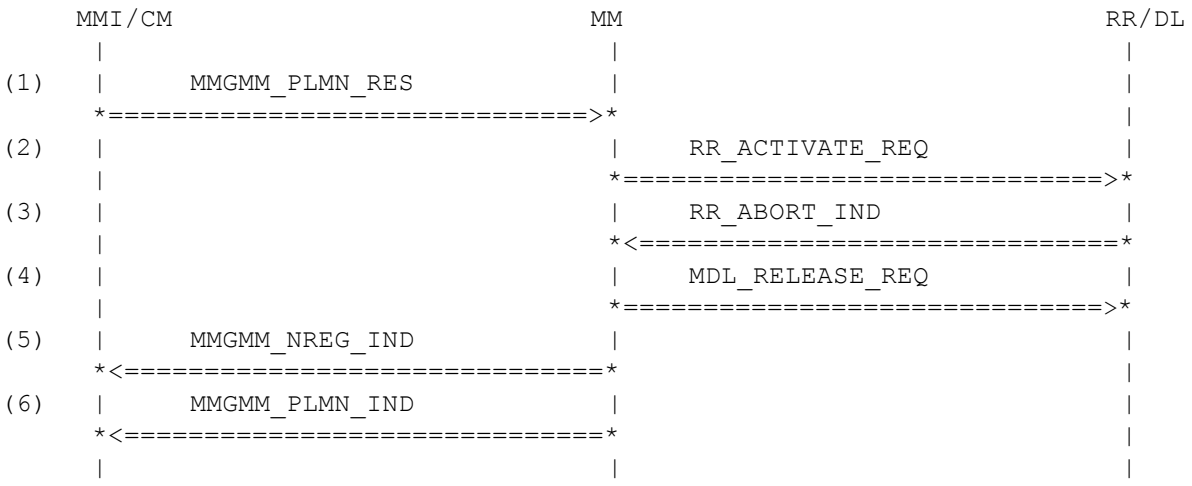
	cid	CELL_ID_1122
	resumption	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.11.01	HM	Revised
	31.01.02	HM	Revised

3.16.17 MMG0366: PLMN Selection unsuccessful (Manual Mode)

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is unsuccessfull.

Preamble: MMG0364B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_PLMN_RES		
	plmn	PLMN_123_33
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33
	op	OP_SIM_MAN_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(3) RR_ABORT_IND		
	op	OP_SIM_MAN_PLMNSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_FOUND
	plmn	PLMN_LIST_FORB
	lac_list	LAC_LIST_1
	rxlevel	RXLEVEL_20
	power	RF_CLASS_2

(4) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(5) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(6) MMGMM_PLMN_IND

cause	MMCS_SUCCESS
plmn	PLMN_LIST_PLMN_123_32_0XFF
forb_ind	FORB_PLMN_ID
lac_list	LAC_LIST_1
rxlevel	RXLEVEL_20
gprs_status	NOT_USED

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)
	02.11.01	HM	Revised
	10.02.03	LOL	added lac_list

3.17 Registration (REG_LIMITED_SERVICE, with SIM card, automatic mode)

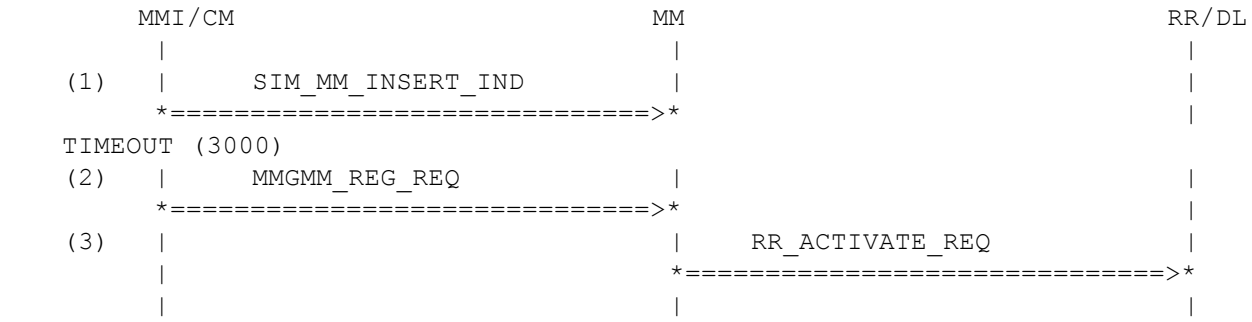
3.17.1 MMG0329: Registration

Description: MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Variant A:	not updated	start with HPLMN
Variant B:	updated, HPLMN	start with HPLMN
Variant C:	updated, not HPLMN	start with LPLMN

Preamble: MMG0307

Variants: <A>....<C>



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
<A>	loc_info	LOC_INFO_NOT_UPD_LPLMN
<B>	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>	loc_info	LOC_INFO_UPDATED_LPLMN
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
<A>	forb_plmn	FORB_PLMN_NONE
<B>	forb_plmn	FORB_PLMN_123_32
<C>	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
<A>	plmn	PLMN_123_33X
<B>	plmn	PLMN_123_33X
<C>	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES

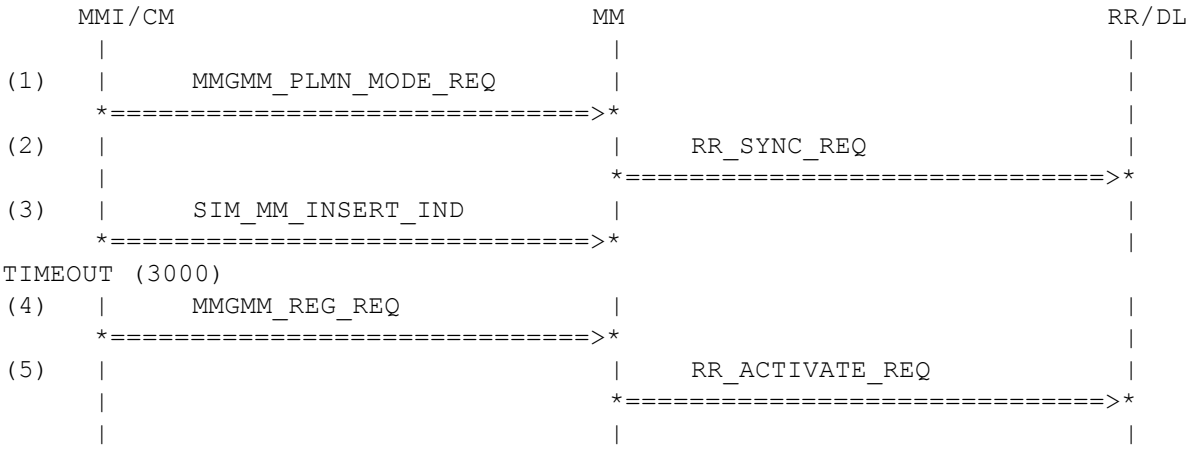
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
<A>	bcch_info	BCCH_INFO_NONE
<B>	bcch_info	BCCH_INFO_ECL
<C>	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.02.00	HM	Revised

3.17.2 MMG0330: PLMN Mode Change

Description: MMI changes the PLMN mode from automatic to manual. MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Preamble: MMG0307



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_MODE_NO_SIM_NO_SERV_M
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	SIM_MM_INSERT_IND		
		op_mode	OP_NORMAL_SIM
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_NOT_UPD_LPLMN
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC

(5) RR_ACTIVATE_REQ

plmn	PLMN_NO_ID
op	OP_SIM_MAN_NETSRCH_NS
cksn	CKSN_RES
kcv	KCV_DELETED
accc	ACC_CLASS_0000
imsi_struct	MOB_ID_NO_ID
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	NOT_USED
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

3.17.3 MMG0331: Deregistration (Power Off)

Description: MM receives a a MMR-NREG request primitive. MM issues a RR-DEACTIVATE request primitive and a MMR-NREG confirmation primitive with cause set to 'Power off' and changes to changes to State 0 (Null).

Preamble: MMG0329A

Parametrization

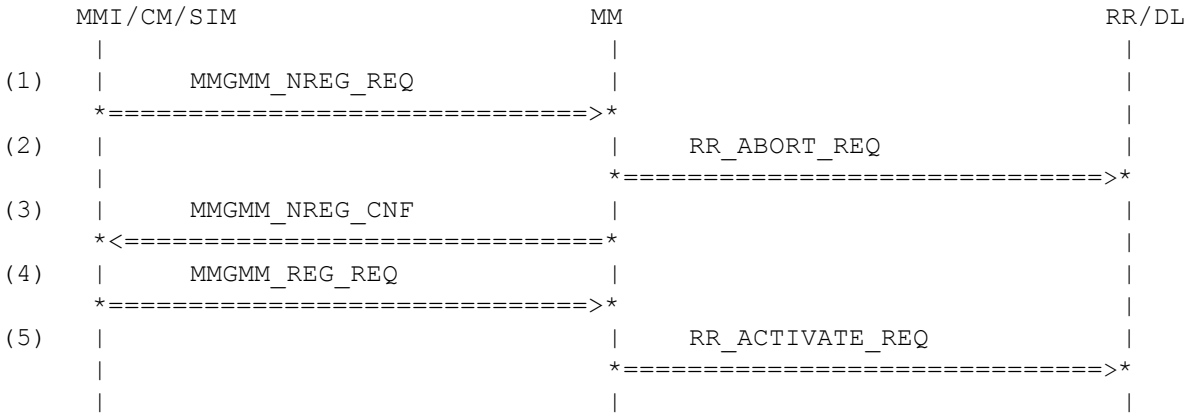
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 08.07.97 HK Initial

3.17.4 MMG0332: Deregistration (SIM invalid)

Description: MM receives a MMR-NREG request primitive. issues a MMR-NREG confirmation primitive with cause set to 'SIM Remove'.

Preamble: MMG0329A



Parametrization

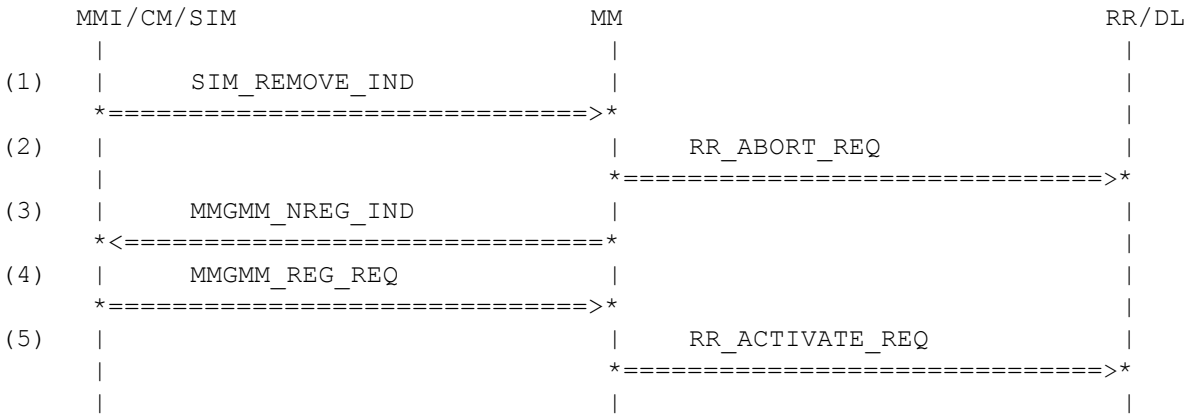
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(3)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:			
	09.07.97	HK	Initial
	15.09.97	DL	revised
	27.10.00	HM	Revised

3.17.5 MMG0333: SIM Removal

Description: The SIM card is removed before starting with registration.

Preamble: MMG0329A



Parametrization

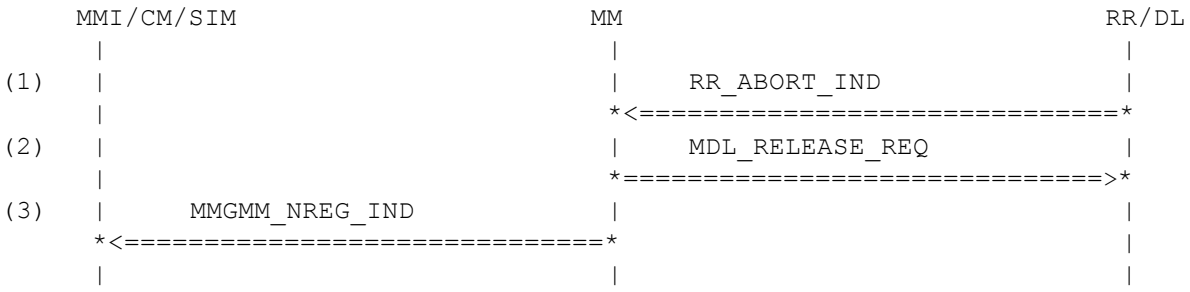
Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(3)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:	08.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised

3.17.6 MMG0334: RR failure (No Service)

Description: MM receives a RR-ABORT indication primitive indicating No Service.

Preamble: MMG0329A



Parametrization

Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	NO_PLMN_FOUND
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMGMM_NREG_IND		
	service	NREG_NO_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.17.7 MMG0335: RR failure (Limited Service, no further PLMNs)

Description: MM receives a RR-ABORT indication primitive indicating Limited Service. The one PLMN which was found is in the forbidden PLMN list and cannot be used.

Preamble: MMG0329B

Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_FORB
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.17.8 MMG0336: RR failure (Limited Service, further PLMNs available)

Description: MM receives a RR-ABORT indication primitive indicating Limited Service. The one PLMN which was found is not in the forbidden PLMN list and can be used. The MMI is informed about the fact that the stack currently is in limited service, but that the search for a network delivering full service still is going on.

Preamble: MMG0329A

Parametrization

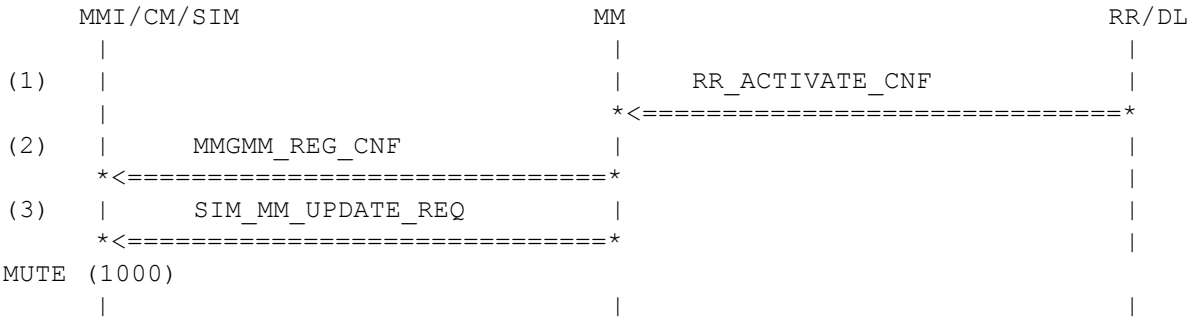
Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_FOUND
	plmn	PLMN_LIST_PLMN_123_31
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(4) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.17.9 MMG0337: MM Success

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell.

Preamble: MMG0329B



Parametrization

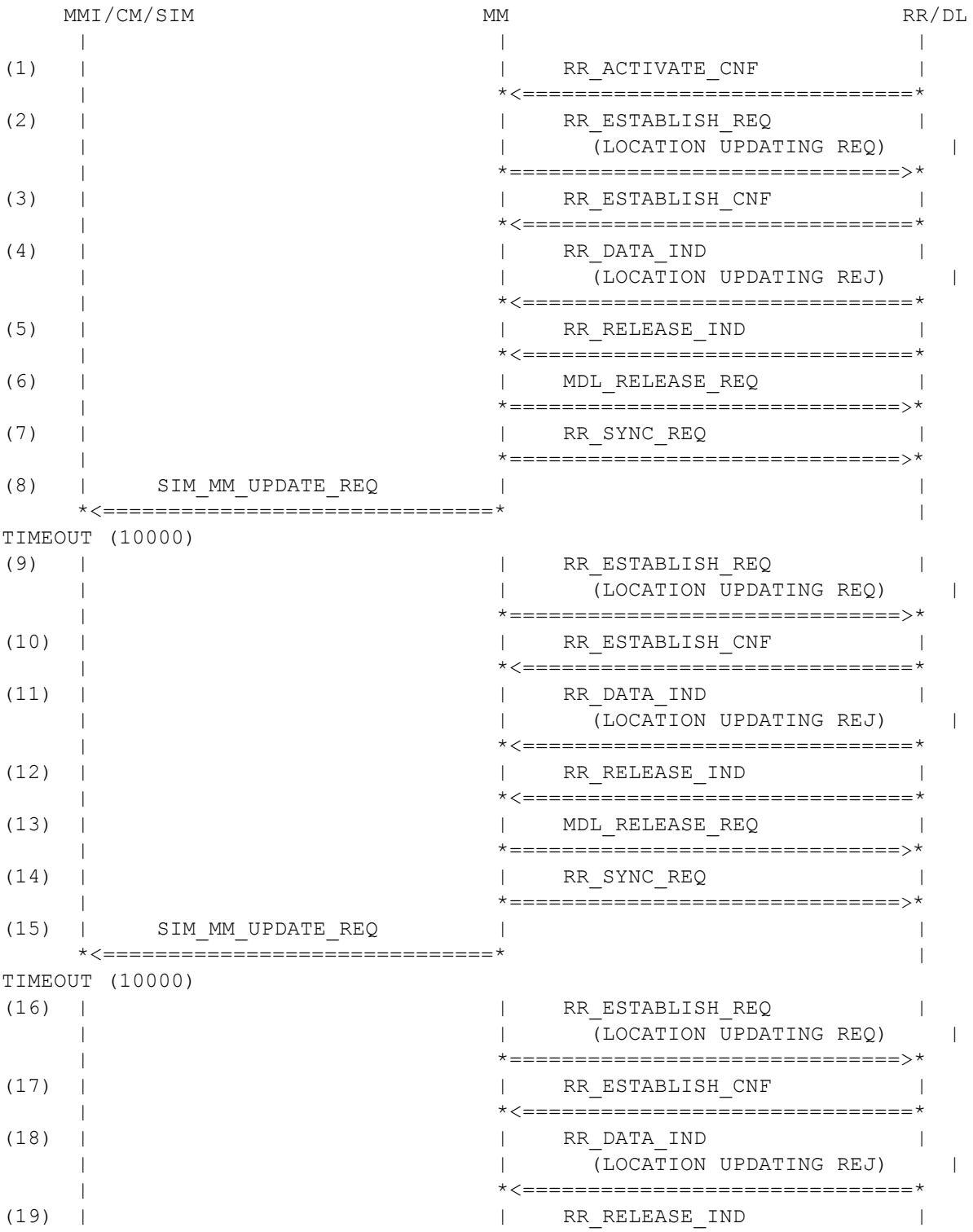
Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(3) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

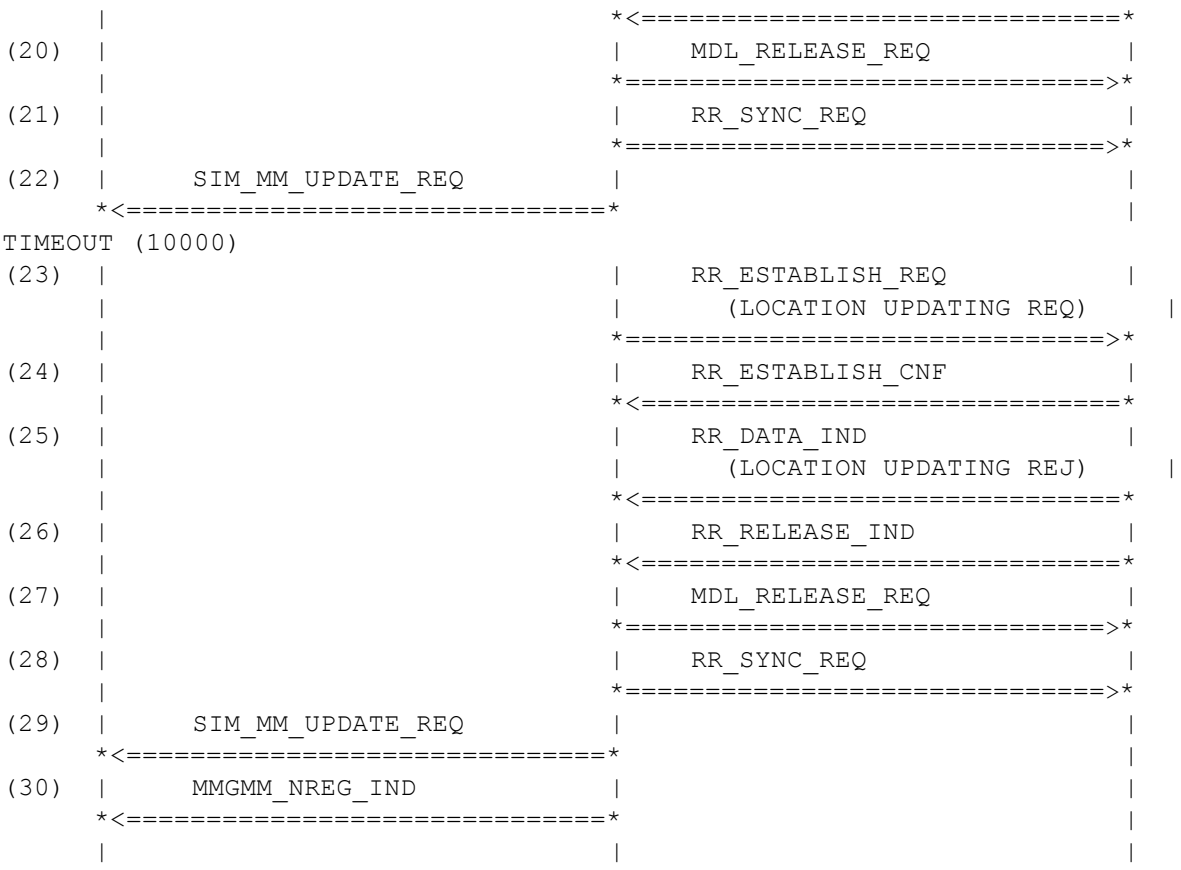
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	30.01.02	HM	Revised

3.17.10 MMG0338: MM Failure

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. A location updating is started. After four rejections limited service is indicated to the user.

Preamble: MMG0329B





Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_UNSPECIFIED
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	BCCH_INF_2
		forb_plmn	NOT_USED
		cksn	CKSN_NO_KEY
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF

	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(10)	RR_ESTABLISH_CNF	
	param	NOT_USED
(11)	RR_DATA_IND	
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(12)	RR_RELEASE_IND	
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(13)	MDL_RELEASE_REQ	
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(14)	RR_SYNC_REQ	
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(15)	SIM_MM_UPDATE_REQ	
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(16)	RR_ESTABLISH_REQ	
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES

	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(17)	RR_ESTABLISH_CNF	
	param	NOT_USED
(18)	RR_DATA_IND	
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(19)	RR_RELEASE_IND	
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(20)	MDL_RELEASE_REQ	
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21)	RR_SYNC_REQ	
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(22)	SIM_MM_UPDATE_REQ	
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(23)	RR_ESTABLISH_REQ	
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL

	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(24)	RR_ESTABLISH_CNF	
	param	NOT_USED
(25)	RR_DATA_IND	
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(26)	RR_RELEASE_IND	
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(27)	MDL_RELEASE_REQ	
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(28)	RR_SYNC_REQ	
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(29)	SIM_MM_UPDATE_REQ	
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(30)	MMGMM_NREG_IND	
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_UNSPECIFIED

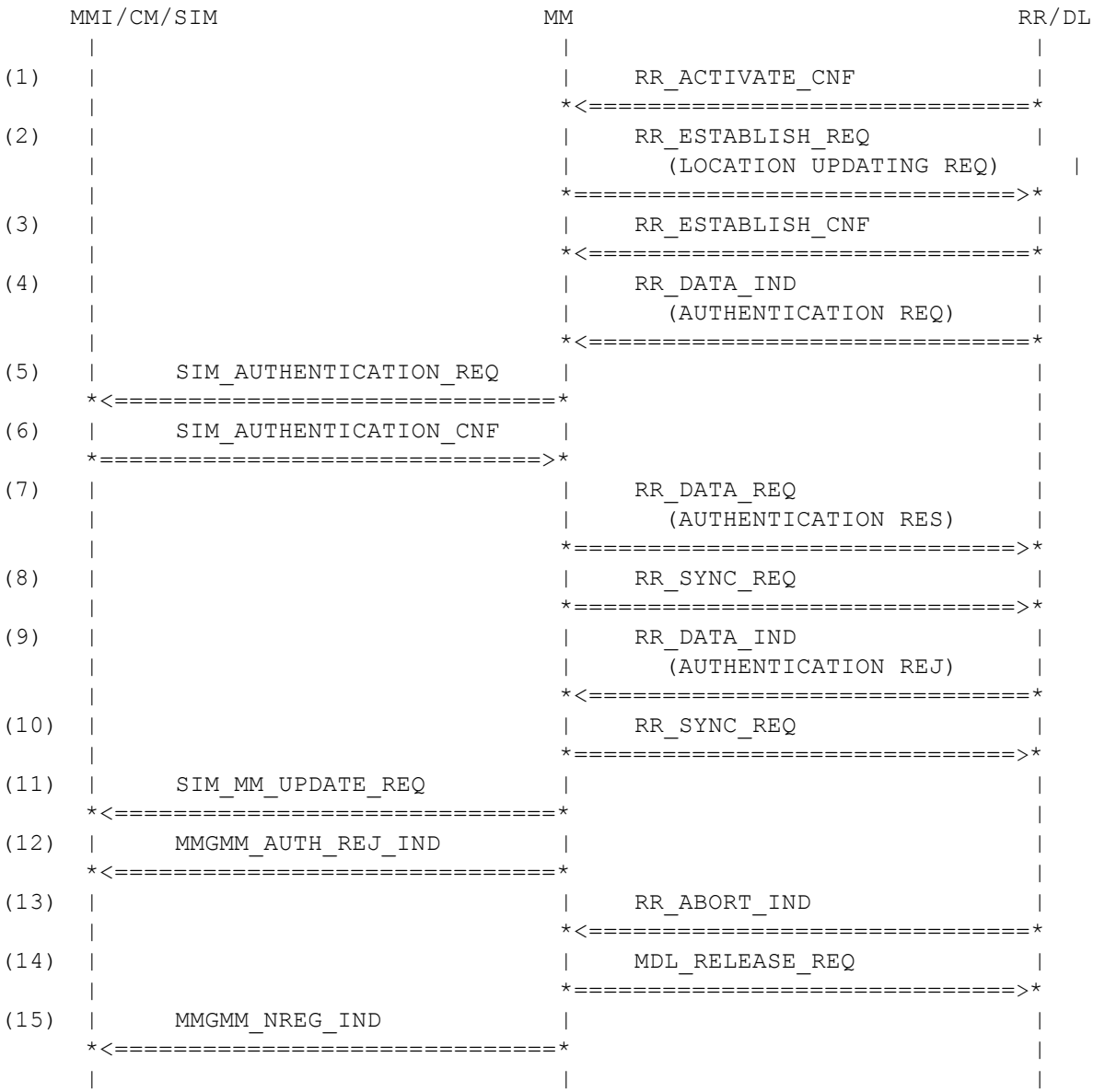
History:	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised

02.03.00	HM	Revised (search_running)
30.01.02	HM	Revised

3.17.11 MMG0339: MM Authentication Failure

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. A location updating is started. After authentication failure only limited service shall be allowed.

Preamble: MMG0329B



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33

		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_AUTH_REQ
		ti	TI_0
		ciph_key_num	CIPH_KEY_NUM_01
		auth_rand	AUTH_RAND_1
		}	
(5)	SIM_AUTHENTICATION_REQ		
		source	SRC_MM
		rand	RAND_1
		cksn	CKSN_01
(6)	SIM_AUTHENTICATION_CNF		
		sres	SRES_1
		kc	KC_11223344
(7)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_AUTH_RES
		ti	TI_0
		auth_sres	SRES_1_CODED
		}	

(8) RR_SYNC_REQ

op	NOT_USED
cksn	CKSN_01
kcv	KCV_11223344
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(9) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_AUTH_REJ
ti	TI_0
}	

(10) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
accc	NOT_USED
thplmn	NOT_USED

(11) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(12) MMGMM_AUTH_REJ_IND

(13) RR_ABORT_IND

op	OP_MODE_TEST_SIM
cause	RRCS_ABORT_RAD_LNK_FAIL
plmn_avail	NOT_USED
plmn	NOT_USED
lac_list	NOT_USED
rxlevel	NOT_USED
power	RF_CLASS_2

(14) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(15) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_AUTHENTICATION_REJECTED

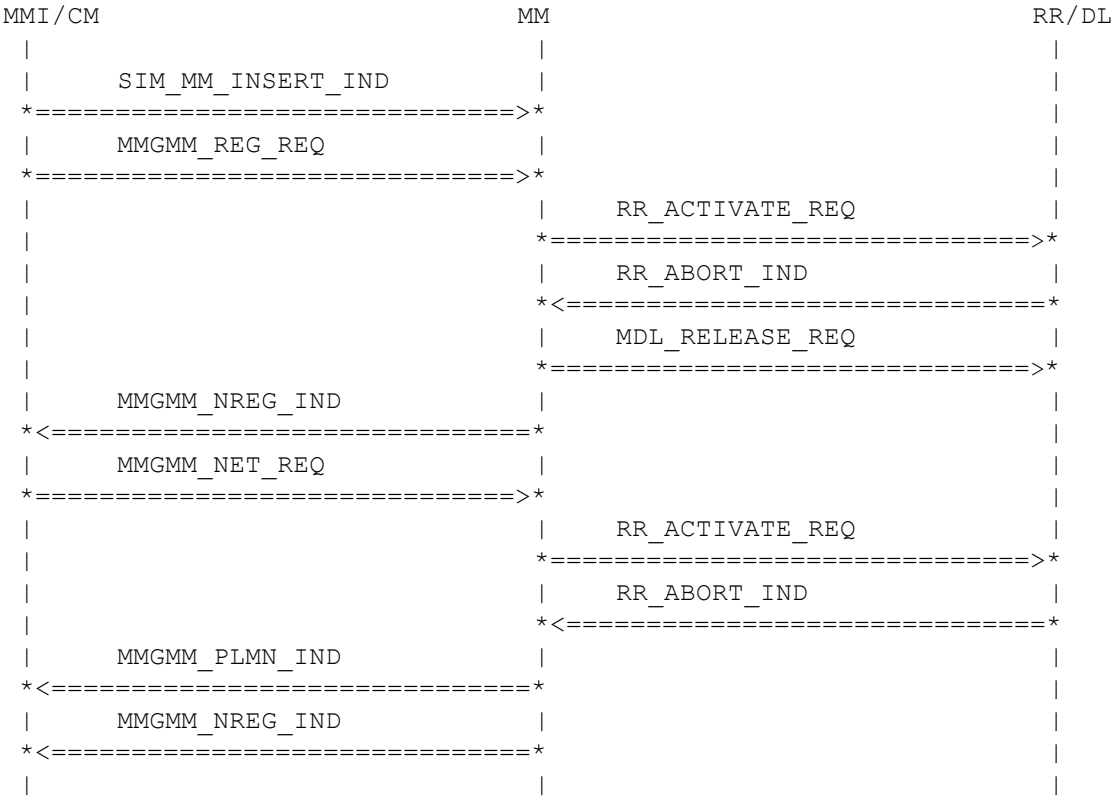
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	27.04.01	HM	Changed ordering of primitives
	30.01.02	HM	Revised
	10.02.03	LOL	added lac_list

3.17.12 MMG0356: PLMN Available Request

Description: MM is in limited service condition. MMI requests a PLMN available request and starts a PLMN search in RR. The result is forwarded to MMI. Even if no PLMN is present in the list, the service delivered from RR decides whether it is limited or no service.

Preamble: MMG0300

Variants: <A>...<C>



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	OP_NORMAL_SIM
	imsi_field	IMSI_FIELD_1
<A>	loc_info	LOC_INFO_NOT_UPD_LPLMN
<B>	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>	loc_info	LOC_INFO_UPDATED_LPLMN
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
<A>	forb_plmn	FORB_PLMN_NONE
<B>	forb_plmn	FORB_PLMN_NONE
<C>	forb_plmn	FORB_PLMN_123_32
	phase	PHASE_2_SIM
	hplmn	THPLMN_01

(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
<A>		plmn	PLMN_123_33X
<B>		plmn	PLMN_123_33X
<C>		plmn	PLMN_123_31
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
<A>		bcch_info	BCCH_INFO_NONE
<B>		bcch_info	BCCH_INFO_ECL
<C>		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ABORT_IND		
<A>		op	OP_SIM_AUTO_PLMNSRCH_LS
<B>		op	OP_SIM_AUTO_PLMNSRCH_LS
<C>		op	OP_SIM_AUTO_PLMNSRCH_NS
		cause	RRCS_ABORT_CEL_SEL_FAIL
<A>		plmn_avail	ONE_PLMN_FOUND
<B>		plmn_avail	ONE_PLMN_FOUND
<C>		plmn_avail	NO_PLMN_FOUND
<A>		plmn	PLMN_LIST_PLMN_123_33
<B>		plmn	PLMN_LIST_PLMN_123_33
<C>		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_NREG_IND		
<A>		service	NREG_LIMITED_SERVICE
<B>		service	NREG_LIMITED_SERVICE
<C>		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(7)	MMGMM_NET_REQ		
(8)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000

	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(9) RR_ABORT_IND		
<A>	op	OP_SIM_AUTO_NETSRCH_NS
<B>	op	OP_SIM_AUTO_NETSRCH_LS
<C>	op	OP_SIM_AUTO_NETSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
<A>	plmn_avail	NO_PLMN_FOUND
<B>	plmn_avail	TWO_PLMN_FOUND
<C>	plmn_avail	TWO_PLMN_FOUND
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN
<C>	plmn	PLMN_LIST_2_PLMN_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18
<C>	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(10) MMGMM_PLMN_IND		
	cause	MMCS_SUCCESS
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN_0XFF
<C>	plmn	PLMN_LIST_2_PLMN_F_0XFF
<A>	forb_ind	NOT_USED
<B>	forb_ind	FORB_PLMN_ID
<C>	forb_ind	FORB_PLMN_ID_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18_A
<C>	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED
(11) MMGMM_NREG_IND		
<A>	service	NREG_NO_SERVICE
<B>	service	NREG_LIMITED_SERVICE
<C>	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

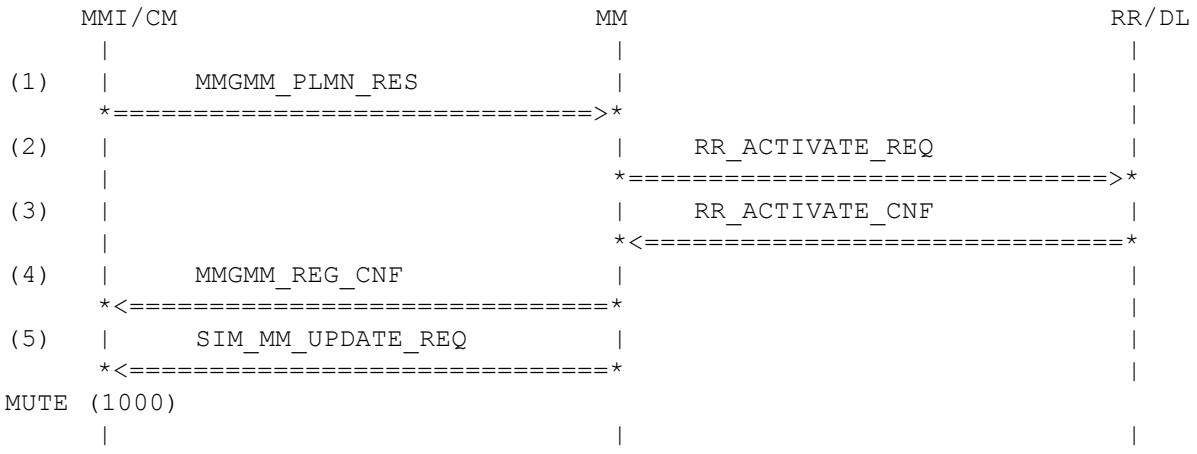
History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.02.00	HM	Revised
	02.03.00	HM	Revised (search_running)

15.03.01	HM	Revised
21.03.02	HM	Revised
10.02.03	LOL	added lac_list

3.17.13 MMG0360: PLMN Selection successful

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is successfull.

Preamble: MMG0356B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_PLMN_RES		
	plmn	PLMN_123_33
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(3) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(4) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147

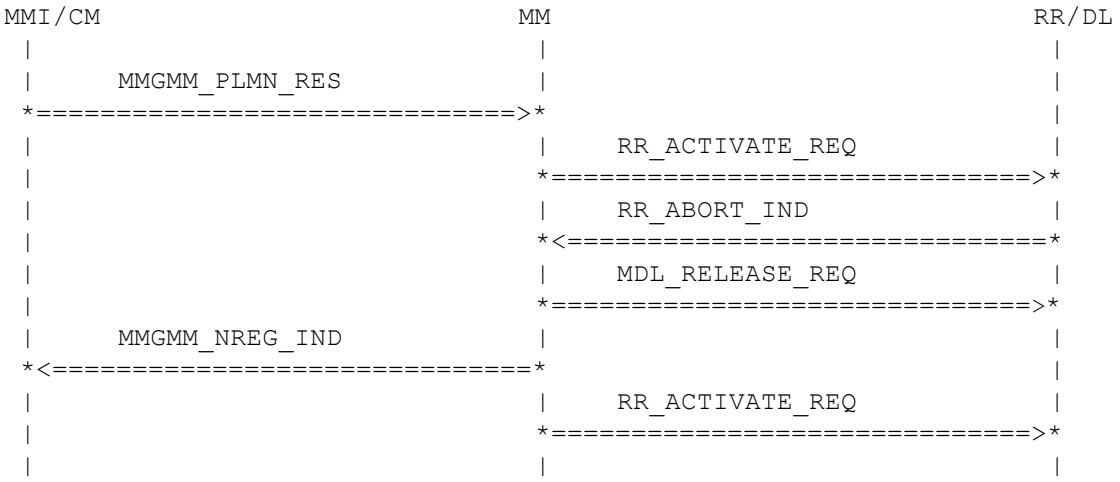
	cid	CELL_ID_1122
	resumption	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.11.01	HM	Revised
	31.01.02	HM	Revised

3.17.14 MMG0361: PLMN Selection unsuccessful

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is unsuccessfull.

Preamble: MMG0356B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_PLMN_RES		
	plmn	PLMN_123_33
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(3) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_FOUND
	plmn	PLMN_LIST_FORB
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20
	power	RF_CLASS_2

(4) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(5) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(6) RR_ACTIVATE_REQ

plmn	PLMN_123_32
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

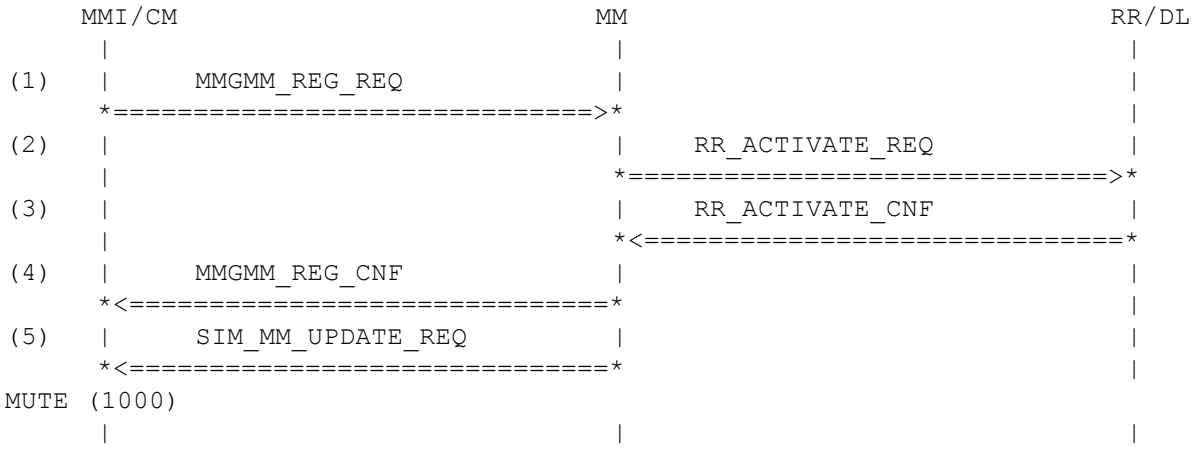
History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised
	02.11.01	HM	Revised
	10.02.03	LOL	added lac_list

3.18 Registration (REG_FULL_SERVICE, with SIM card, automatic mode)

3.18.1 MMG0340: Registration

Description: MMI restarts registration. This is not allowed in full service. Instead a PLMN list must be requested by MMI and a selection must be done using MMGMM_PLMN_RES. No network contact shall be take place here. As an optimization, which was formerly present in MM, the RR_ACTIVATE_REQ/RR_ACTIVATE_CNF pair could be avoided.

Preamble: MMG0337



Parametrization

Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(3) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147

	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(4) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

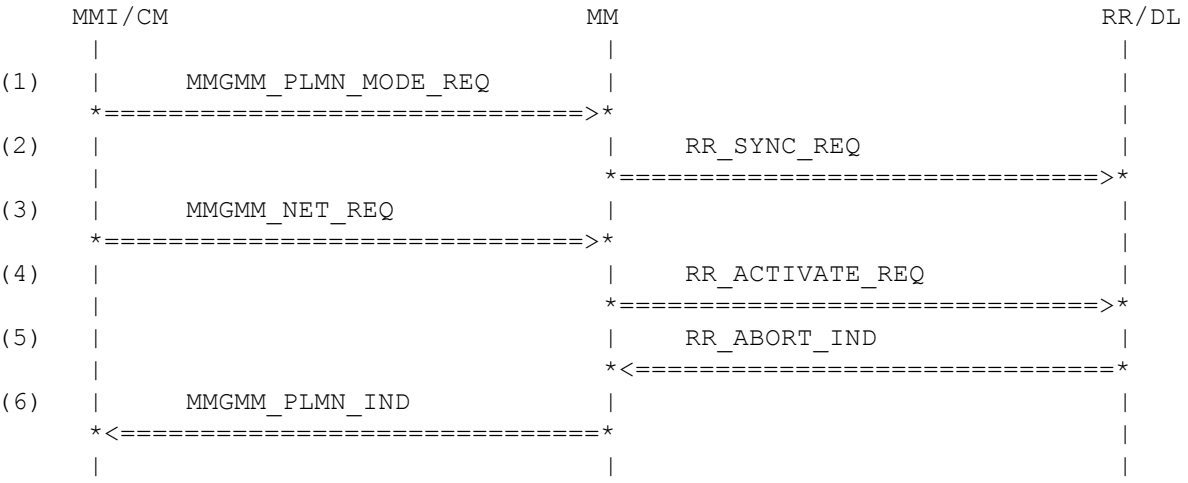
History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.05.01	HM	Revised
	30.01.02	HM	Revised

3.18.2 MMG0341: PLMN Mode Change

Description: MMI changes the PLMN mode from automatic to manual. MM receives SIM information followed by the registration start of MMI. The cell selection is started.

Preamble: MMG0337

Variants: <A>...<B>



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_NET_REQ		
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_MAN_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	NOT_USED
		thplmn	NOT_USED
		bcch_info	NOT_USED

		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ABORT_IND		
		op	OP_SIM_MAN_NETSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
<A>		plmn	PLMN_LIST_2_PLMN
<B>		plmn	PLMN_LIST_2_PLMN_F
		lac_list	LAC_LIST_2
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(6)	MMGMM_PLMN_IND		
		cause	MMCS_SUCCESS
<A>		plmn	PLMN_LIST_2_PLMN_0XFF
<B>		plmn	PLMN_LIST_2_PLMN_F_0XFF
<A>		forb_ind	FORB_PLMN_ID
<B>		forb_ind	FORB_PLMN_ID_F
<A>		lac_list	LAC_LIST_2
<B>		lac_list	LAC_LIST_2
		rxlevel	RXLEVEL_20_18_A
		gprs_status	NOT_USED

History:	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	10.02.03	LOL	added lac_list

3.18.3 MMG0342: Deregistration (Power Off)

Description: MM receives a a MMR-NREG request primitive. MM issues a RR-DEACTIVATE request primitive and a MMR-NREG confirmation primitive with cause set to 'Power off' and changes to changes to State 0 (Null).

Preamble: MMG0337

Parametrization

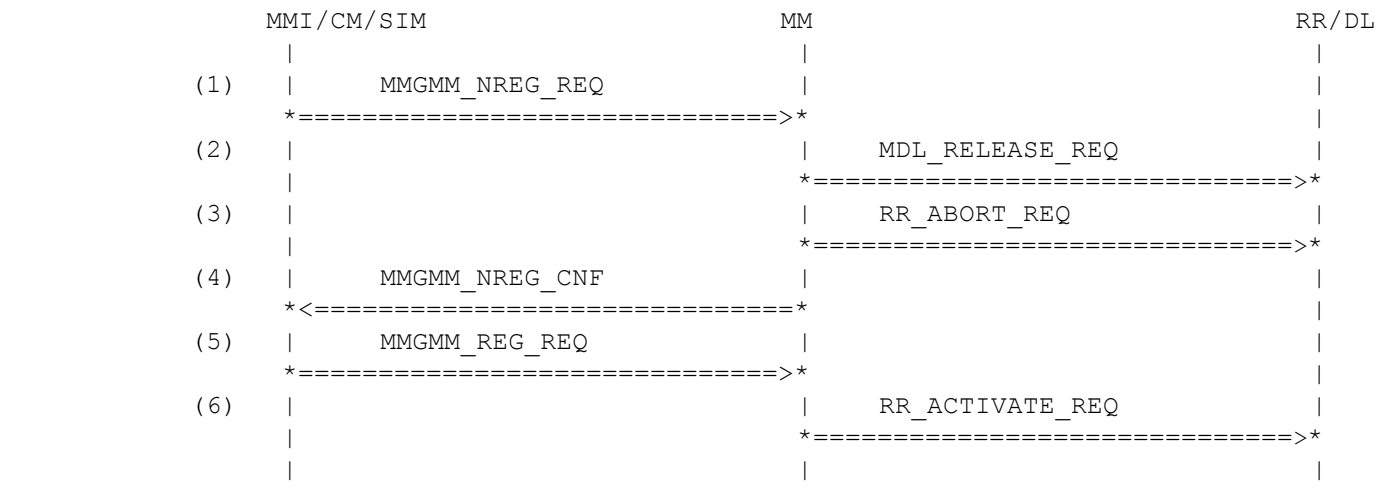
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 08.07.97 HK Initial

3.18.4 MMG0343: Deregistration (SIM invalid)

Description: MM receives a MMR-NREG request primitive. issues a MMR-NREG confirmation primitive with cause set to 'SIM Remove'.

Preamble: MMG0337



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL

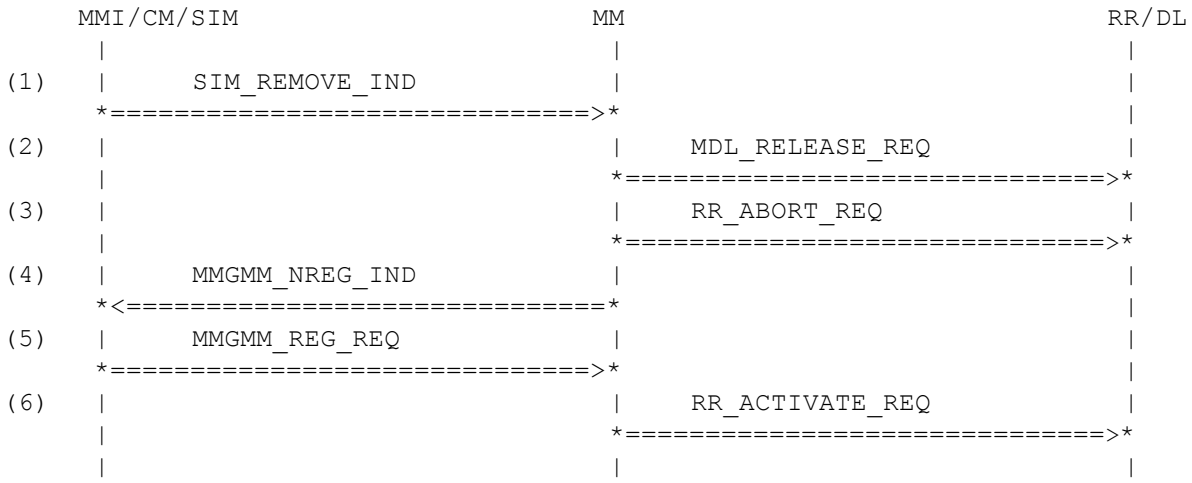
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:	09.07.97	HK	Initial
	15.09.97	DL	revised
	27.10.00	HM	Revised

3.18.5 MMG0344: SIM Removal

Description: The SIM card is removed before starting with registration.

Preamble: MMG0337



Parametrization

Primitive	Parameter	Value
(1) SIM_REMOVE_IND		
	cause	SIM_CAUSE_CARD_REMOVED
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_ABORT_REQ		
	abcs	ABCS_SIM_REM
(4) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_SIM_REMOVED
(5) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(6) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_MODE_NO_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED

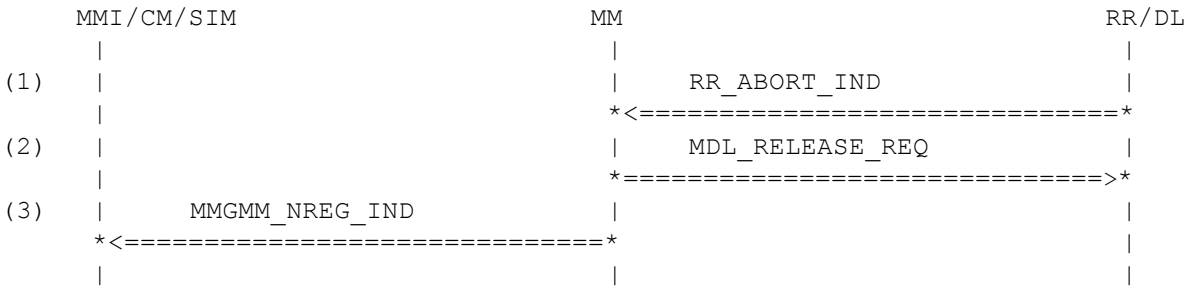
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

History:	08.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised

3.18.6 MMG0345: RR failure (No Service)

Description: MM receives a RR-ABORT indication primitive indicating No Service.

Preamble: MMG0337



Parametrization

Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	NO_PLMN_FOUND
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMGMM_NREG_IND		
	service	NREG_NO_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.18.7 MMG0346: RR failure (Limited Service, no further PLMNs)

Description: MM receives a RR-ABORT indication primitive indicating Limited Service. The one PLMN which was found is in the forbidden PLMN list. This indication is forwarded to MMI.

Preamble: MMG0337

Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_FORB
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:			
	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.18.8 MMG0347: RR failure (Limited Service, further PLMNs available)

Description: MM receives a RR-ABORT indication primitive indicating Limited Service. This indication is forwarded to MMI.

Preamble: MMG0337

Parametrization

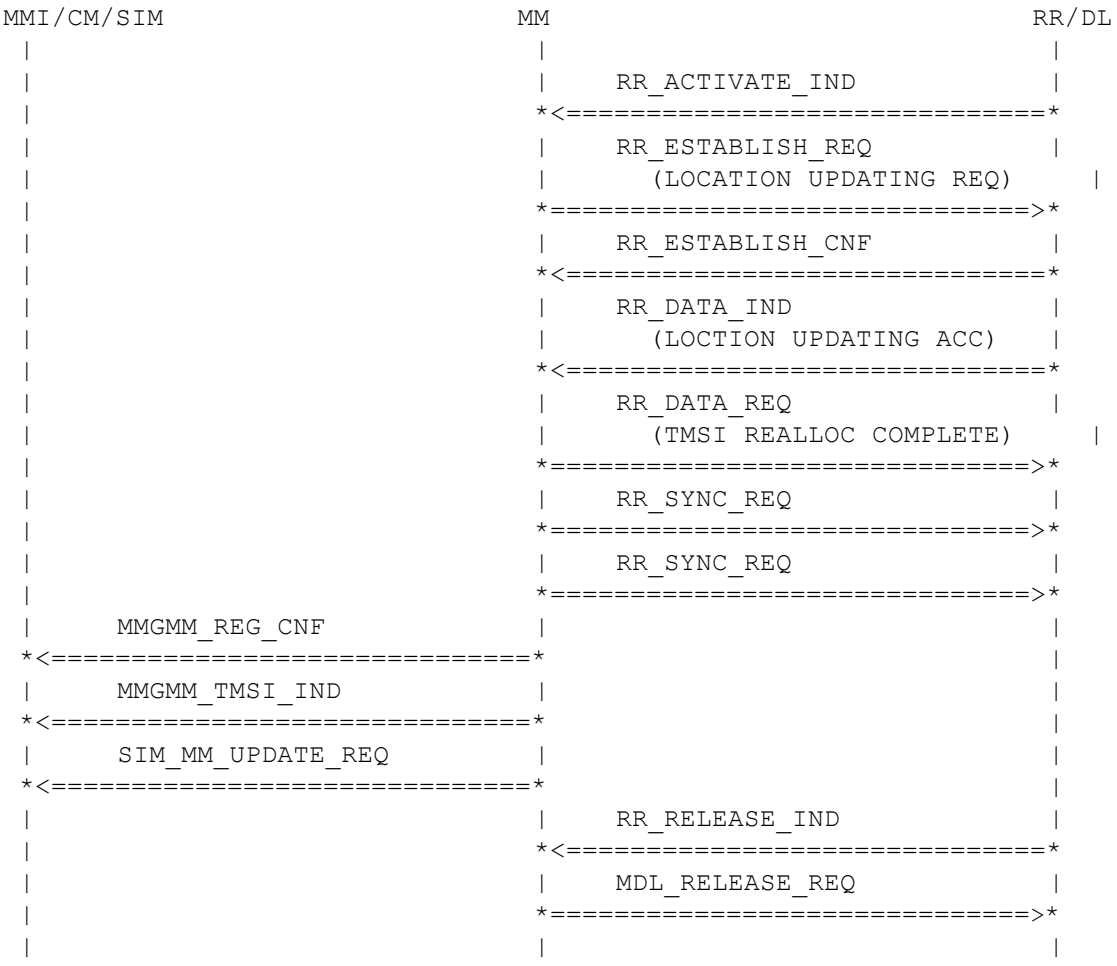
Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_FOUND
	plmn	PLMN_LIST_PLMN_123_31
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(4) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	10.07.97	HK	Initial
	02.03.00	HM	Revised (search_running)
	14.03.01	HM	Revised
	10.02.03	LOL	added lac_list

3.18.9 MMG0348: MM Success

Description: MM is informed about a cell change.

Preamble: MMG0337



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_31
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK

	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_31_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(5) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(6) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(7) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_31
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW

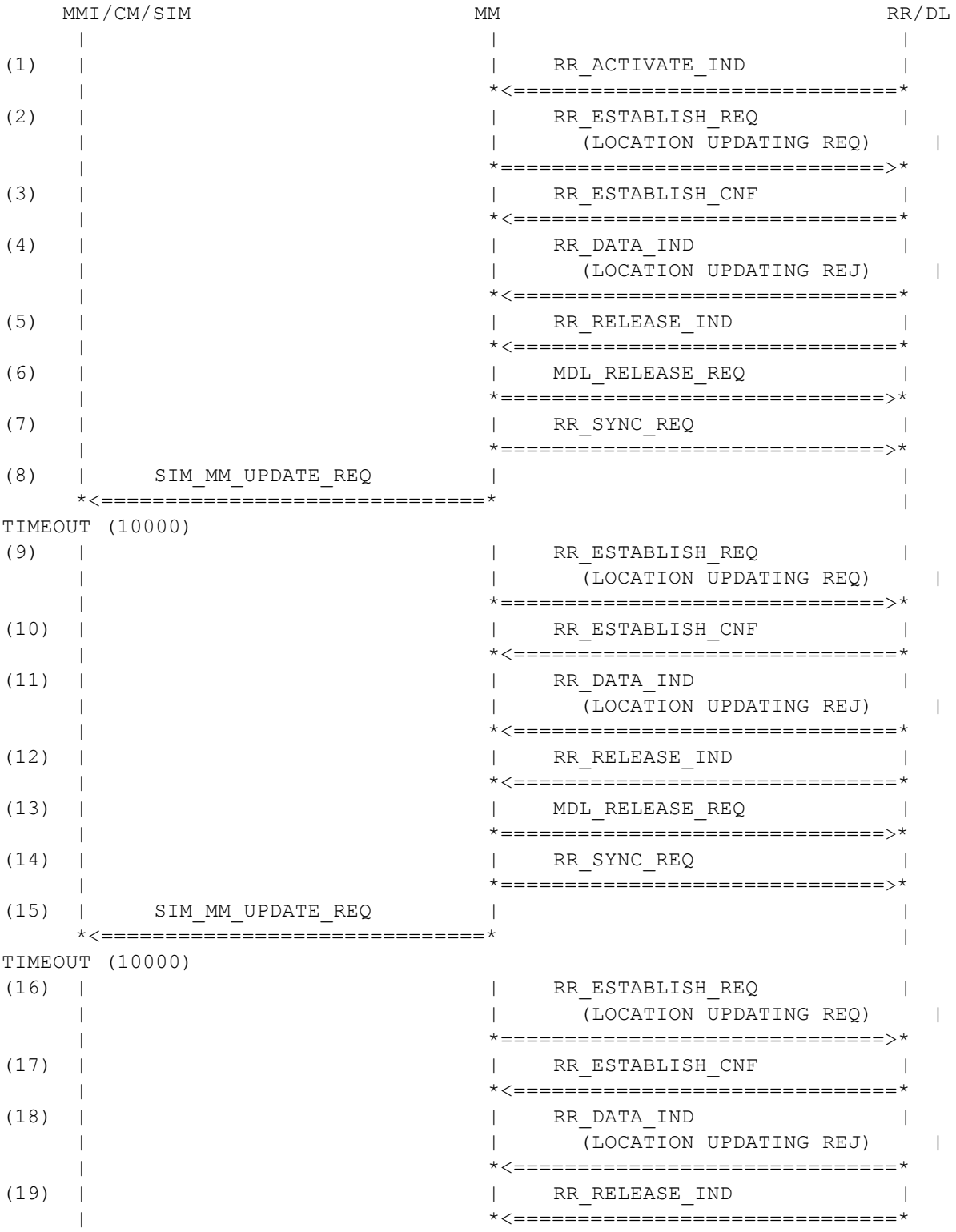
	accc	NOT_USED
	thplmn	NOT_USED
(8) MMGMM_REG_CNF		
	plmn	PLMN_123_31
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(9) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(10) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_31_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(11) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

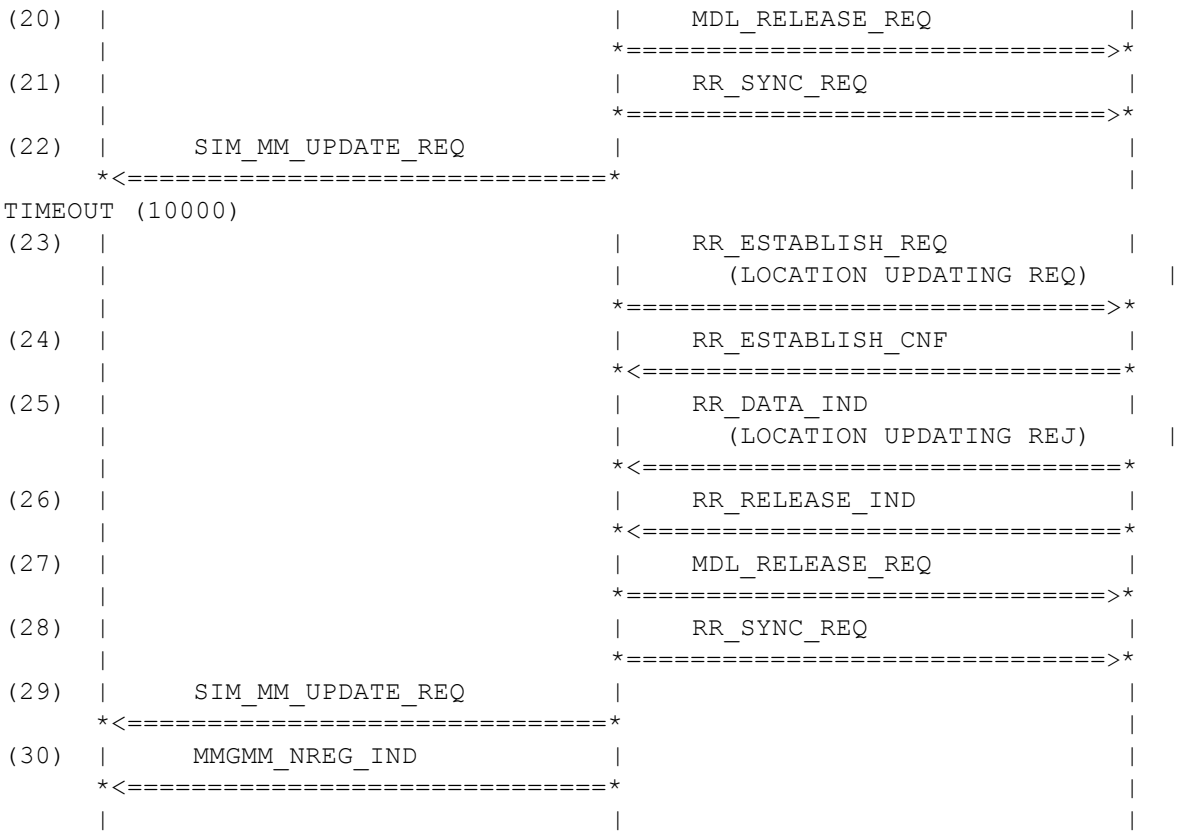
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	28.06.01	HM	Revised
	17.01.02	HM	Revised

3.18.10 MMG0349: MM Failure

Description: MM is informed about a cell change. A location updating is started. After four rejections MM enters the state ATTEMPTING TO UPDATE and no further reactions are expected.

Preamble: MMG0337





Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_31
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

(3) RR_ESTABLISH_CNF

param	NOT_USED

(4) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_UNSPECIFIED
}	

(5) RR_RELEASE_IND

cause	RRCS_ABNORM_UNSPEC
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(6) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(7) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(8) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(9) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(10) RR_ESTABLISH_CNF		
	param	NOT_USED
(11) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(12) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(13) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(14) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(16) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

(17) RR_ESTABLISH_CNF		
	param	NOT_USED
(18) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(19) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(20) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(22) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(23) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

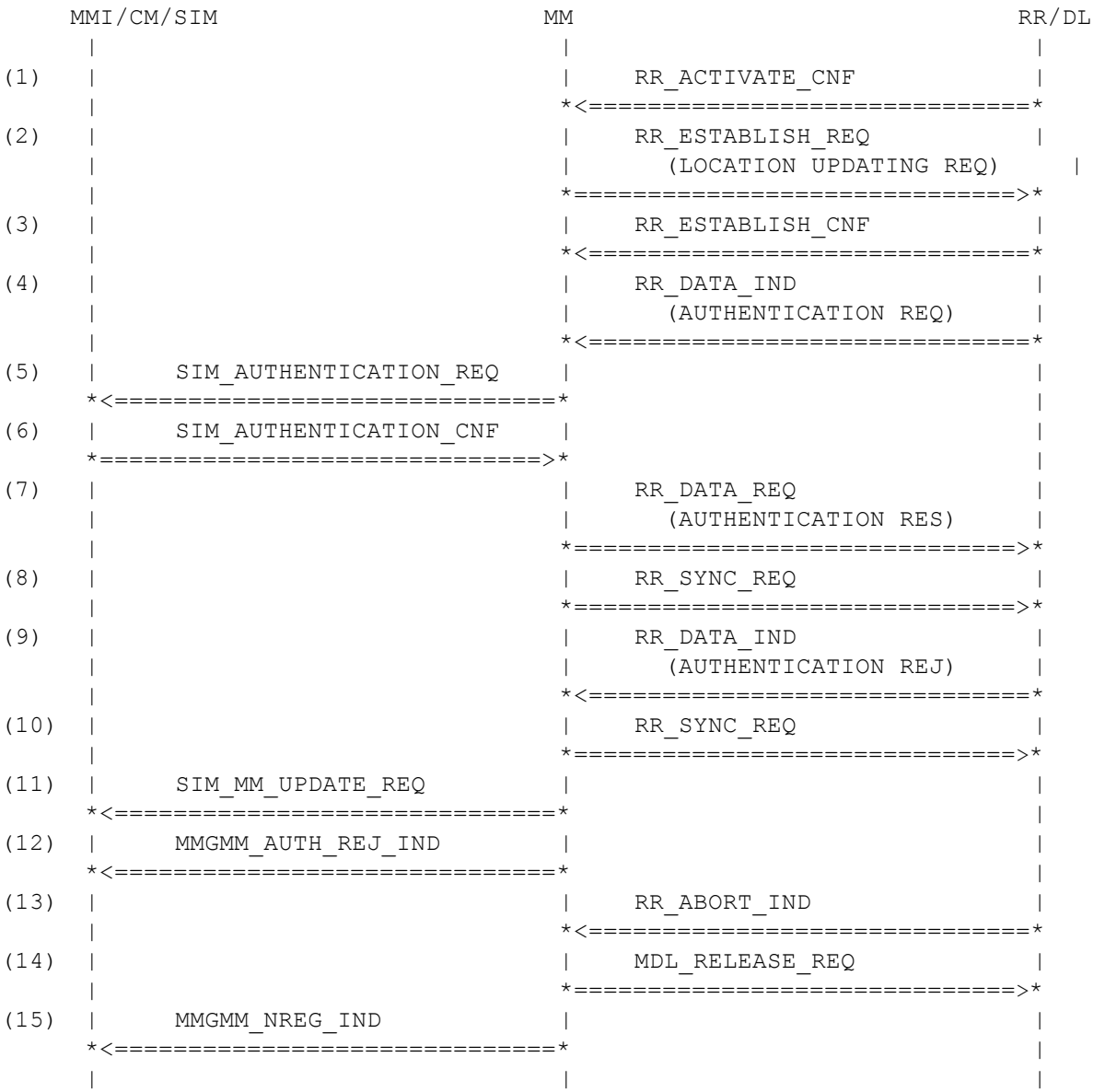
(24) RR_ESTABLISH_CNF		
	param	NOT_USED
(25) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_UNSPECIFIED
	}	
(26) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(27) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(28) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(29) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(30) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_UNSPECIFIED

History:	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	01.02.01	HM	Revised (last NREG_IND added)

3.18.11 MMG0350: MM Authentication Failure

Description: MM is informed by means of a RR-ACTIVATE confirmation primitive that the mobile station is synchronous to a cell. A location updating is started. After authentication failure only limited service shall be allowed.

Preamble: MMG0329B



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33

		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_AUTH_REQ
		ti	TI_0
		ciph_key_num	CIPH_KEY_NUM_01
		auth_rand	AUTH_RAND_1
		}	
(5)	SIM_AUTHENTICATION_REQ		
		source	SRC_MM
		rand	RAND_1
		cksn	CKSN_01
(6)	SIM_AUTHENTICATION_CNF		
		sres	SRES_1
		kc	KC_11223344
(7)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_AUTH_RES
		ti	TI_0
		auth_sres	SRES_1_CODED
		}	

(8) RR_SYNC_REQ

op	NOT_USED
cksn	CKSN_01
kcv	KCV_11223344
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(9) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_AUTH_REJ
ti	TI_0
}	

(10) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
accc	NOT_USED
thplmn	NOT_USED

(11) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_PLMN_NOT_ALLOW
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(12) MMGMM_AUTH_REJ_IND

(13) RR_ABORT_IND

op	OP_MODE_TEST_SIM
cause	RRCS_ABORT_RAD_LNK_FAIL
plmn_avail	NOT_USED
plmn	NOT_USED
lac_list	NOT_USED
rxlevel	NOT_USED
power	RF_CLASS_2

(14) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(15) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_AUTHENTICATION_REJECTED

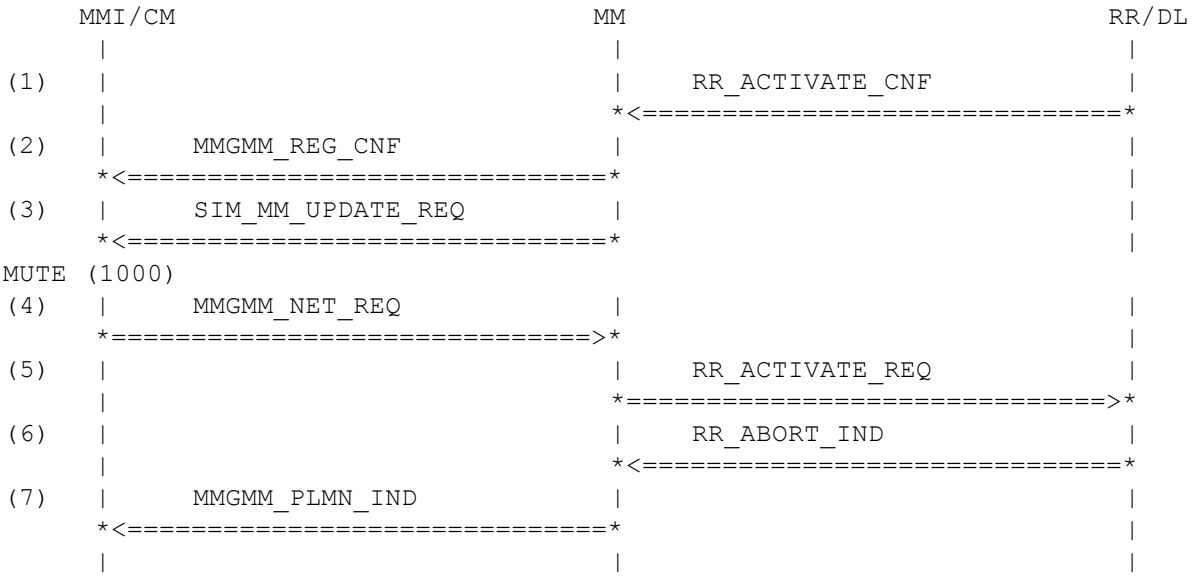
History:			
	09.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)
	08.11.00	HM	Adapted for GPRS
	27.04.01	HM	Changed ordering of primitives
	30.01.02	HM	Revised
	10.02.03	LOL	added lac_list

3.18.12 MMG0357: PLMN Available Request

Description: MM is in full service condition. MMI requests a PLMN available request and starts a PLMN search in RR. The result is forwarded to MMI.

Preamble: MMG0329B

Variants: <A>...<C>



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(3)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(4)	MMGMM_NET_REQ		

(5) RR_ACTIVATE_REQ

	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

(6) RR_ABORT_IND

<A>	op	OP_SIM_AUTO_NETSRCH_NS
<B>	op	OP_SIM_AUTO_NETSRCH_FS
<C>	op	OP_SIM_AUTO_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
<A>	plmn_avail	NO_PLMN_FOUND
<B>	plmn_avail	TWO_PLMN_FOUND
<C>	plmn_avail	TWO_PLMN_FOUND
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN
<C>	plmn	PLMN_LIST_2_PLMN_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18
<C>	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2

(7) MMGMM_PLMN_IND

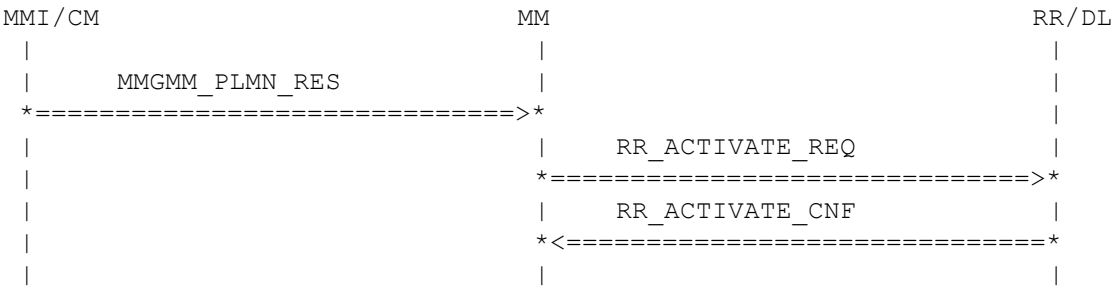
	cause	MMCS_SUCCESS
<A>	plmn	NOT_USED
<B>	plmn	PLMN_LIST_2_PLMN_0XFF
<C>	plmn	PLMN_LIST_2_PLMN_F_0XFF
<A>	forb_ind	NOT_USED
<B>	forb_ind	FORB_PLMN_ID
<C>	forb_ind	FORB_PLMN_ID_F
<A>	lac_list	NOT_USED
<B>	lac_list	LAC_LIST_2
<C>	lac_list	LAC_LIST_2
<A>	rxlevel	NOT_USED
<B>	rxlevel	RXLEVEL_20_18_A
<C>	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	30.01.02	HM	Revised
	21.03.02	HM	Revised
	10.02.03	LOL	added lac_list

3.18.13 MMG0362: PLMN Selection successful

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is successfull.

Preamble: MMG0357B



Parametrization

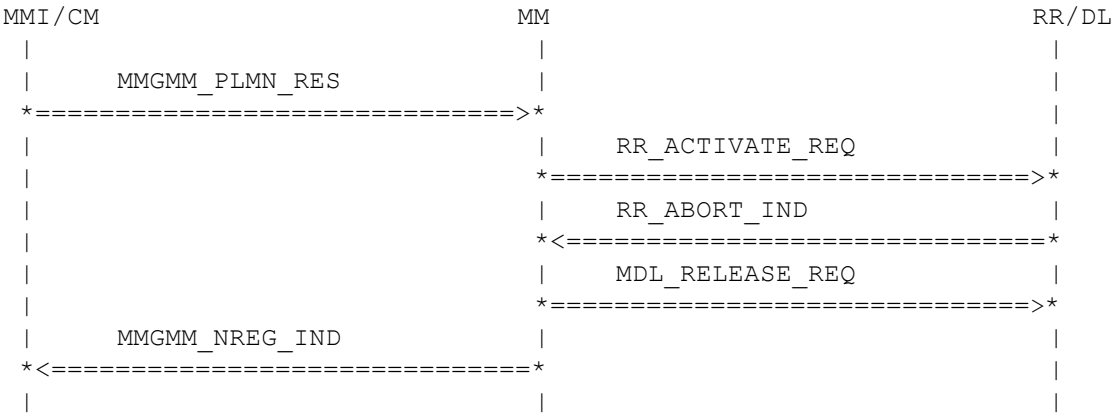
Primitive	Parameter	Value
(1) MMGMM_PLMN_RES		
	plmn	PLMN_123_33
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(3) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	24.03.00	HM	Revised
	02.11.01	HM	Revised

3.18.14 MMG0363: PLMN Selection unsuccessful

Description: MMI has requested a PLMN available list. It now selects a PLMN. The selection is unsuccessfull.

Preamble: MMG0357B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_FORB
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

(5) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

History:			
	07.07.97	HK	Initial
	06.08.97	DL	Revised
	12.08.97	HK	Revised
	02.03.00	HM	Revised (search_running)
	02.11.01	HM	Revised
	10.02.03	LOL	added lac_list

3.19 MM Idle Mode Behaviour (Normal Service)

3.19.1 MMG0400: Normal Service, new cell, same location area

Description: MM is in service state NORMAL SERVICE. A new cell is entered in the same location area. The new cell indicates IMSI attach. It is assumed that no location updating is started.

Preamble: MMG0024

Parametrization

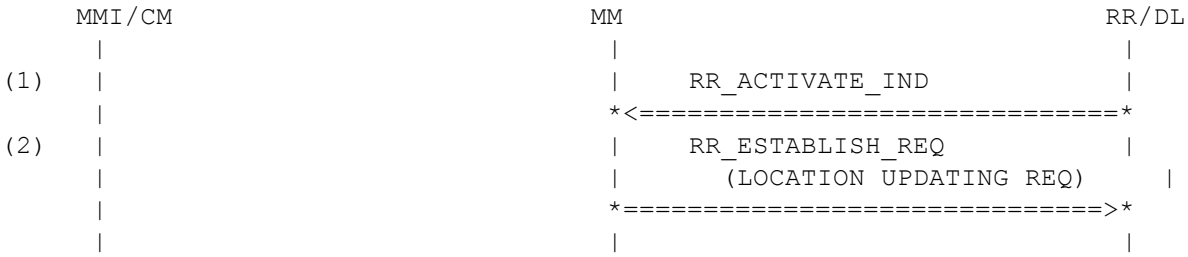
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1123
		resumption	NOT_USED
(3)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1123

History:			
	03.05.99	LE	Initial
	31.01.02	HM	Revised

3.19.2 MMG0401: Normal Service, new cell, new location area

Description: MM is in service state NORMAL SERVICE. A new cell is entered in a new location area. A normal location updating is started.

Preamble: MMG0024



Parametrization

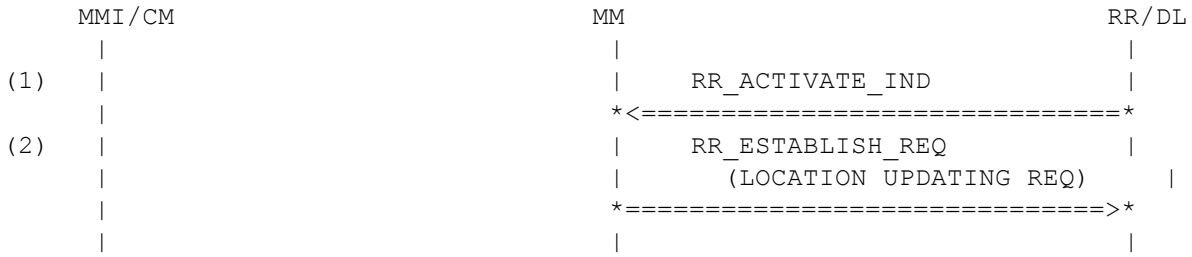
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History: 07.07.97 HK Initial

3.19.3 MMG0402: Normal Service, new cell, new PLMN identification

Description: MM is in service state NORMAL SERVICE. A new cell is entered in a new PLMN. A normal location updating is started.

Preamble: MMG0024



Parametrization

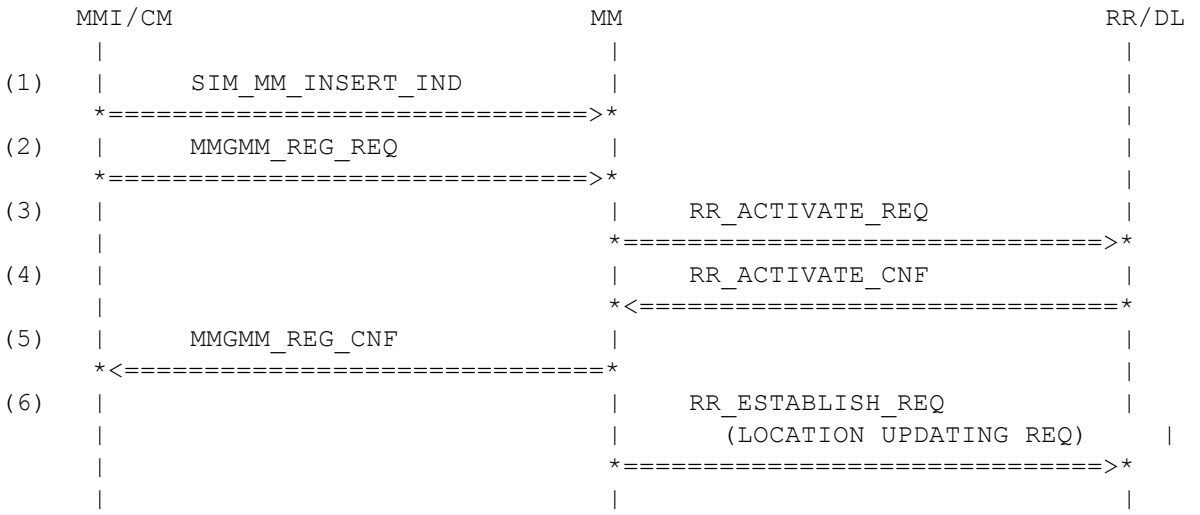
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History: 07.07.97 HK Initial

3.19.4 MMG0403: Updated, IMSI Attach

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive. Successful conclusion of cell selection is signalled by the receipt of a RR-ACTIVATE confirmation primitive. MM forwards the PLMN identification to MMI in the form of a MMR-REG confirmation primitive. An IMSI attach is started.

Preamble: MMG0022



Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID

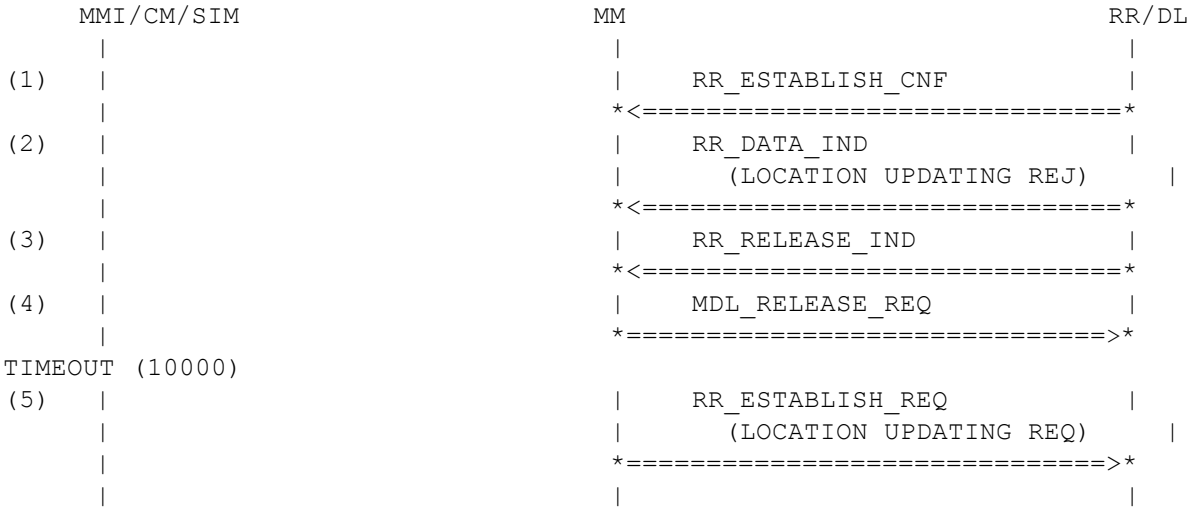
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial
	24.02.00	HM	Revised

3.19.5 MMG0404: Normal Service, Timeout T3211, LUP Reject Cause #17

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

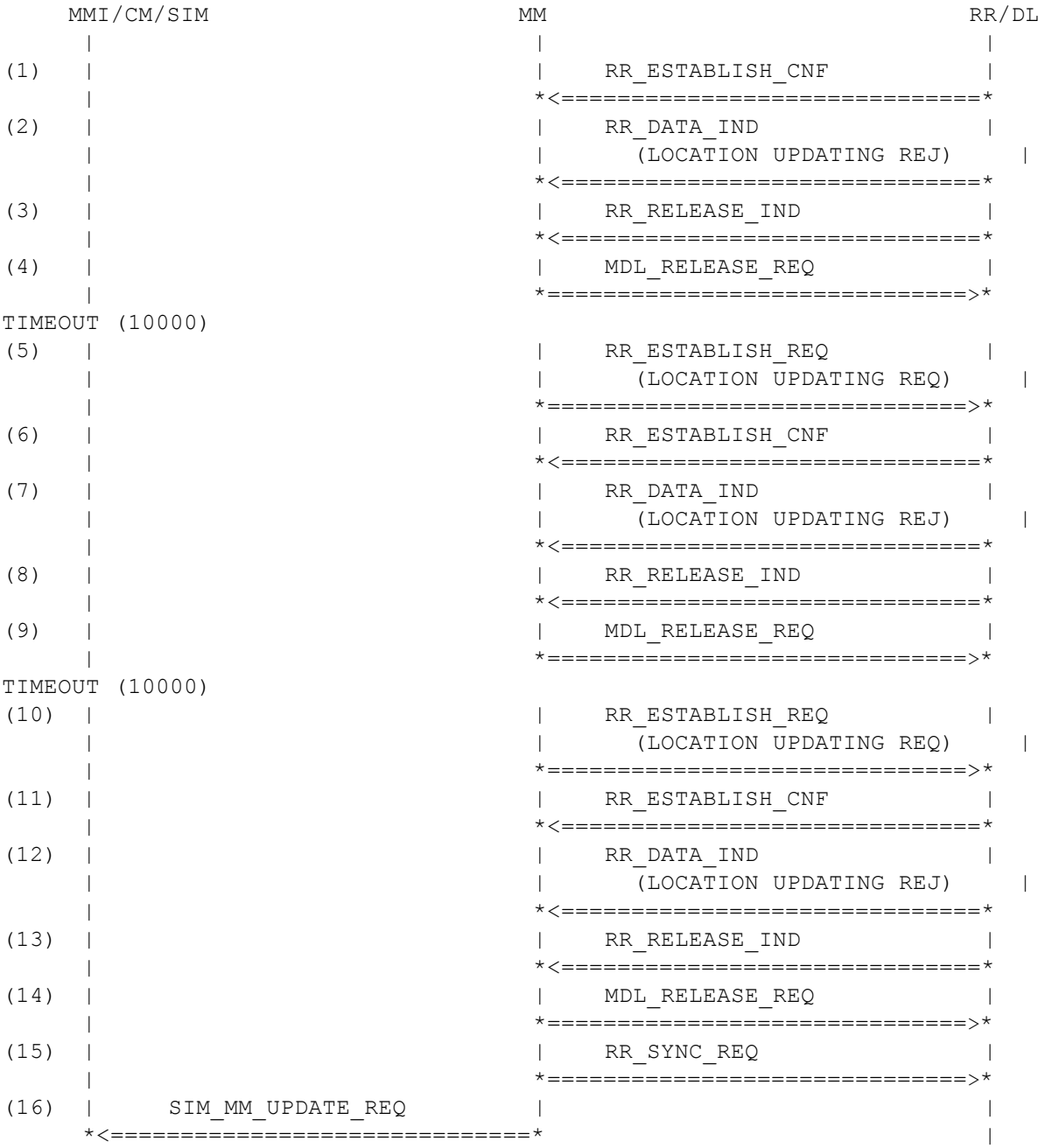
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

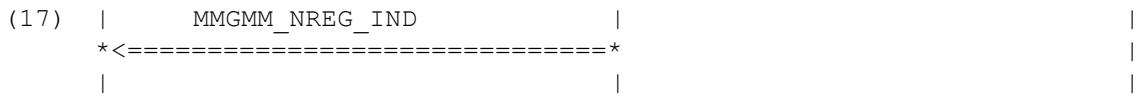
History:	04.05.99	LE	Initial

3.19.6 MMG0405: Normal Service, Timeout T3211, LUP Reject Cause, 2.-4. attempt

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0404





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(6)	RR_ESTABLISH_CNF		
		param	NOT_USED
(7)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM

		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(11)	RR_ESTABLISH_CNF		
		param	NOT_USED
(12)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(13)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED

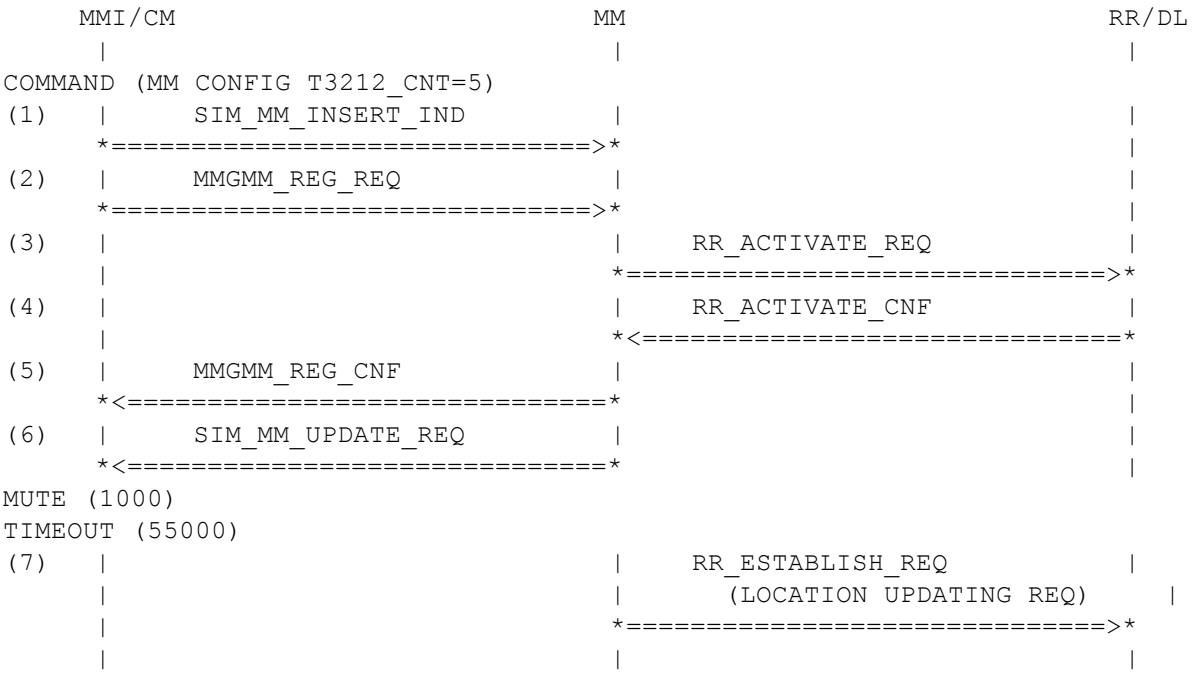
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(16)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(17)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_NETWORK_FAILURE

History:	04.05.99	LE	Initial

3.19.7 MMG0406: Updated, Periodic LUP

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive. Successful conclusion of cell selection is signalled by the receipt of a RR-ACTIVATE confirmation primitive. MM forwards the PLMN identification to MMI in the form of a MMR-REG confirmation primitive. The periodic location updating timer is started.

Preamble: MMG0022



Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES

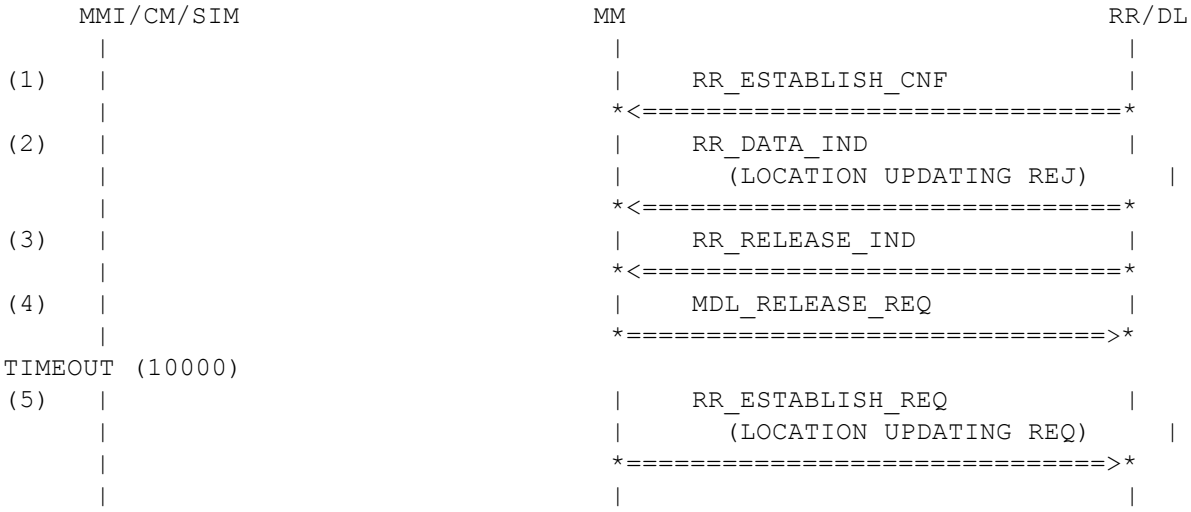
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(4) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_PER
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(5) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(6) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(7) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_PERIODIC
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

History:	04.05.99	LE	Initial
	24.02.00	HM	Revised
	30.01.02	HM	Revised

3.19.8 MMG0407: Normal Service, Timeout T3211, LUP Reject Cause #17

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0406



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

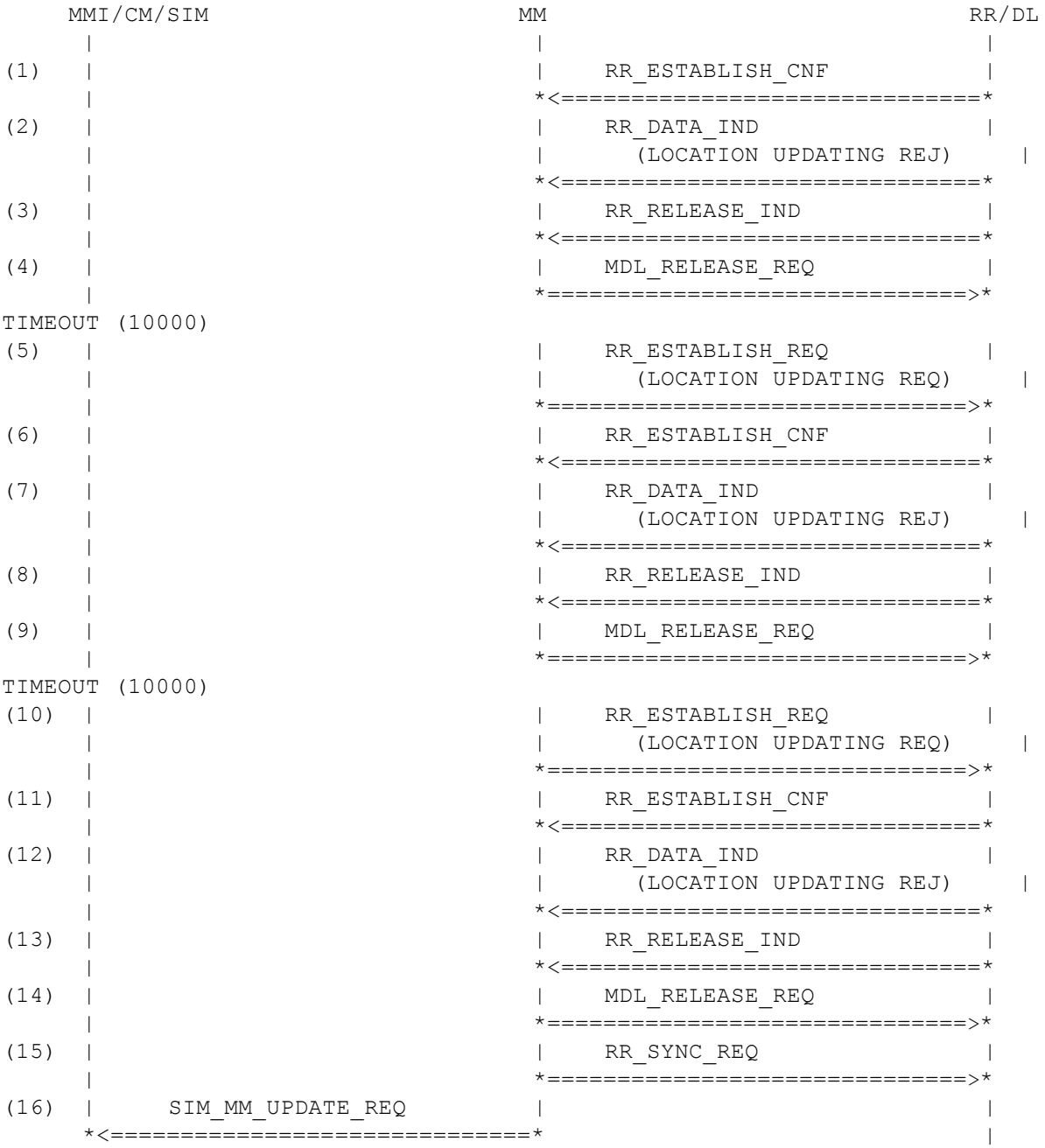
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

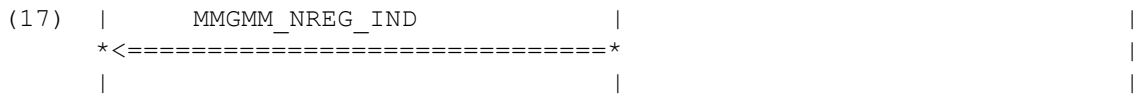
History:	04.05.99	LE	Initial

3.19.9 MMG0408: Normal Service, Timeout T3211, LUP Reject Cause, 2.-4. attempt

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0407





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(6)	RR_ESTABLISH_CNF		
		param	NOT_USED
(7)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM

		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(11)	RR_ESTABLISH_CNF		
		param	NOT_USED
(12)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(13)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED

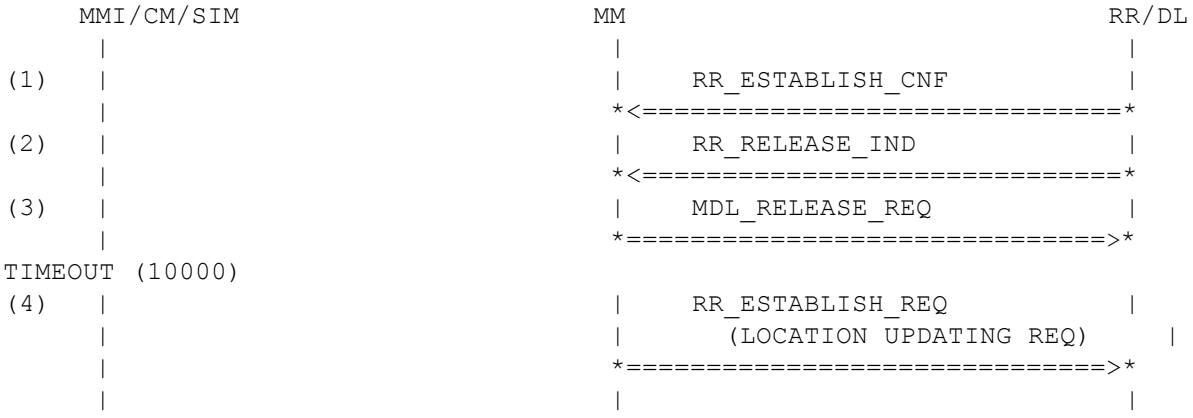
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(16)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(17)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_NETWORK_FAILURE

History:	04.05.99	LE	Initial
	15.01.01	HM	Revised (last NREG_IND added)

3.19.10 MMG0409: Normal Service, Timeout T3211, RR Release before end of proc

Description: The RR connection is established and released before receiving an answer by the network. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0403



Parametrization

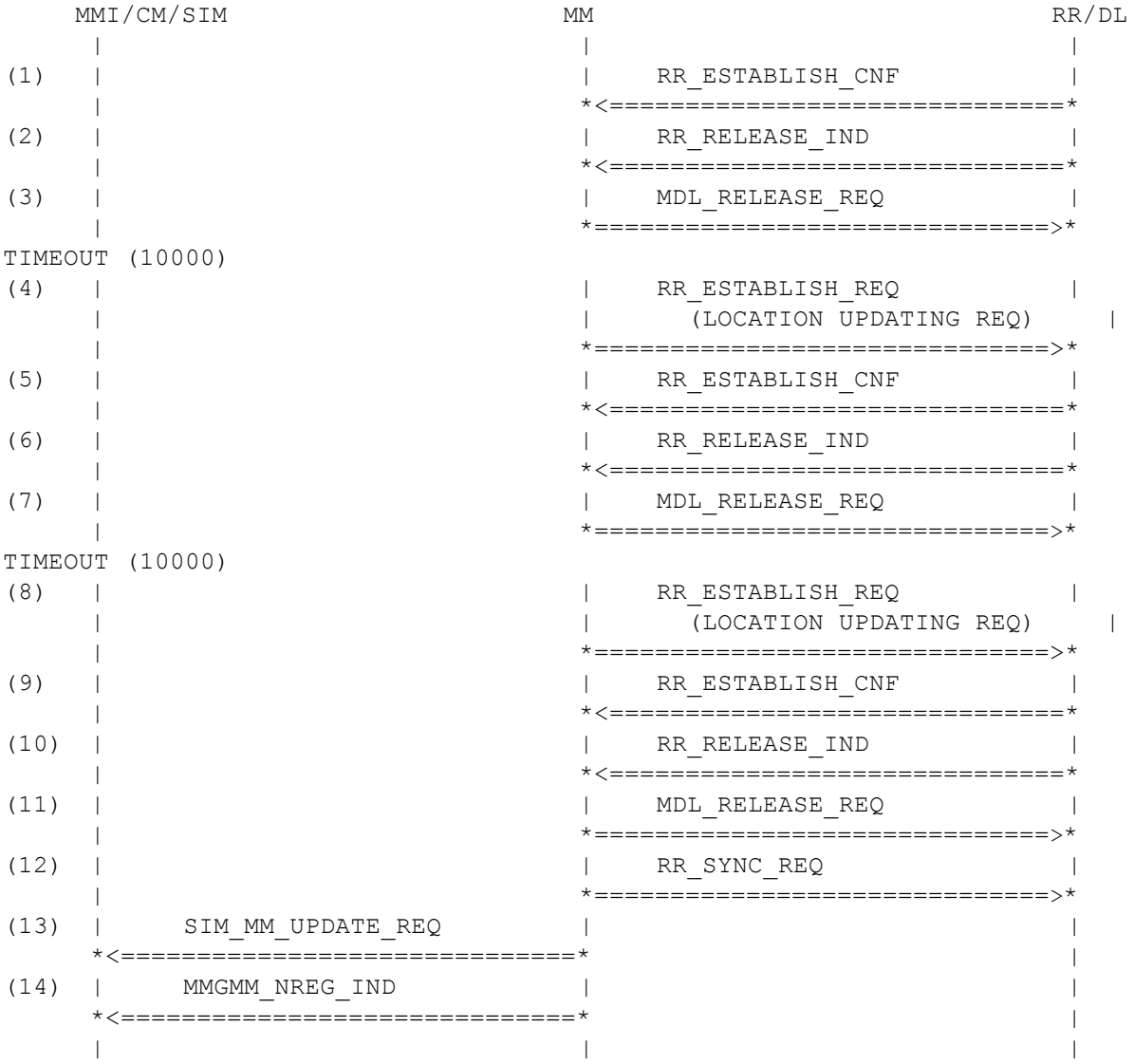
Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
History:	04.05.99	LE	Initial

3.19.11 MMG0410: Normal Service, T3211, RR Release before end of proc, 2.-4. attempt

Description: The RR connection is established and released before receiving an answer by the network. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0409



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED

(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(11) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(12) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(13) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(14) MMGMM_NREG_IND

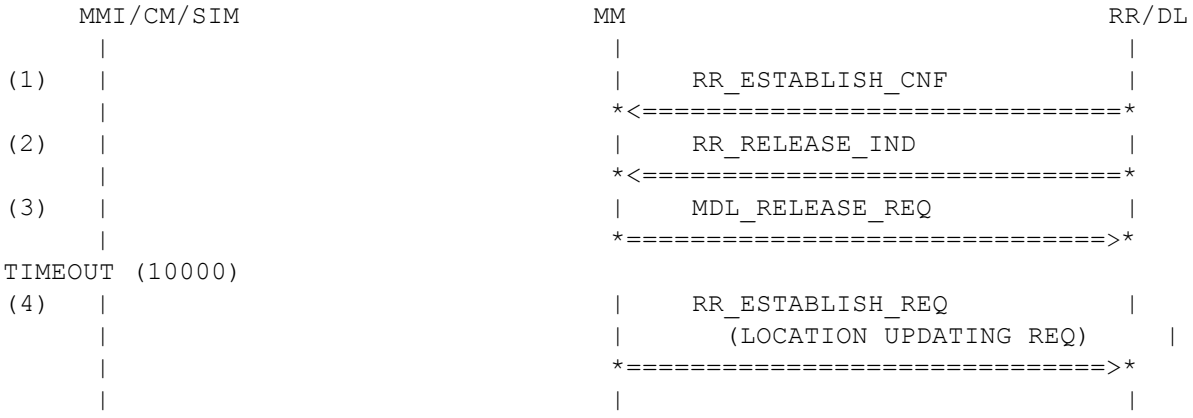
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	01.02.01	HM	Revised (last MMR_NREG_IND added)

3.19.12 MMG0411: Normal Service, T3211, RR Release before end of proc

Description: The RR connection is established and released before receiving an answer by the network. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0406



Parametrization

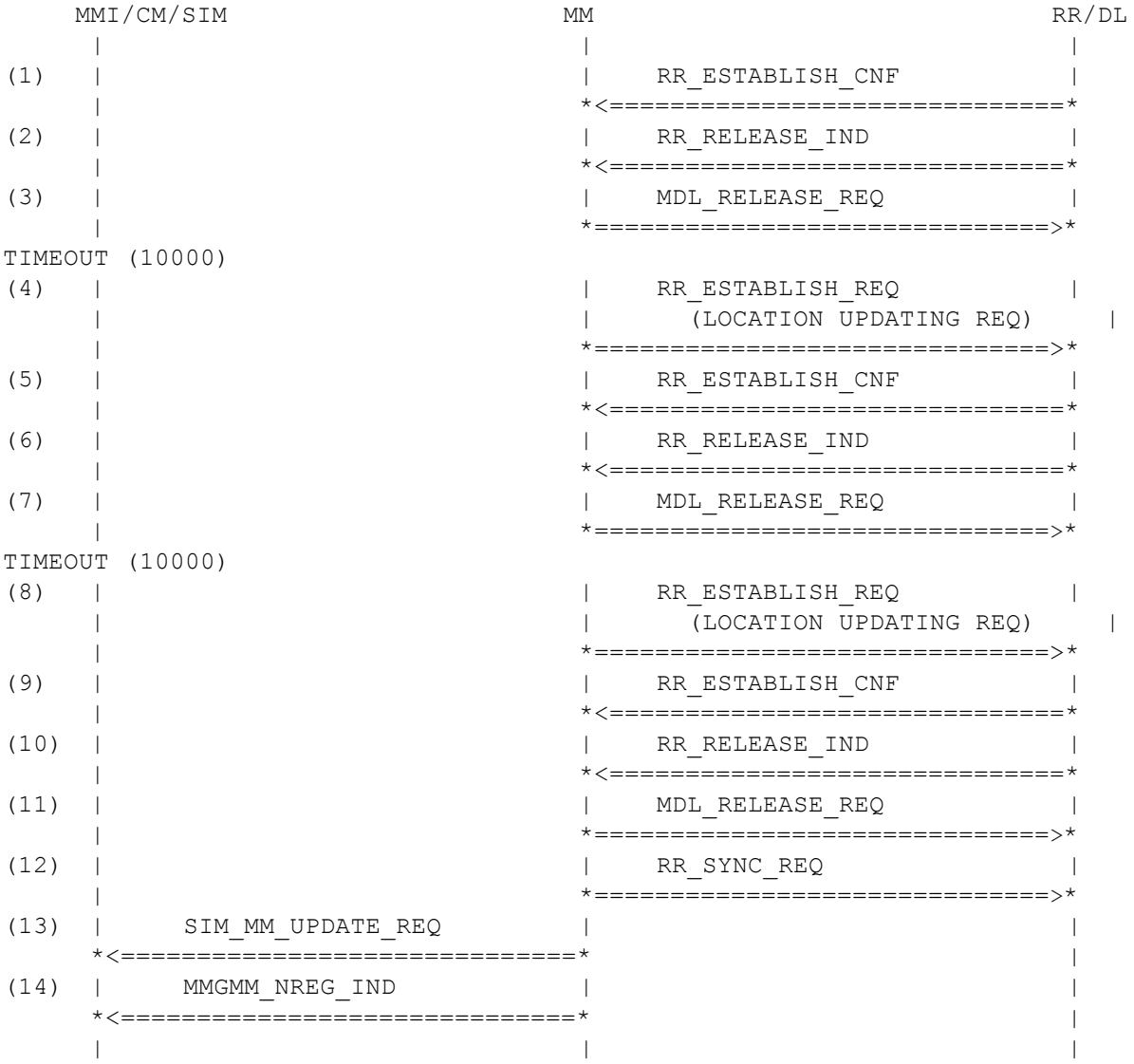
Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
History:	04.05.99	LE	Initial

3.19.13 MMG0412: Normal Service, T3211, RR Release before end of proc, 2.-4. attempt

Description: The RR connection is established and released before receiving an answer by the network. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0411



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED

(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

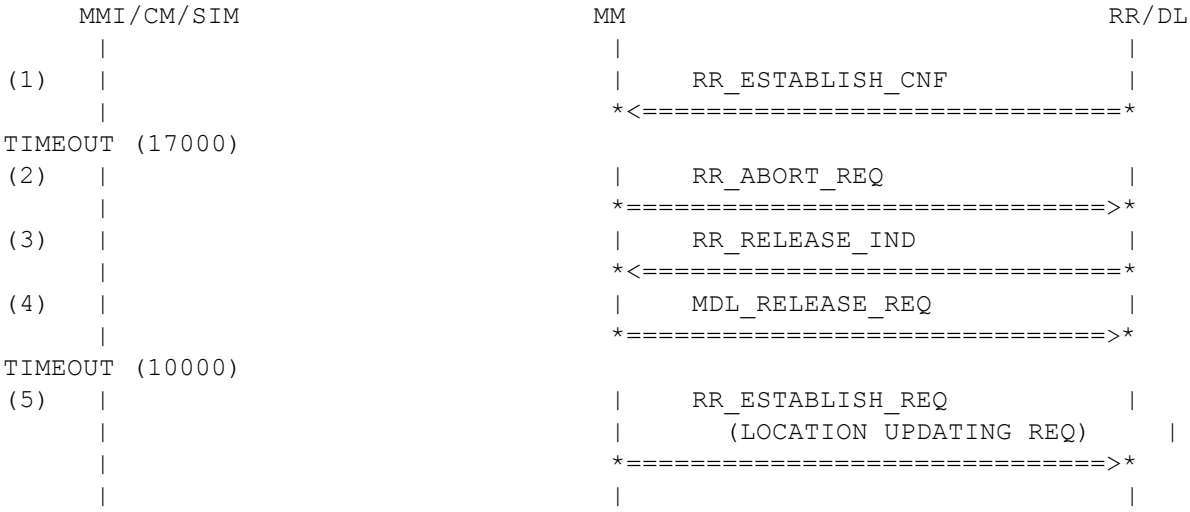
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(14)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	01.02.01	HM	Revised (last MMR_NREG_IND added)

3.19.14 MMG0413: Normal Service, T3211, Timeout T3210

Description: The RR connection is established and no answer receives from the network. After timeout of T3210 the RR connection is aborted. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ

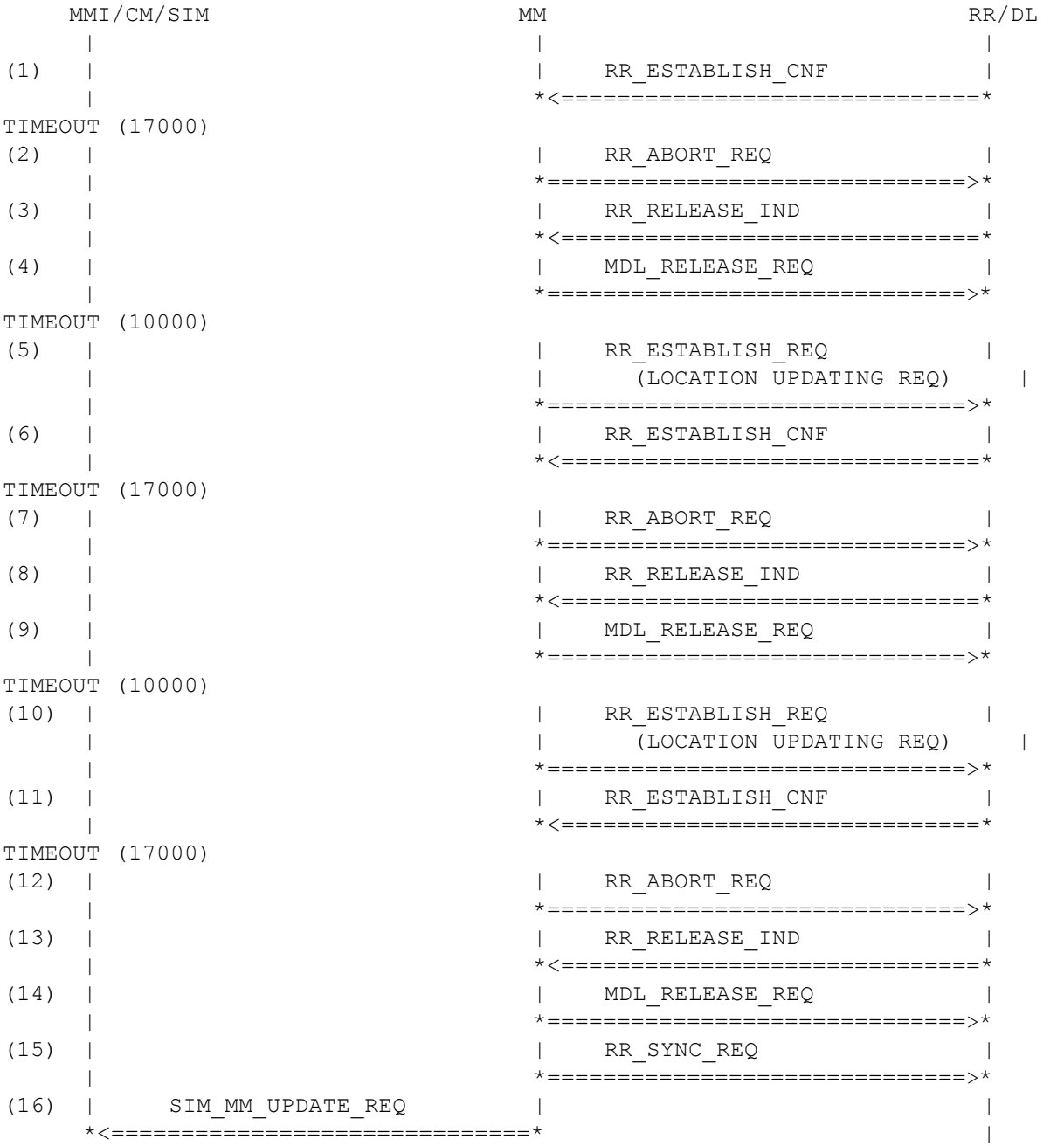
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_ATTACH
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

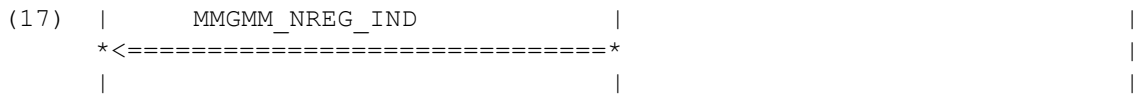
History:			
	04.05.99	LE	Initial
	19.03.01	HM	Increased timeout T3211
	27.04.01	HM	Changed abort behaviour

3.19.15 MMG0414: Normal Service, T3211, Timeout T3210, 2.-4. attempt

Description: The RR connection is established and no answer of the network receives. After timeout of T3210 the connection is aborted. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0413





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(6)	RR_ESTABLISH_CNF		
		param	NOT_USED
(7)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(8)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM

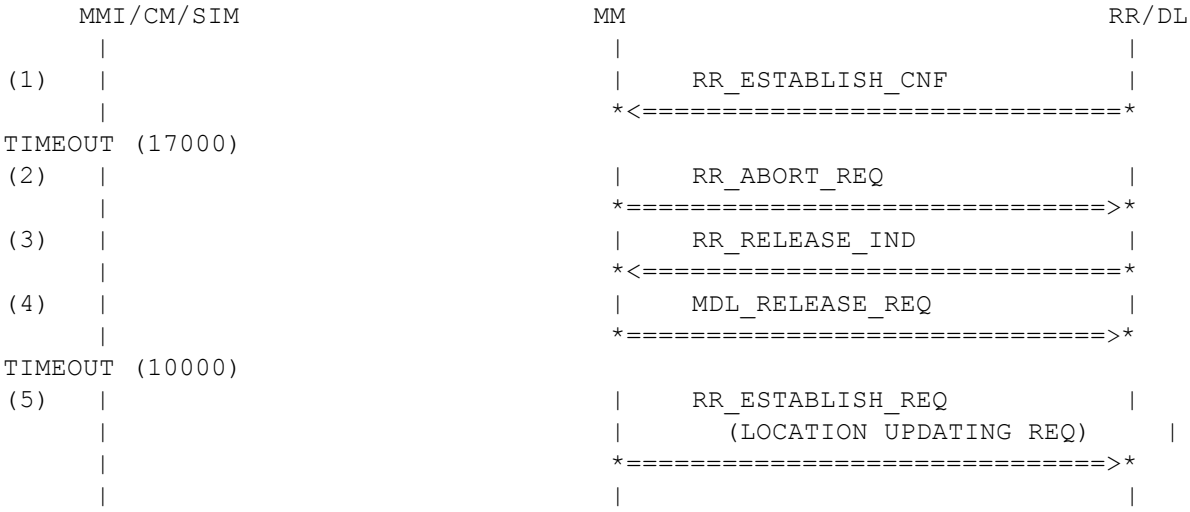
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(11)	RR_ESTABLISH_CNF		
		param	NOT_USED
(12)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(13)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(16)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(17)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	19.03.01	HM	Increased timeout T3211
	27.04.01	HM	Changed abort behaviour

3.19.16 MMG0415: Normal Service, T3211, Timeout T3210

Description: The RR connection is established and there is no answer by the network. After timeout of T3210 a connection abort is processed. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0406



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ

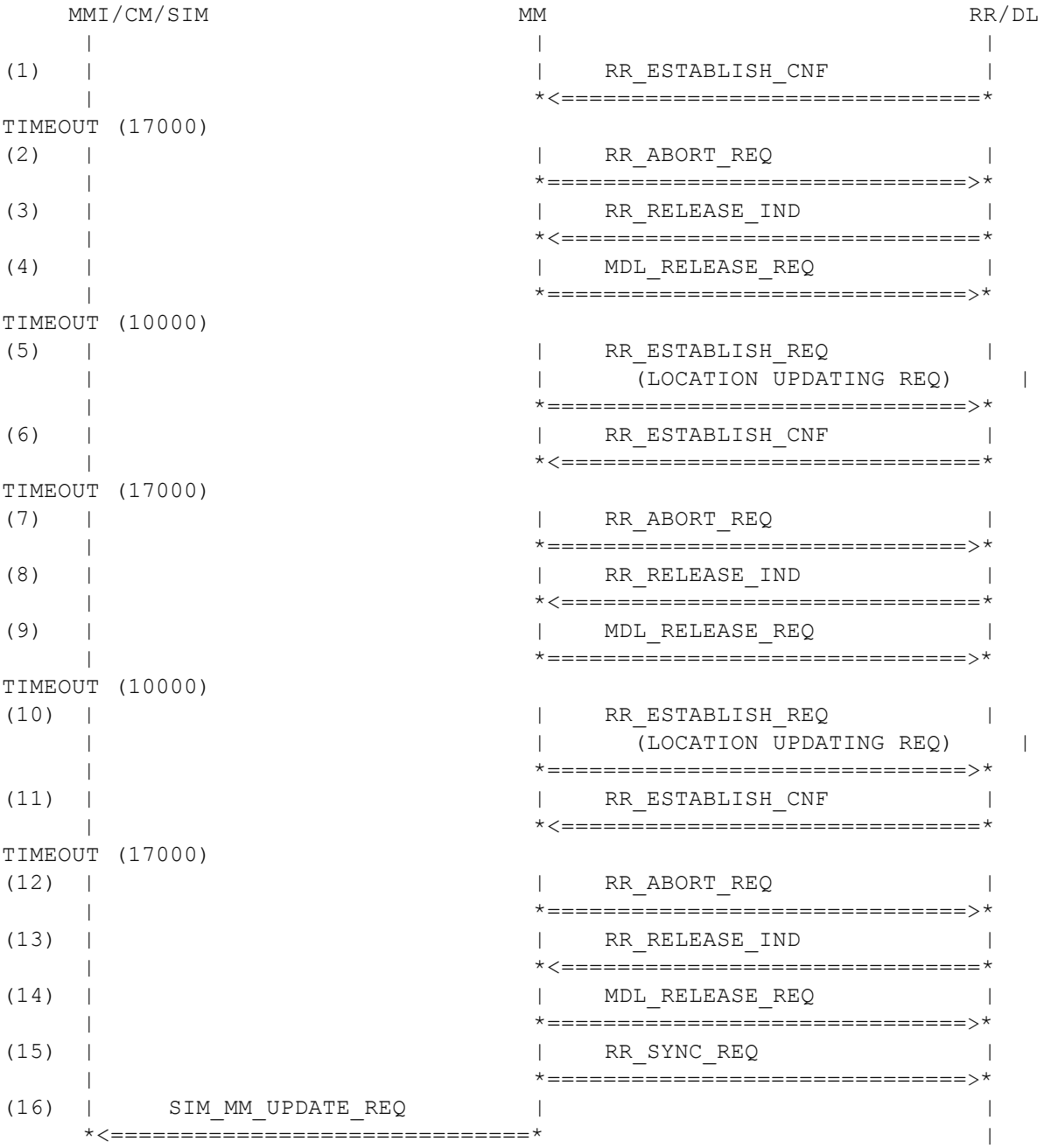
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_PERIODIC
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

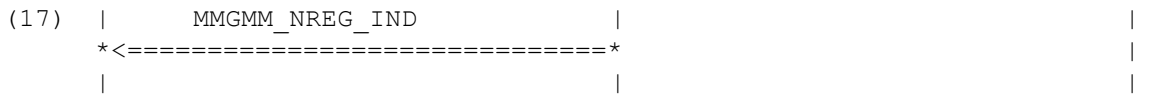
History:	04.05.99	LE	Initial
	19.03.01	HM	Increased timeout T3211
	27.04.01	HM	Changed abort behaviour

3.19.17 MMG0416: Normal Service, T3211, Timeout T3210, 2.-4. attempt

Description: The RR connection is established and there is no answer by the network. After timeout T3210 the connection is aborted. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0415





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(6)	RR_ESTABLISH_CNF		
		param	NOT_USED
(7)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(8)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM

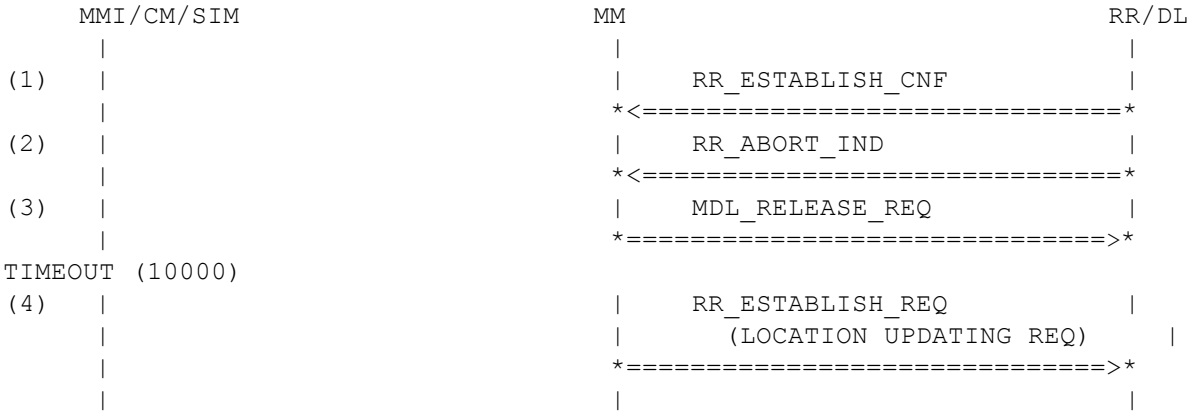
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(11)	RR_ESTABLISH_CNF		
		param	NOT_USED
(12)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(13)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(16)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(17)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	19.03.01	HM	Increased timeout T3211
	27.04.01	HM	Changed abort behaviour

3.19.18 MMG0417: Normal Service, T3211, RR connection failure

Description: The RR connection is established and released before receiving an answer by the network due to a radio link failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH

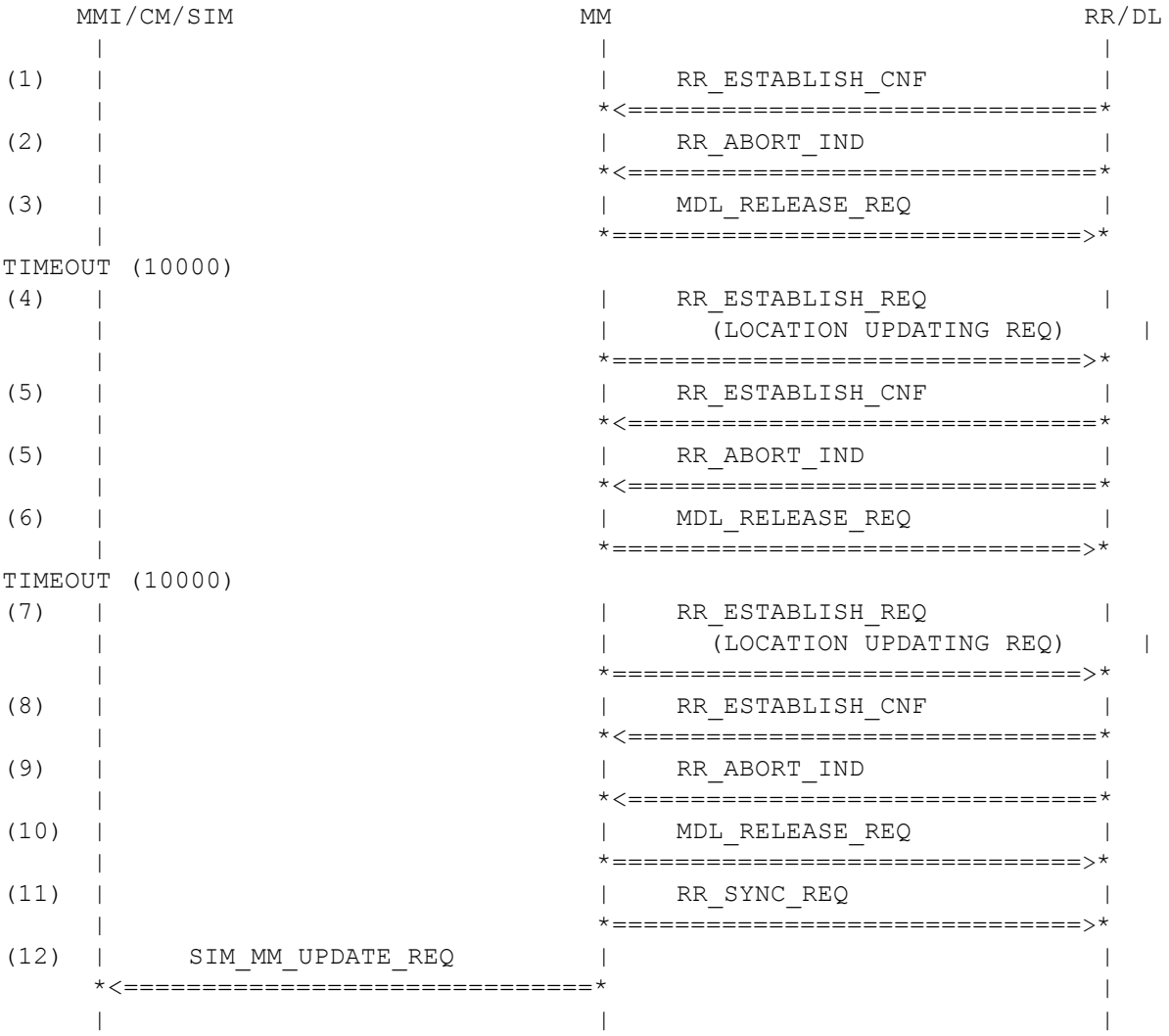
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial
	10.02.03	LOL	added lac_list

3.19.19 MMG0418: Normal Service, T3211, RR Connection Failure, 2.-4. attempt

Description: The RR connection is established and released before receiving an answer by the network due to a radio link failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0417



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED

(2)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1

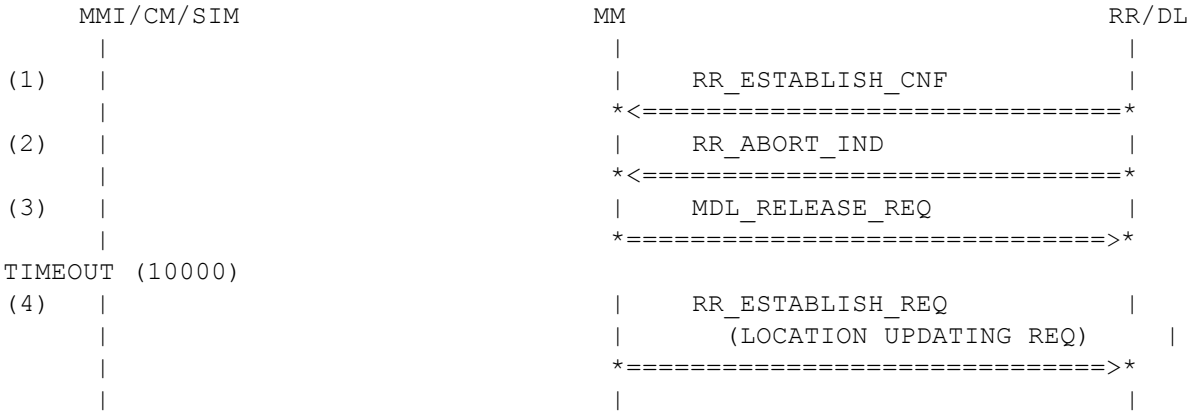
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

History:	04.05.99	LE	Initial
	10.02.03	LOL	added lac_list

3.19.20 MMG0419: Normal Service, T3211, RR Connection Failure

Description: The RR connection is established and released before receiving an answer by the network due to a radio link failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0406



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC

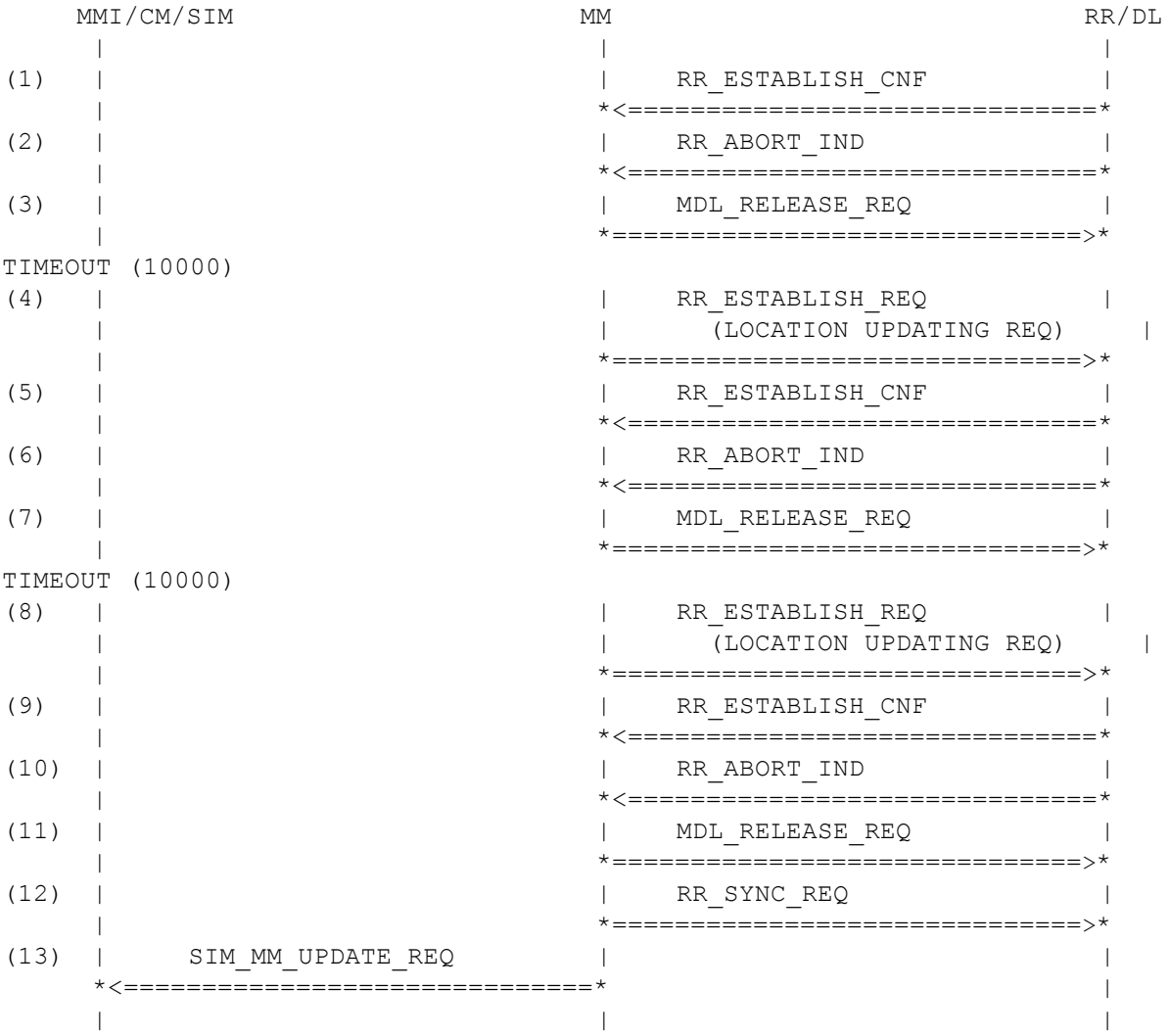
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial
	10.02.03	LOL	added lac_list

3.19.21 MMG0420: Normal Service, T3211, RR Connection Failure, 2.-4. attempt

Description: The RR connection is established and released before receiving an answer by the network due to a radio link failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0419



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_CNF		
	param	NOT_USED

(2)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1

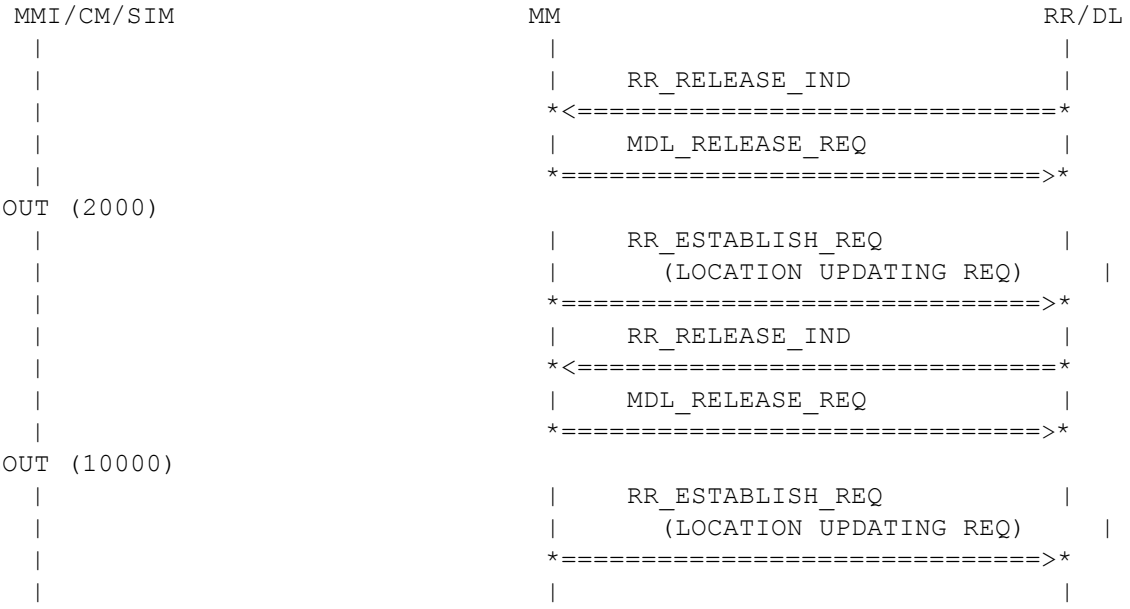
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

History:	04.05.99	LE	Initial
	10.02.03	LOL	added lac_list

3.19.22 MMG0421: Normal Service, T3211, Random Access Failure

Description: An Random Access Failure occurs. After timeout T3213 the next attempt is started which fails with the same cause. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH

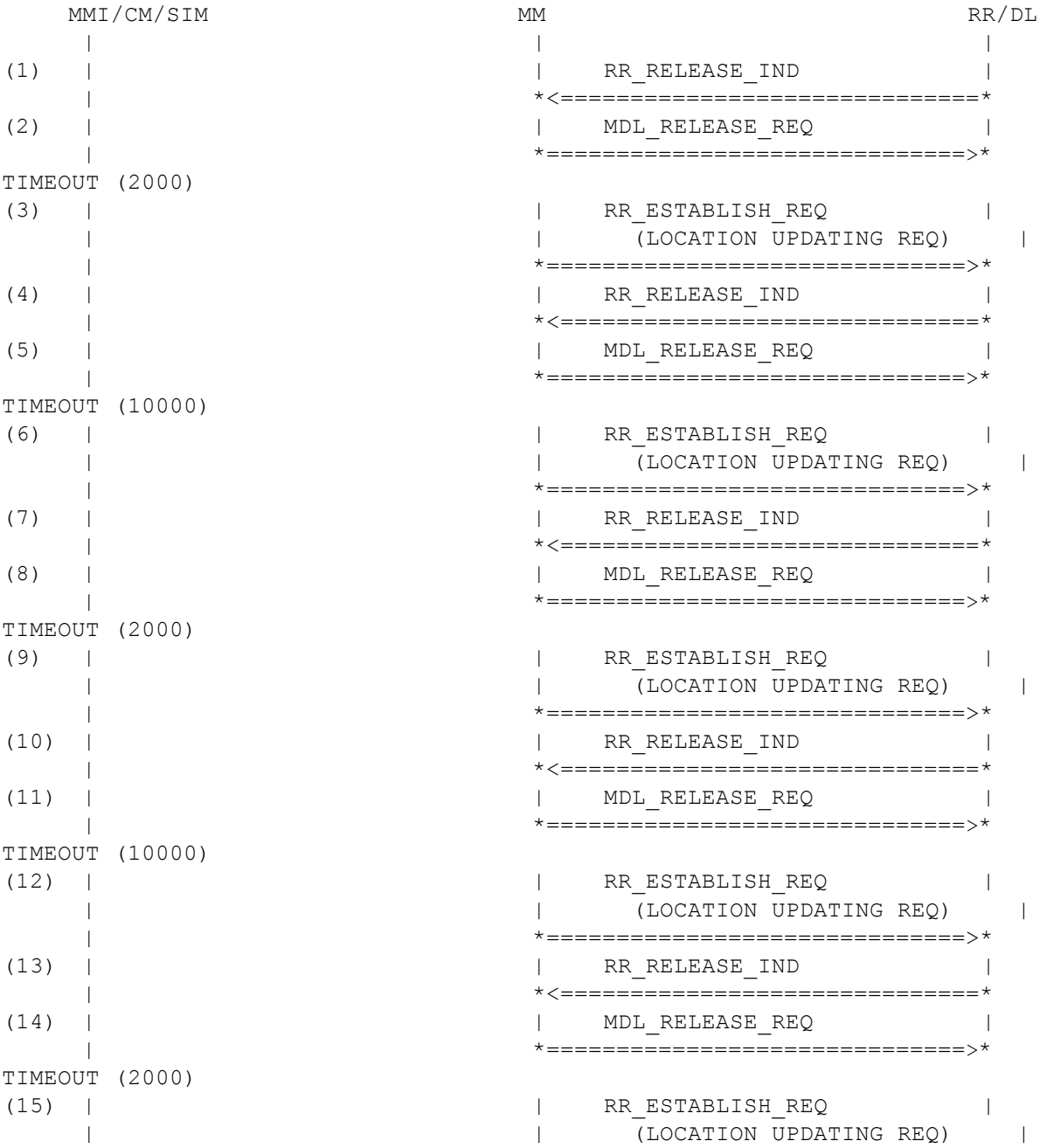
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.19.23 MMG0422: Normal Service, T3211, Random Access Failure, 2.-4. attempt

Description: A random access failure occurs. T3213 is started. The next attempt fails due to the same cause. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0421



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0

		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(13)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL

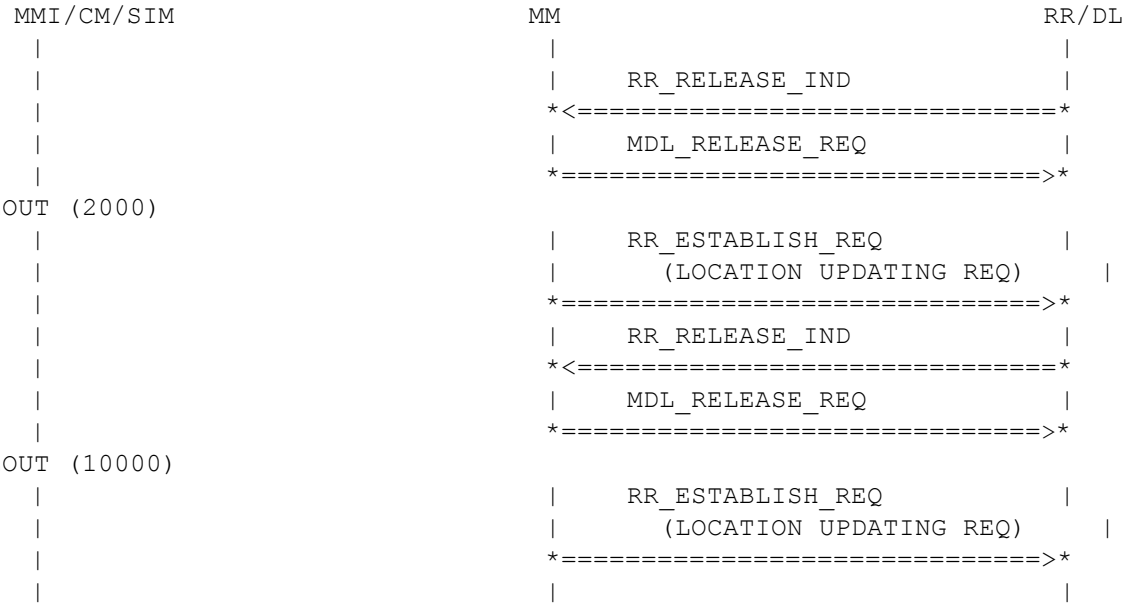
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(16)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(17)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(18)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(19)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

History:	04.05.99	LE	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.19.24 MMG0423: Normal Service, T3211, Random Access Failure

Description: A random access failure occurs. T3213 is started. After timeout a new attempt is started. The attempt fails due to the same cause. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0406



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC

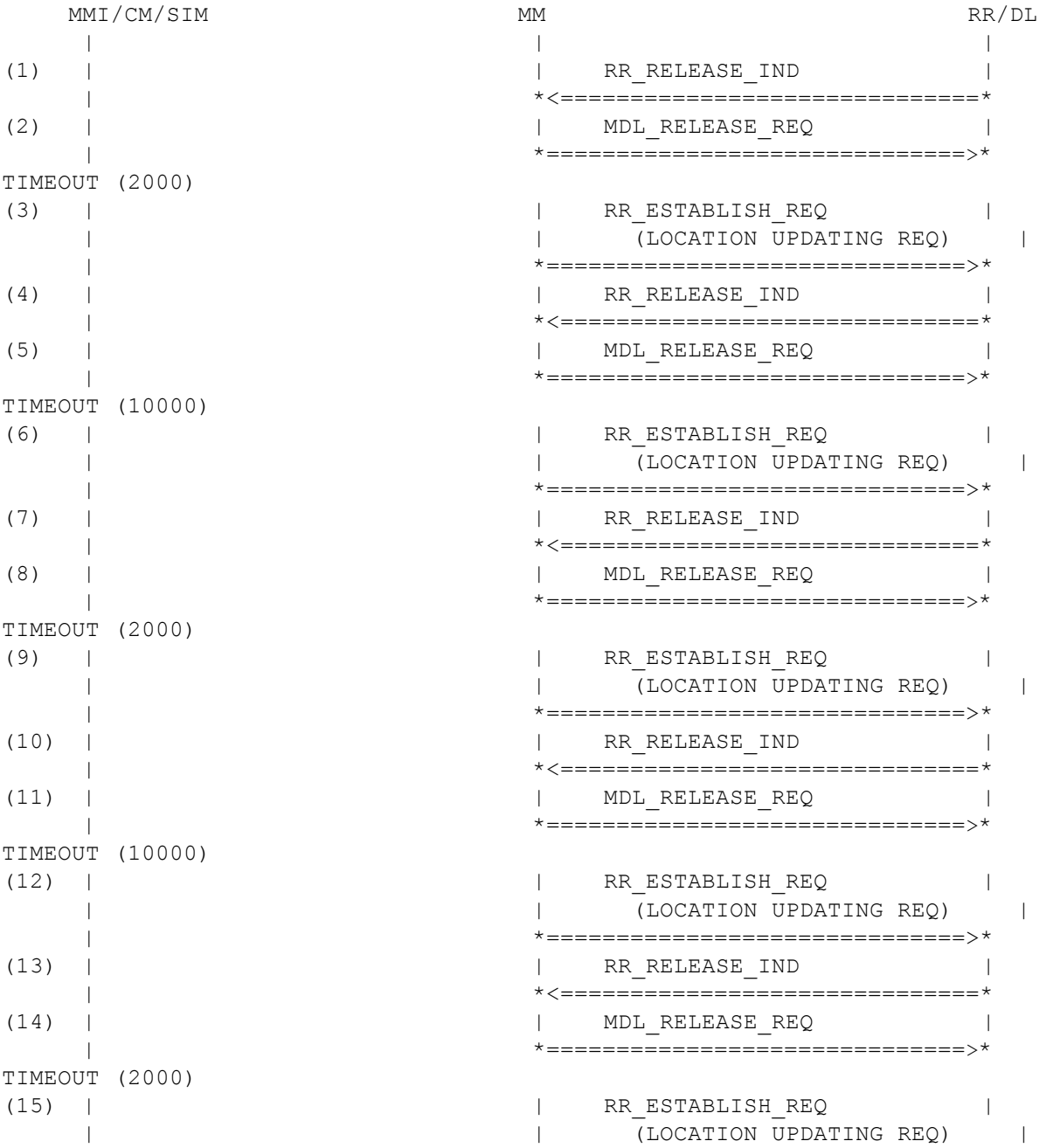
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.19.25 MMG0424: Normal Service, T3211, Random Access Failure, 2.-4. attempt

Description: A random access failure occurs. T3213 is started. The next attempt fails due to the same cause. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.

Preamble: MMG0423



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0

		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(13)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL

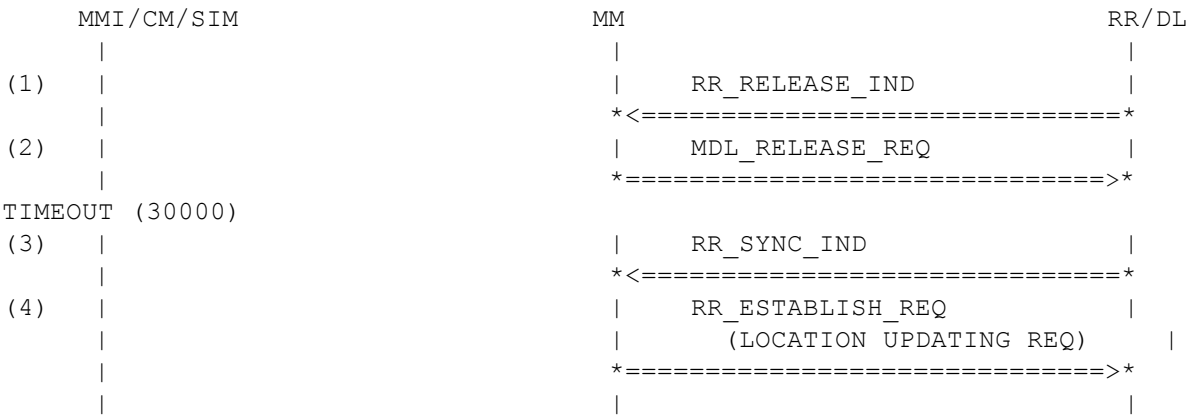
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(16)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(17)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(18)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(19)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

History:	04.05.99	LE	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.19.26 MMG0425: Random access delayed

Description: MM receives a RR-RELEASE indication primitive from RR; Normal Location Updating cannot be carried out because of random access delay. MM issues a MDL-RELEASE request primitive. After T3122 timeout in RR a new attempt is started.

Preamble: MMG0401



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_DELAY
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_SYNC_IND		
		ciph	CIPH_NOT_PRES
		mm_info	NOT_USED
		bcch_info	NOT_USED
		synccs	SYNCCS_T3122_TIM_OUT
		chm	CHM_NOT_PRESENT
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1

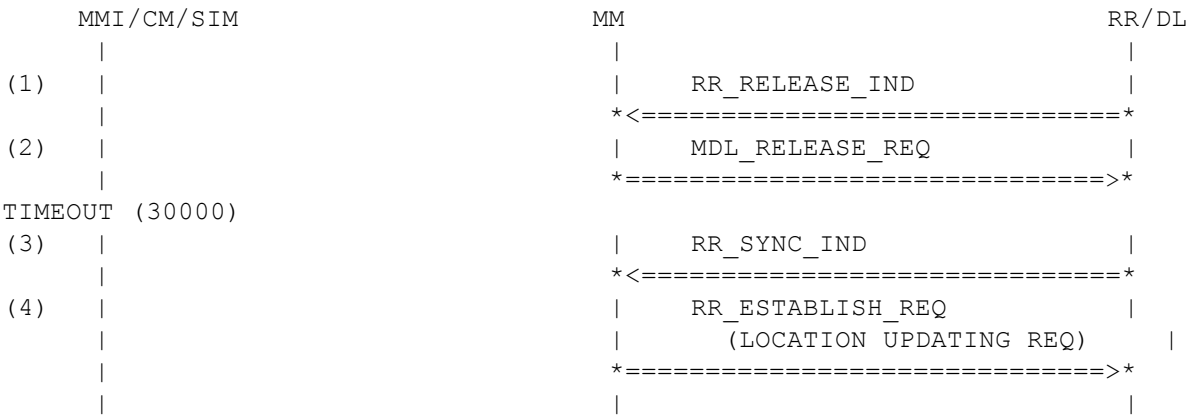
		mob_id	MOB_IDENT_IMSI
		}	

History:	09.07.97	HK	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.19.27 MMG0426: Random access barred

Description: MM receives a RR-RELEASE indication primitive from RR; Normal Location Updating cannot be carried out because of access barred. MM issues a MDL-RELEASE request primitive. After access control class changes in RR a new attempt is started.

Preamble: MMG0401



Parametrization

Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_SYNC_IND		
	ciph	CIPH_NOT_PRES
	mm_info	NOT_USED
	bcch_info	NOT_USED
	synccs	SYNCCS_ACC_CLS_CHA
	chm	CHM_NOT_PRESENT
(4) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1

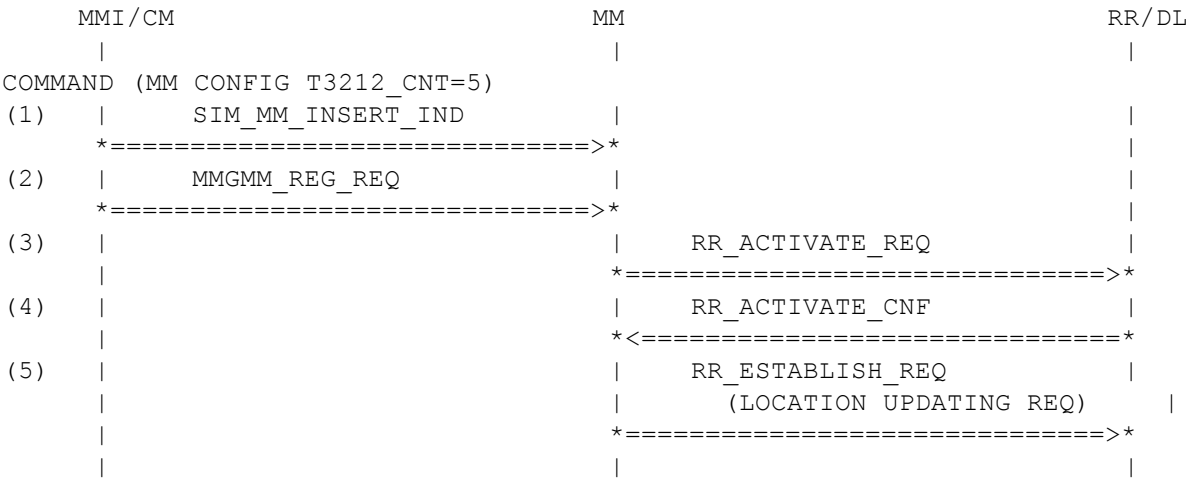
		mob_id	MOB_IDENT_IMSI
		}	

History:	09.07.97	HK	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.19.28 MMG0427: Not Updated in Current LA, Start Normal Location Updating

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive. Successful conclusion of cell selection is signalled by the receipt of a RR-ACTIVATE confirmation primitive. MM forwards the PLMN identification to MMI in the form of a MMR-REG confirmation primitive. A normal location updating is started.

Preamble: MMG0022



Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_0002_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED

bcch_info	BCCH_INFO_ECL	
cell_test	CELL_TEST_DISABLE	
gprs_indication	GPRS_NO	

(4) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO_PER
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(5) RR_ESTABLISH_REQ

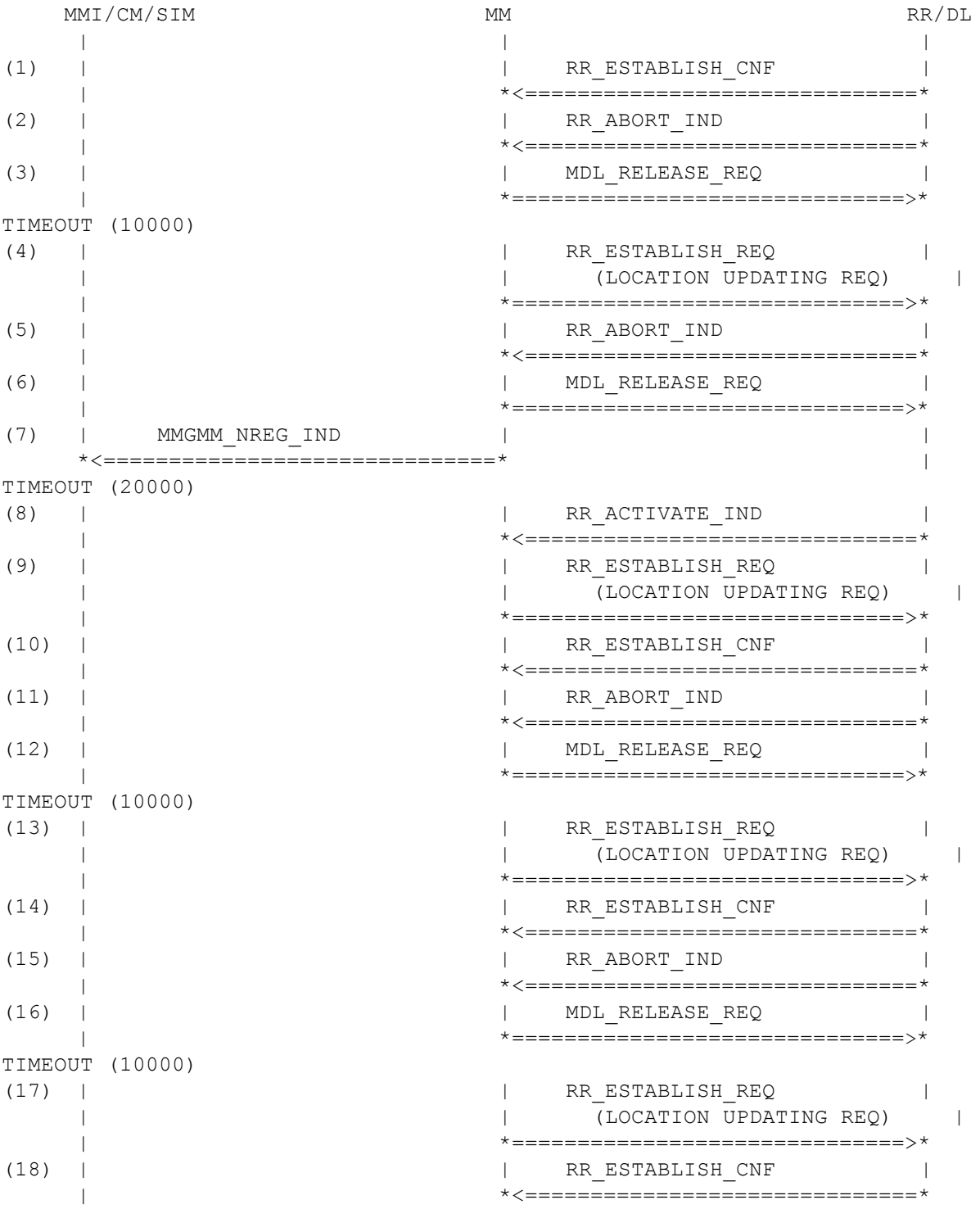
estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

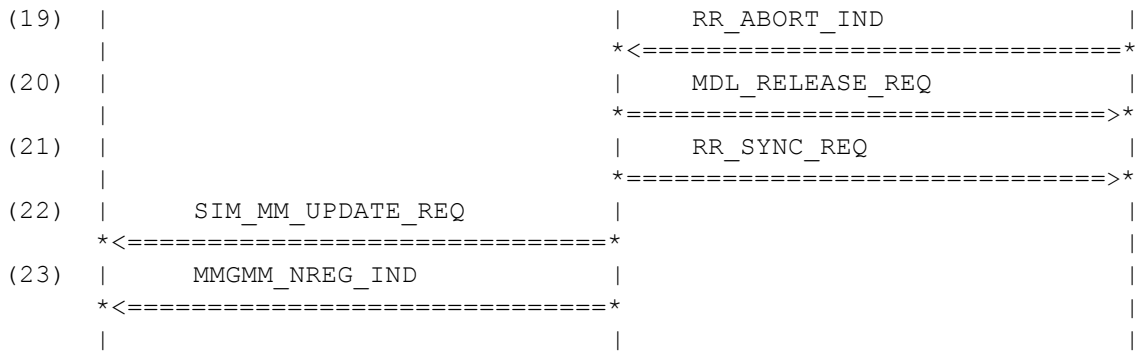
History:	04.05.99	LE	Initial
	24.02.00	HM	Revised
	30.01.02	HM	Revised

3.19.29 MMG0600: Normal Service, T3211, Anite Behaviour

Description: The radio link failure in the preamble is realized by the Anite by simply switching off the BCCH carrier. This leads to a cell reselection problem in RR and a cell selection failure is indicated to MM. RR retries the synchronisation and forwards a RR ACTIVATE IND to MM indicating that it is back to full service.

Preamble: MMG0406





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_FOUND
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2

(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(8)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_ESTABLISH_CNF		
		param	NOT_USED
(11)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(12)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(13)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ

	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_PERIODIC
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(14) RR_ESTABLISH_CNF		
	param	NOT_USED
(15) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(16) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(17) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_PERIODIC
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(18) RR_ESTABLISH_CNF		
	param	NOT_USED
(19) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(20) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED

kcv	NOT_USED	
tmsi_struct	NOT_USED	
plmn	NOT_USED	
lac	NOT_USED	
synccs	SYNCCS_TMSI_CKSN_KC_INVAL	
accc	NOT_USED	
thplmn	NOT_USED	

(22) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(23) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

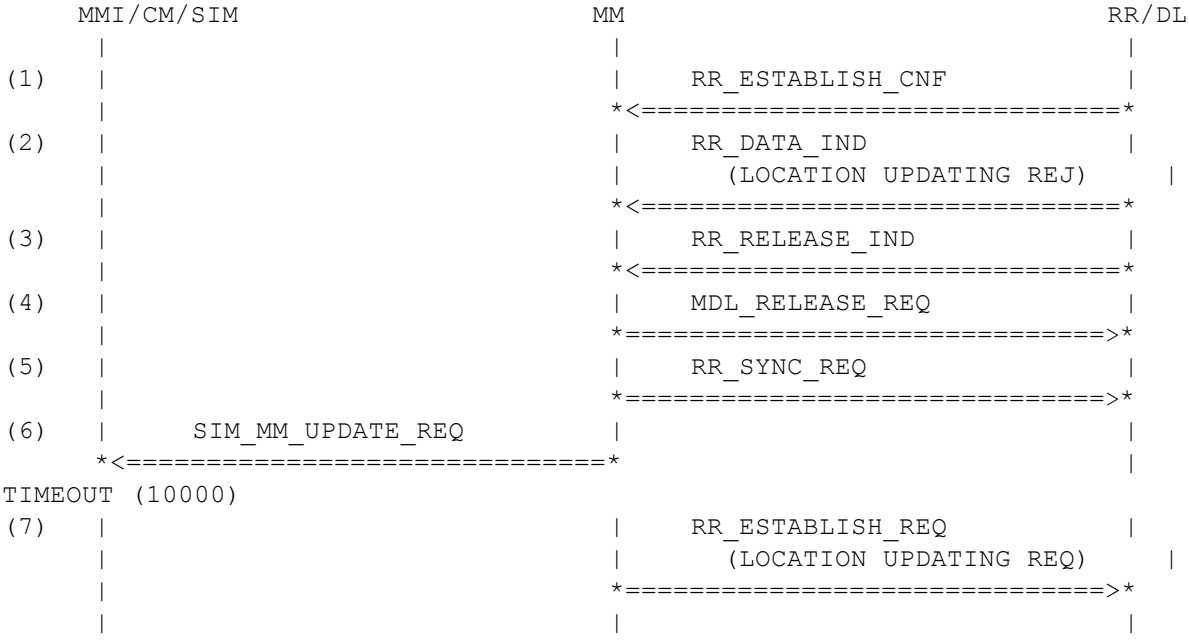
History:			
	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	21.06.01	HM	Revised
	10.02.03	LOL	added lac_list

3.20 MM Idle Mode Behaviour (Attempt to Update)

3.20.1 MMG0428: Attempt to Update, Timeout T3211, LUP Reject Cause #17

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is NOT UPDATED. The MS shall delete the location information and enter the MM IDLE substate ATTEMPTING TO UPDATE after the RR connection release. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again.

Preamble: MMG0427



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM

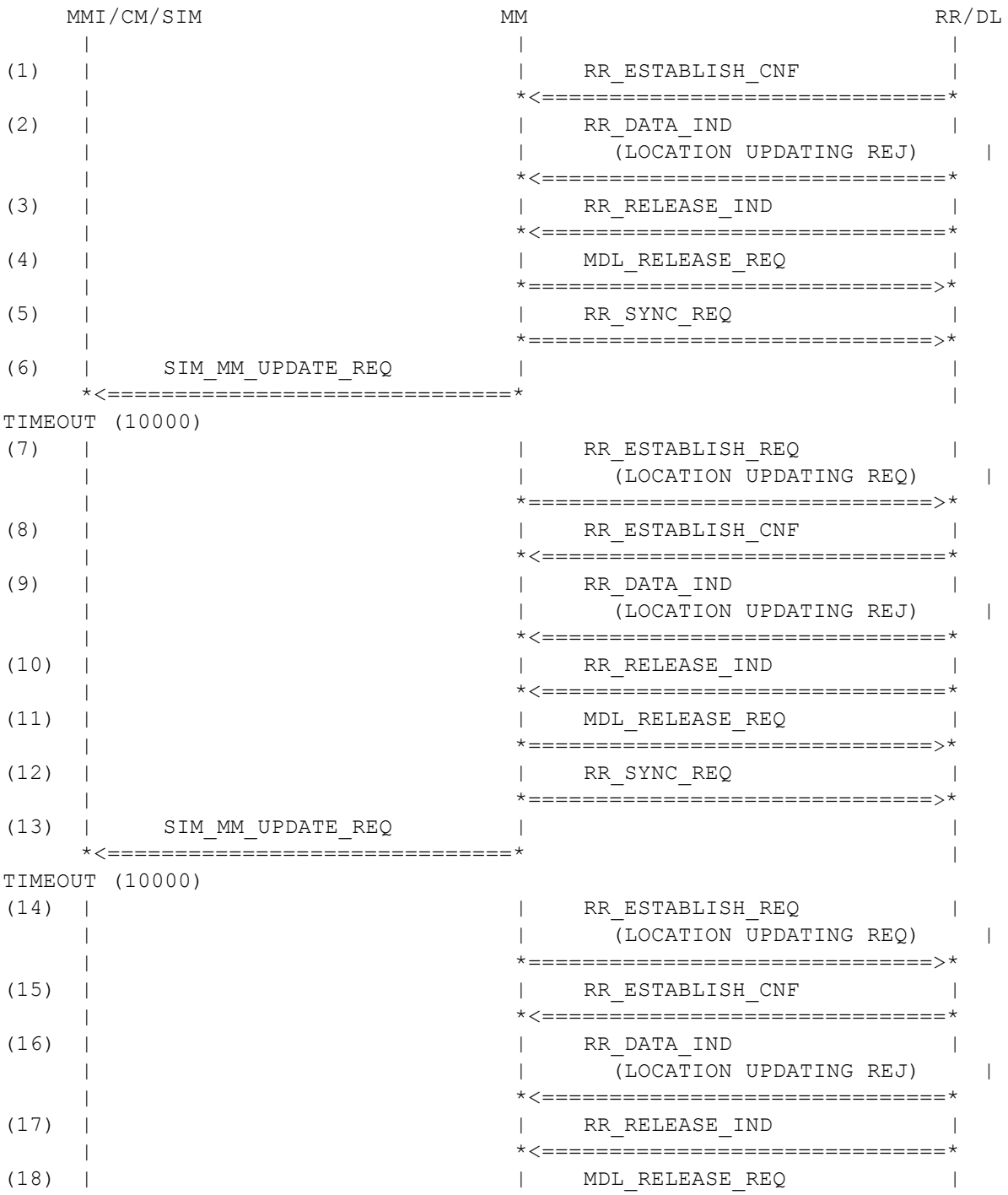
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

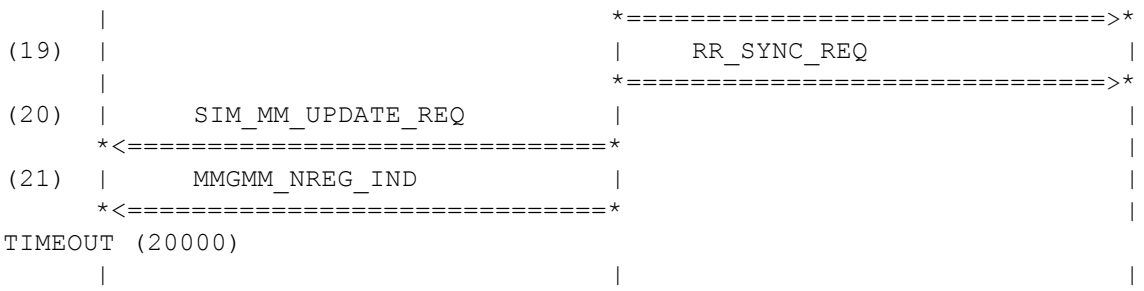
History:	04.05.99	LE	Initial

3.20.2 MMG0429: Attempt to update, Timeout T3211, LUP Reject Cause, 2.-4. attempt

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is NOT UPDATED. The MS is in MM IDLE substate ATTEMPTING TO UPDATE after the RR connection release. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered and no new location updating is triggered.

Preamble: MMG0428





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

(14)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(15)	RR_ESTABLISH_CNF		
		param	NOT_USED
(16)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(17)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(18)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(19)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(20)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

(21) MMGMM_NREG_IND

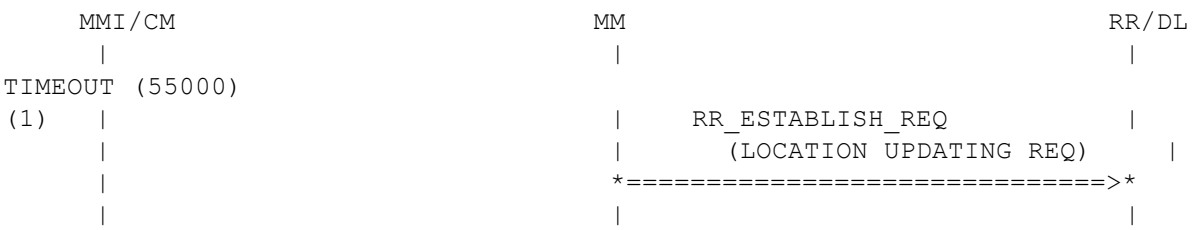
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_NETWORK_FAILURE

History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)

3.20.3 MMG0430: Not Updated, Periodic LUP

Description: MM has processed four unsuccessful location updatings and stays in the MM idle sub-state ATTEMPTING TO UPDATE. After timeout of the periodic location updating timer a new set of normal location updatings is started.

Preamble: MMG0429



Parametrization

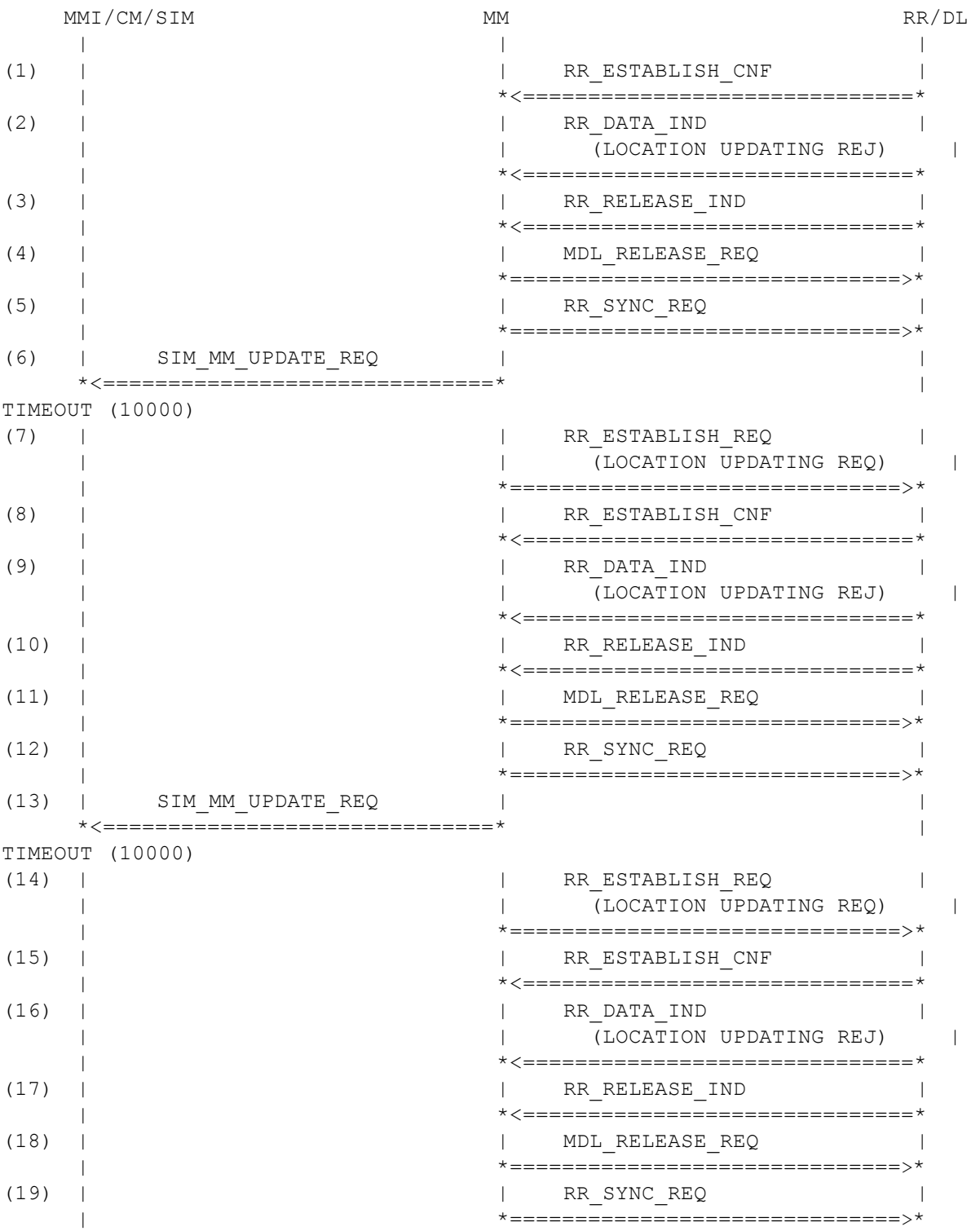
Primitive		Parameter	Value
(1)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

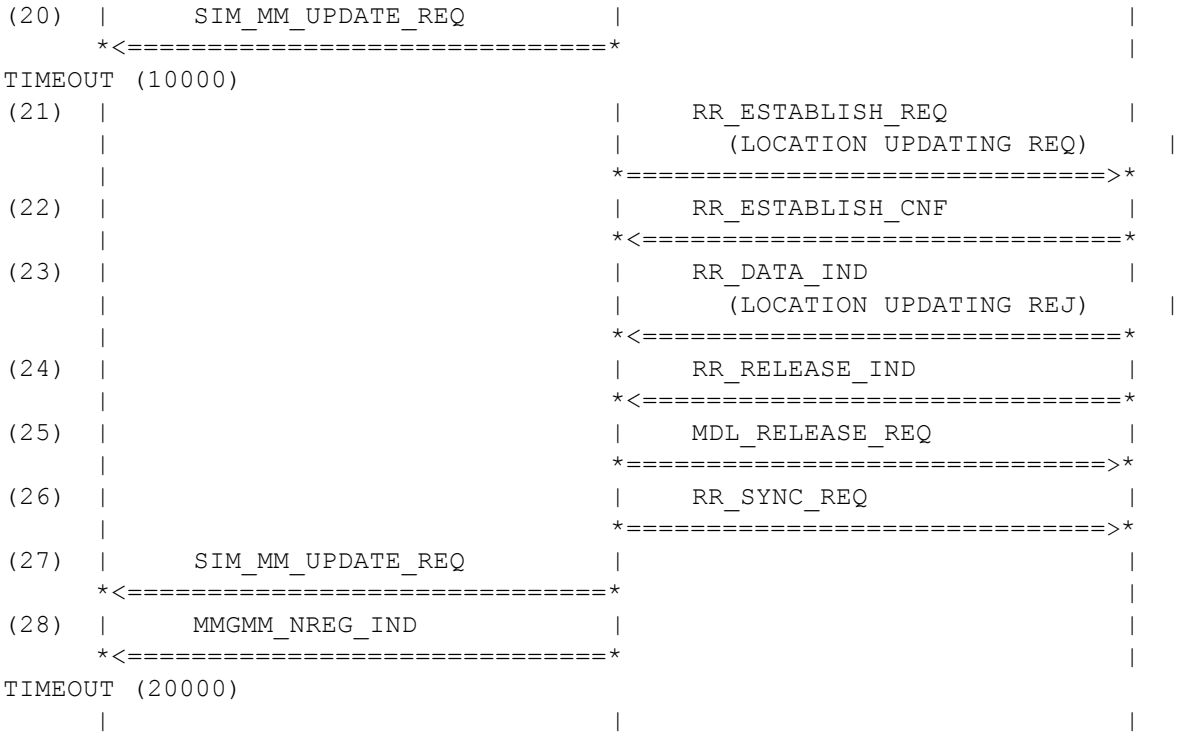
History: 04.05.99 LE Initial

3.20.4 MMG0431: Periodic not updated, Timeout T3211, LUP Reject Cause #17

Description: The MS is not updated. After timeout of T3212 a new attempt is made. The MS remains in ATTEMPTING TO UPDATE state. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again

Preamble: MMG0430





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED

		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED

		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(14)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(15)	RR_ESTABLISH_CNF		
		param	NOT_USED
(16)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(17)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(18)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(19)	RR_SYNC_REQ		
		op	NOT_USED

		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(20)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(21)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(22)	RR_ESTABLISH_CNF		
		param	NOT_USED
(23)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(24)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(25)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

(26) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(27) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(28) MMGMM_NREG_IND

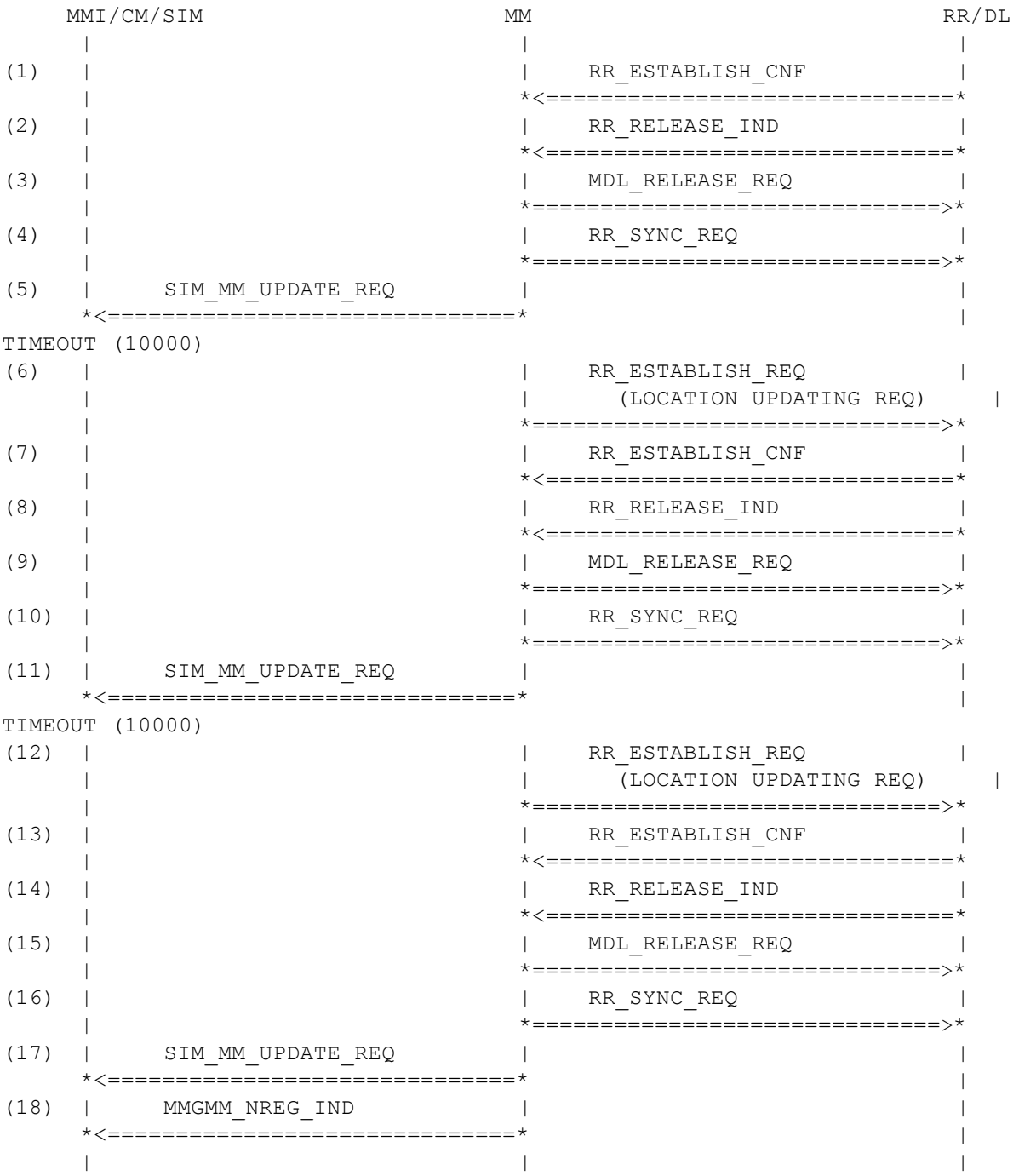
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_NETWORK_FAILURE

History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)

3.20.5 MMG0432: Attempt to Udpate, Normal, T3211, RR Release before end of proc

Description: The RR connection is established and released before receiving an answer by the network. The MS shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again.

Preamble: MMG0428



Parametrization

Primitive	Parameter	Value

(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(5)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

(10) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(11) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(12) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(13) RR_ESTABLISH_CNF

param	NOT_USED

(14) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(15) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(16) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

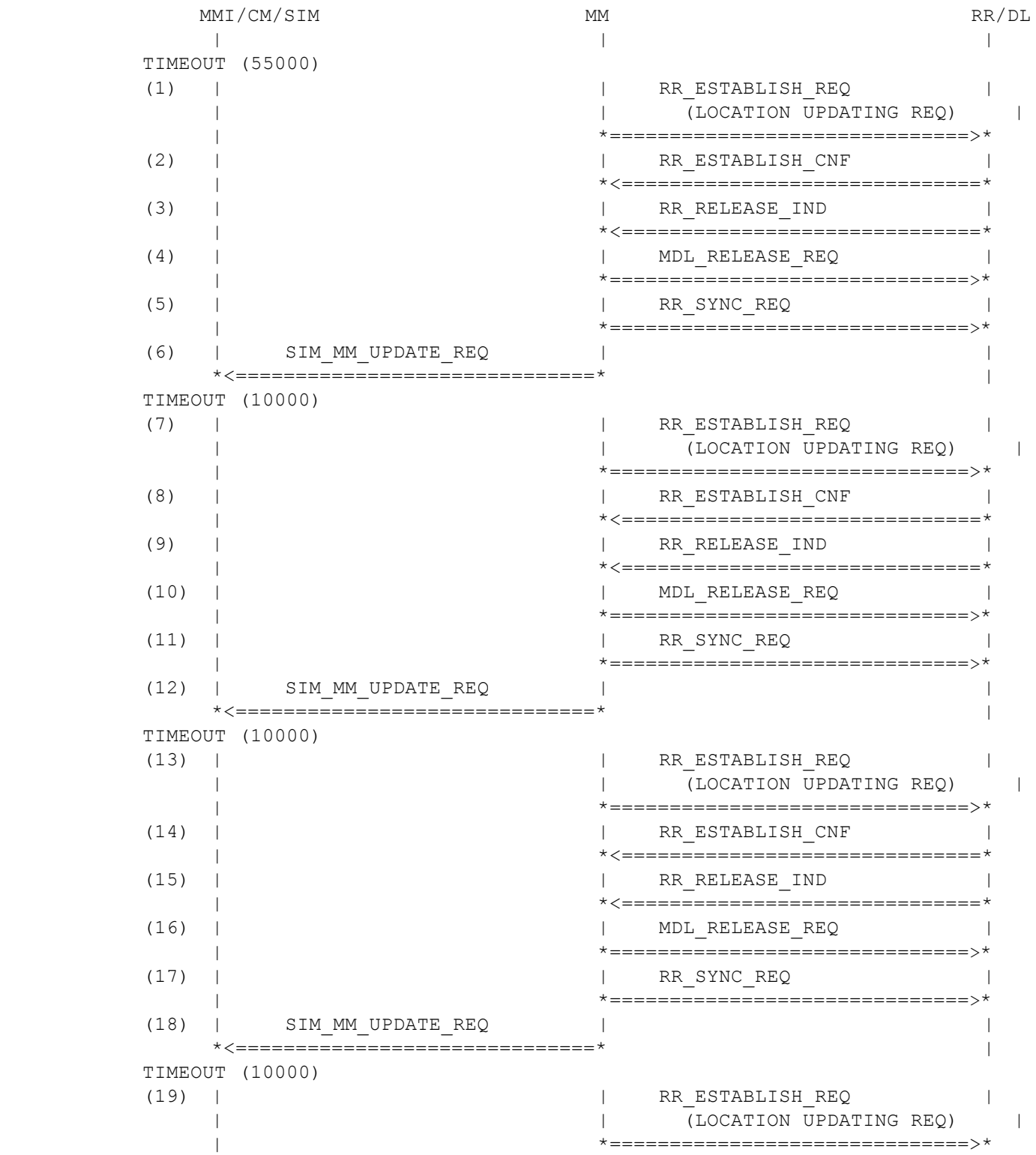
(17)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(18)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

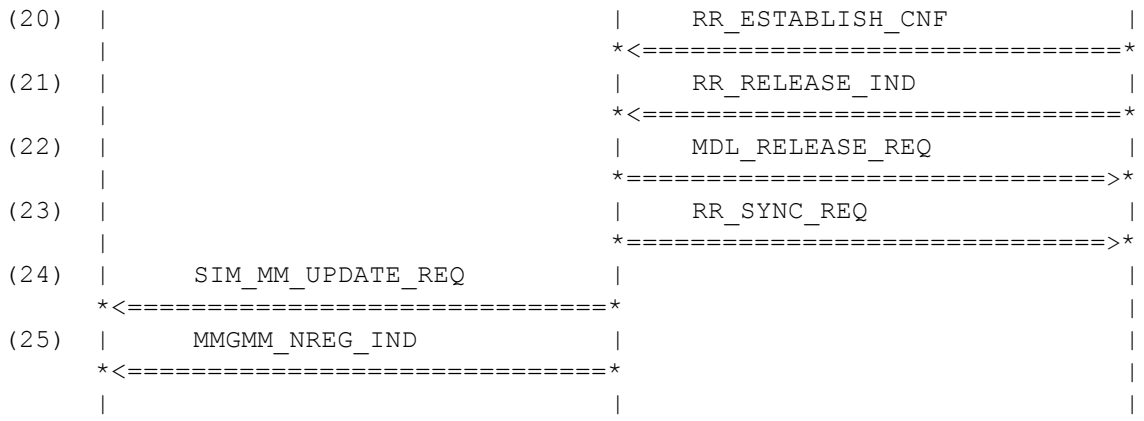
History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)

3.20.6 MMG0433: Periodic, Attempt to Update, T3211, RR Release before end of proc

Description: After timeout of the periodic location updating timer a new set of four attempts for normal location updating is started.

Preamble: MMG0432





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(2)	RR_ESTABLISH_CNF		
		param	NOT_USED
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED

(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(12)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(13)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	

		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(14)	RR_ESTABLISH_CNF		
		param	NOT_USED
(15)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(16)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(17)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(18)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(19)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

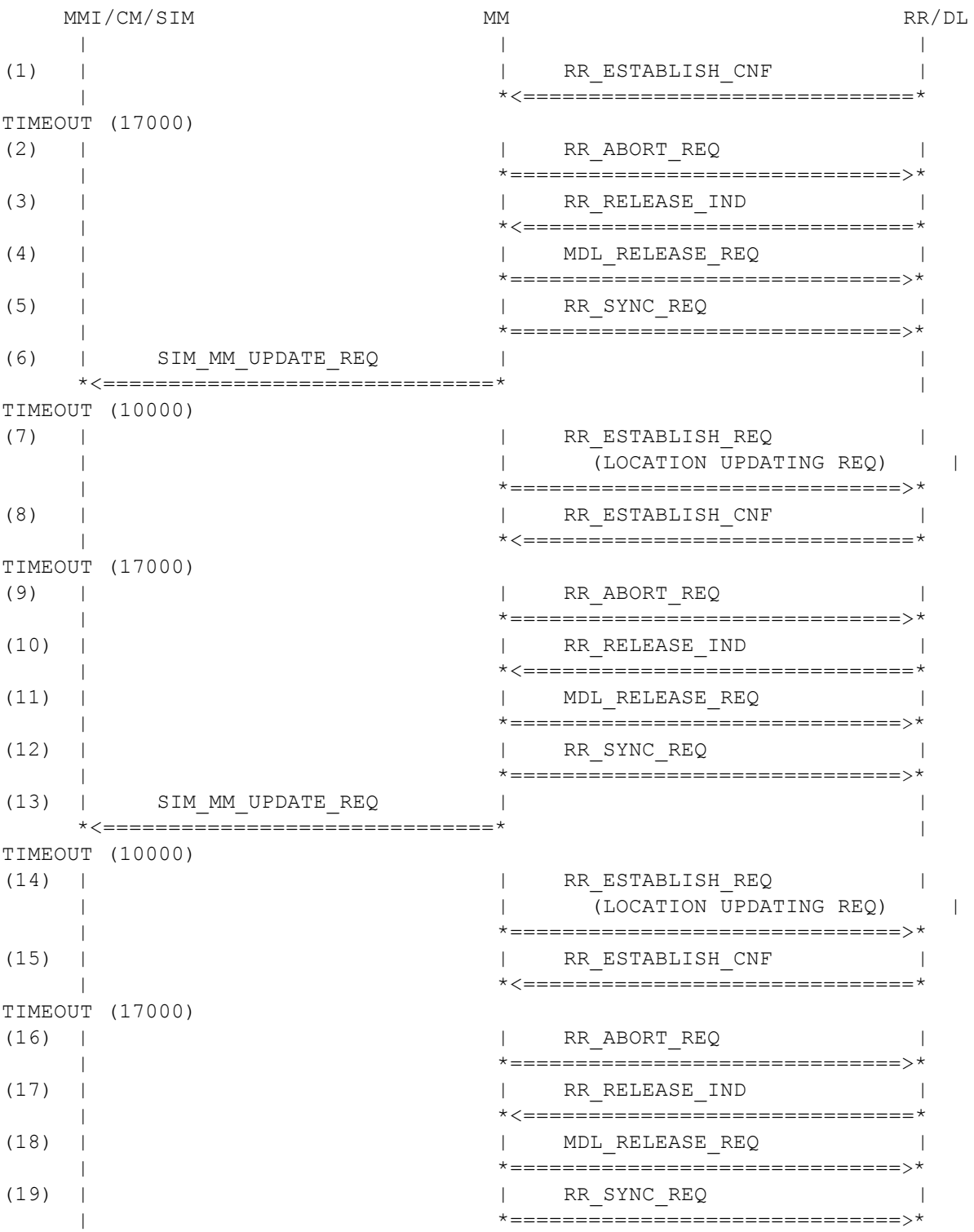
(20)	RR_ESTABLISH_CNF		
		param	NOT_USED
(21)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(22)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(23)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(24)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(25)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

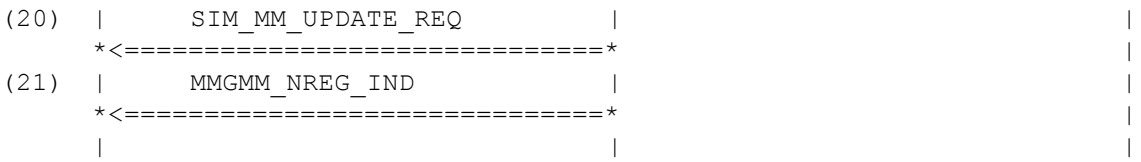
History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)

3.20.7 MMG0434: Attempt to Udpate, Normal, T3211, Timeout T3210

Description: The RR connection is established and no answer receives from the network. After timeout of T3210 the RR connection is aborted. The MS shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again.

Preamble: MMG0428





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(10)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(14)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(15)	RR_ESTABLISH_CNF		
		param	NOT_USED
(16)	RR_ABORT_REQ		
		abcs	ABCS_NORM

(17) RR_RELEASE_IND

cause	RRCS_ABNORM_UNSPEC
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(18) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(19) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(20) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(21) MMGMM_NREG_IND

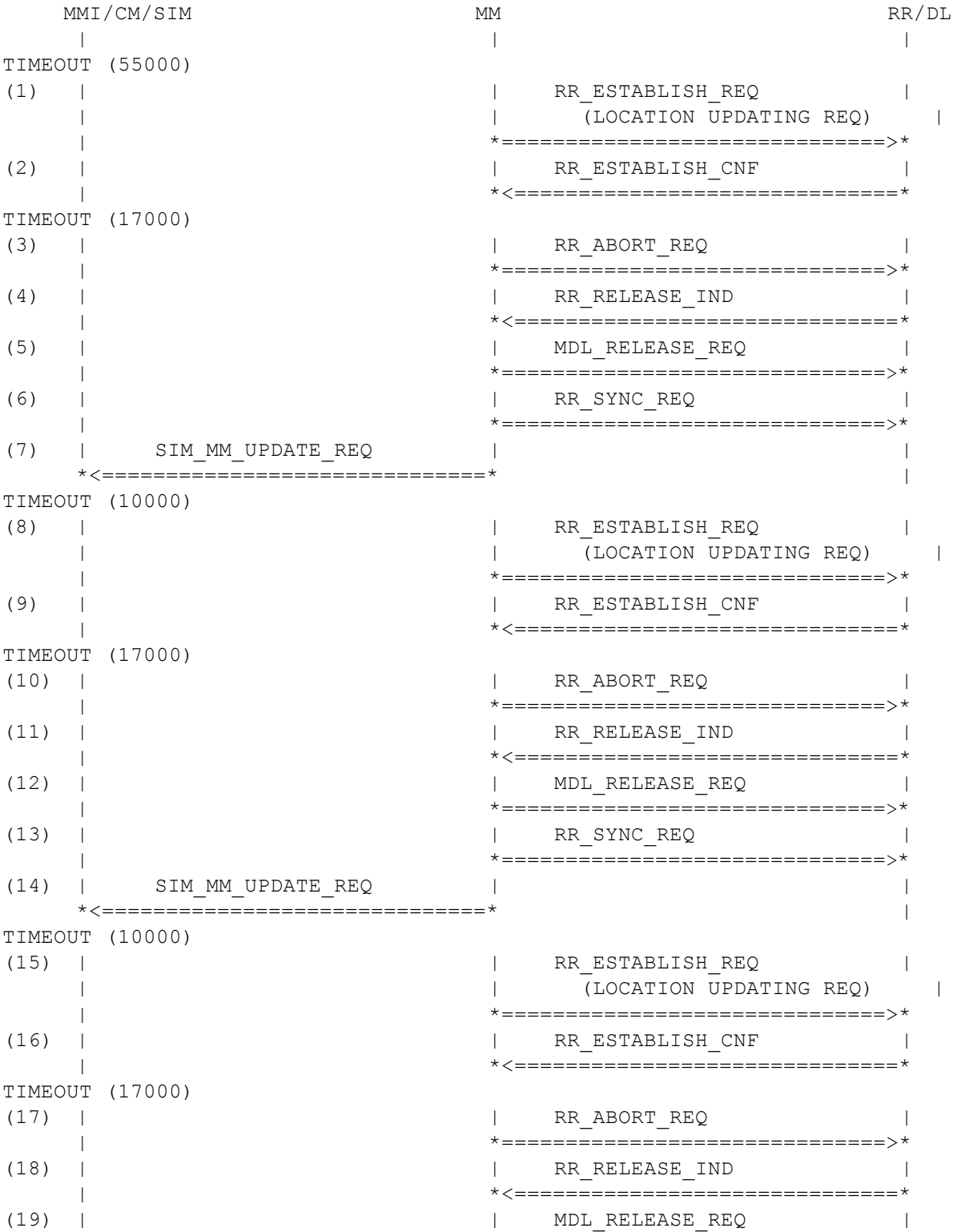
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

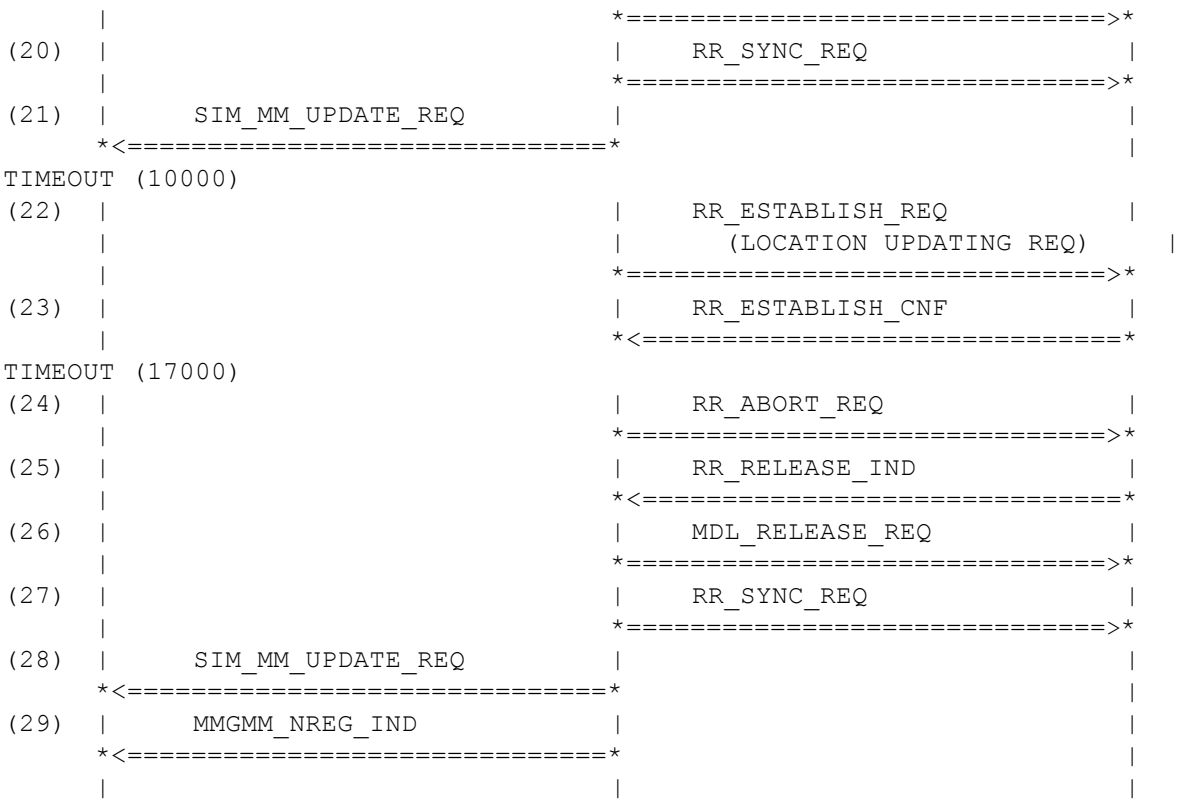
History:			
	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	19.03.01	HM	Increased timeout T3211
	27.04.01	HM	Change of abort behaviour

3.20.8 MMG0435: Periodic, Attempt to Update, T3211, Timeout T3210

Description: After timeout of the periodic location updating timer a new set of four attempts for normal location updating is started.

Preamble: MMG0434





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(2)	RR_ESTABLISH_CNF		
		param	NOT_USED
(3)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(4)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(5) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(6) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(7) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(8) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(9) RR_ESTABLISH_CNF

param	NOT_USED

(10) RR_ABORT_REQ

abcs	ABCS_NORM

(11) RR_RELEASE_IND

cause	RRCS_ABNORM_UNSPEC
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(12) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(13) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED

	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(14) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(15) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(16) RR_ESTABLISH_CNF		
	param	NOT_USED
(17) RR_ABORT_REQ		
	abcs	ABCS_NORM
(18) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(19) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(20) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(21) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED

	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(22) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(23) RR_ESTABLISH_CNF		
	param	NOT_USED
(24) RR_ABORT_REQ		
	abcs	ABCS_NORM
(25) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(26) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(27) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(28) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(29) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING

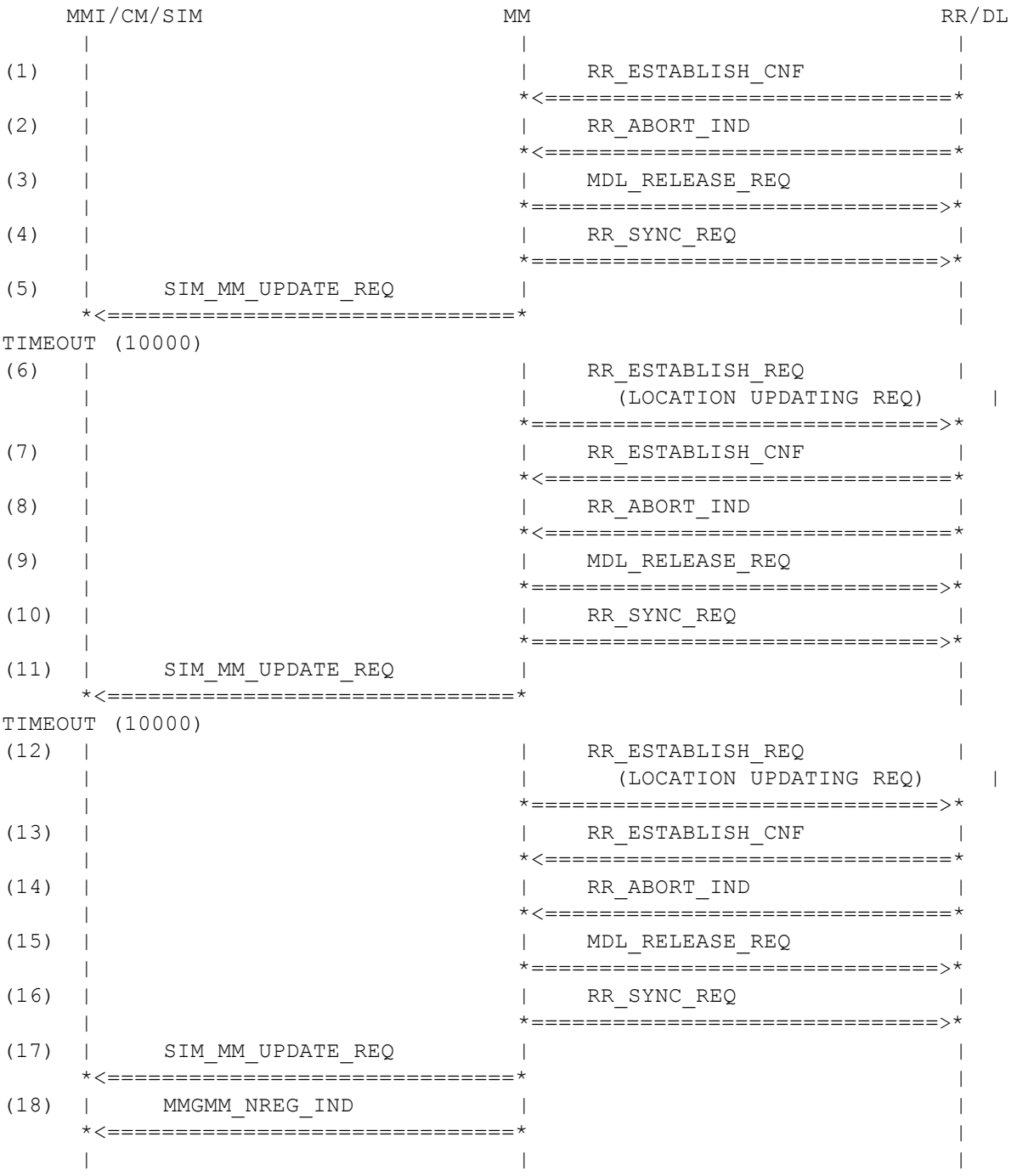
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	19.03.01	HM	Increased timeout T3211
	27.04.01	HM	Changed abort behaviour

3.20.9 MMG0436: Attempt to Update, Normal, T3211, RR connection failure

Description: The RR connection is established and a radio link failure is detected. The MS shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again.

Preamble: MMG0428



Parametrization

Primitive	Parameter	Value

(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(5)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED

	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(9) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(10) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(11) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(12) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(13) RR_ESTABLISH_CNF		
	param	NOT_USED
(14) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2

(15) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(16) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(17) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(18) MMGMM_NREG_IND

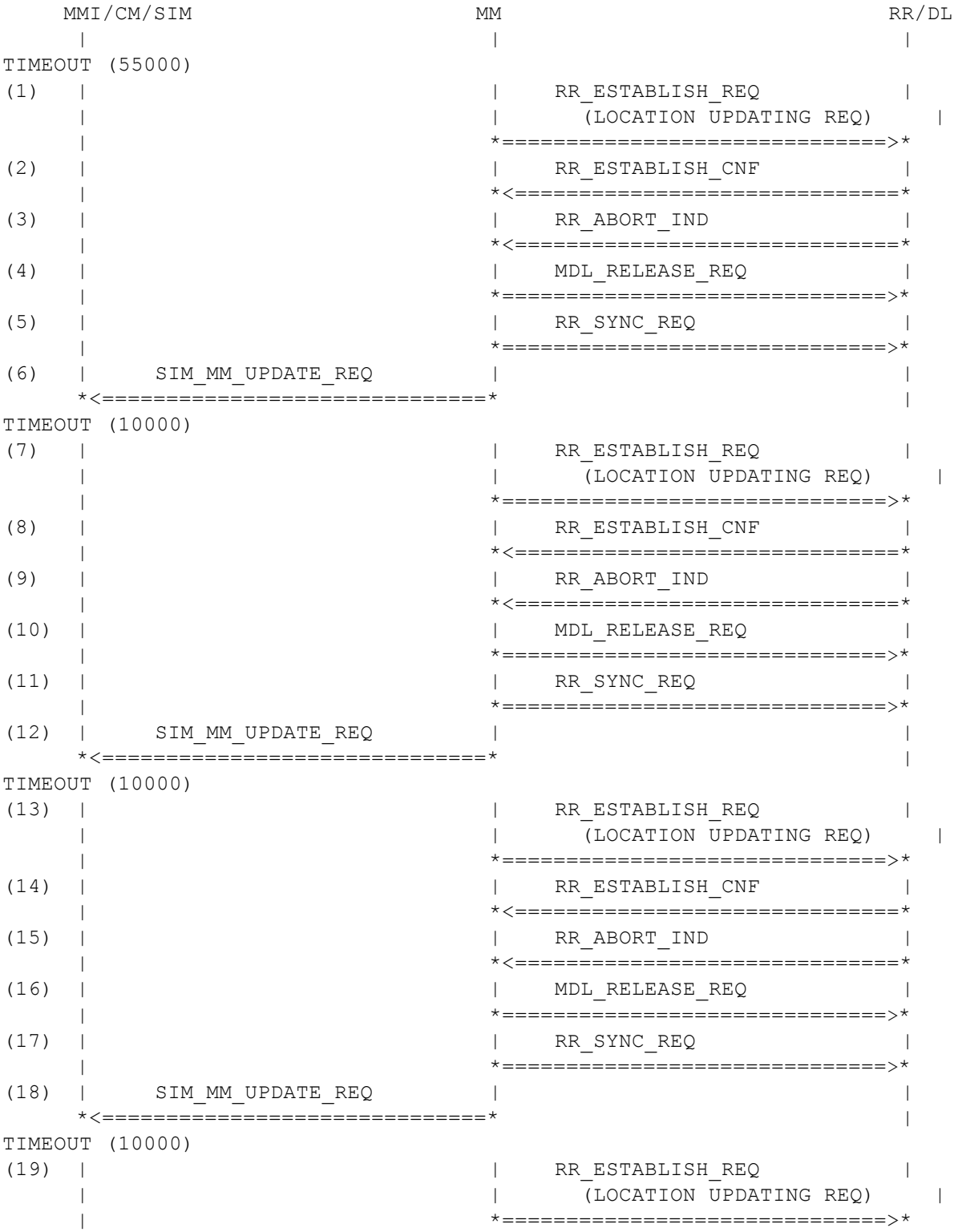
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

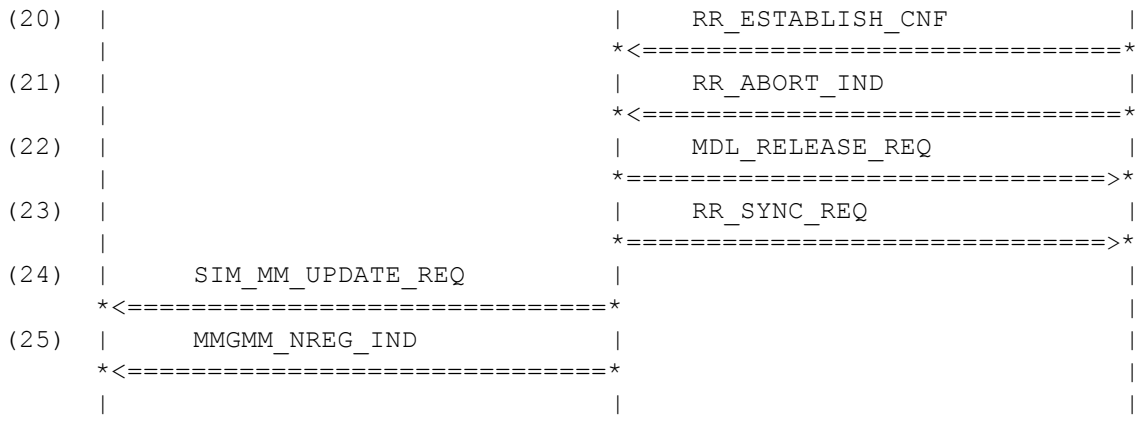
History:		
04.05.99	LE	Initial
02.03.00	HM	Revised (search_running)
10.02.03	LOL	added lac_list

3.20.10 MMG0437: Periodic, Attempt to Update, T3211, RR Connection Failure

Description: After timeout of the periodic location updating timer a new set of four attempts for normal location updating is started.

Preamble: MMG0436





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(2)	RR_ESTABLISH_CNF		
		param	NOT_USED
(3)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED

	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(6) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(7) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(8) RR_ESTABLISH_CNF		
	param	NOT_USED
(9) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(10) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(12) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED

	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(13) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(14) RR_ESTABLISH_CNF		
	param	NOT_USED
(15) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(16) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(17) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(18) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(19) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM

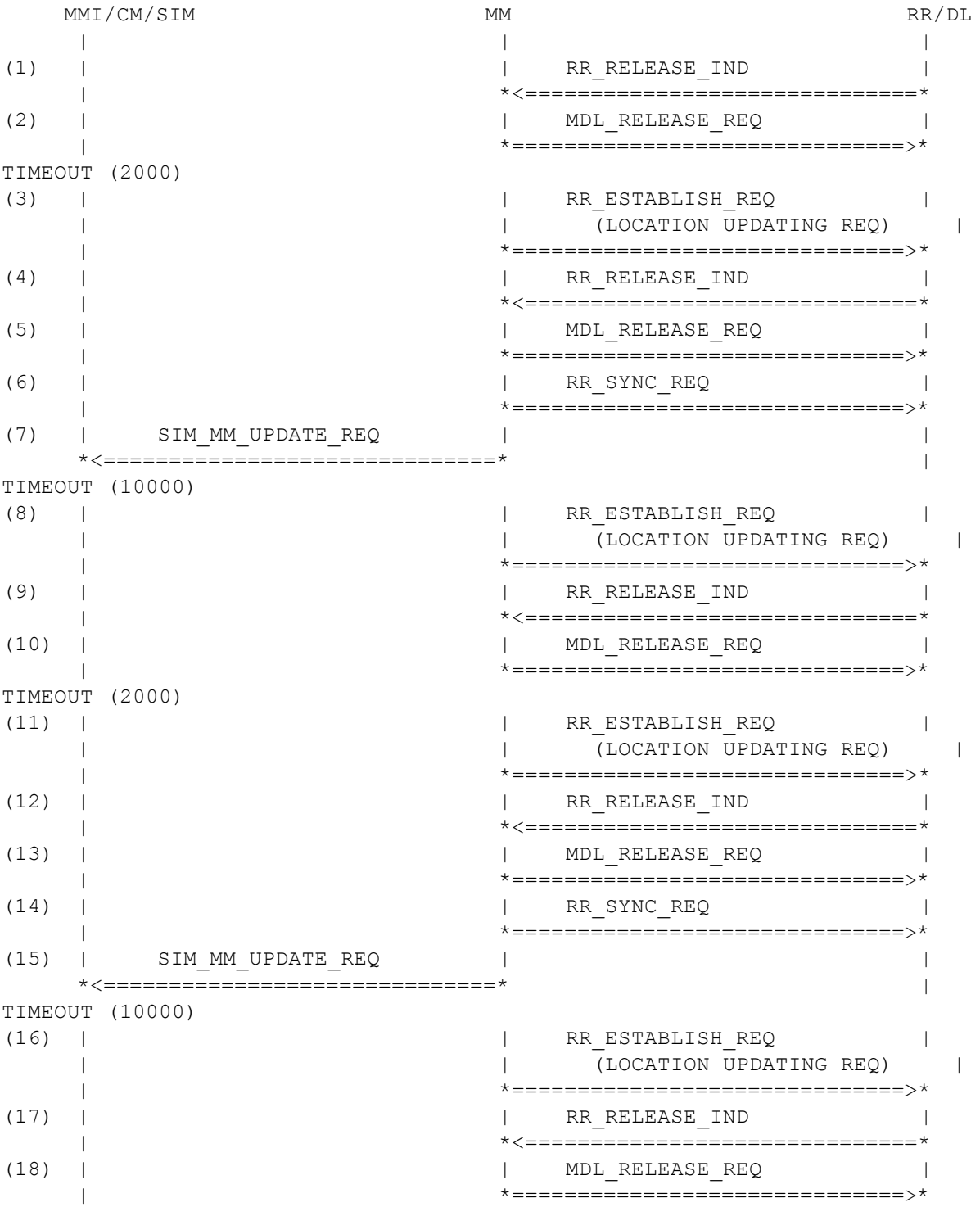
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(20) RR_ESTABLISH_CNF		
	param	NOT_USED
(21) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(22) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(23) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(24) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(25) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

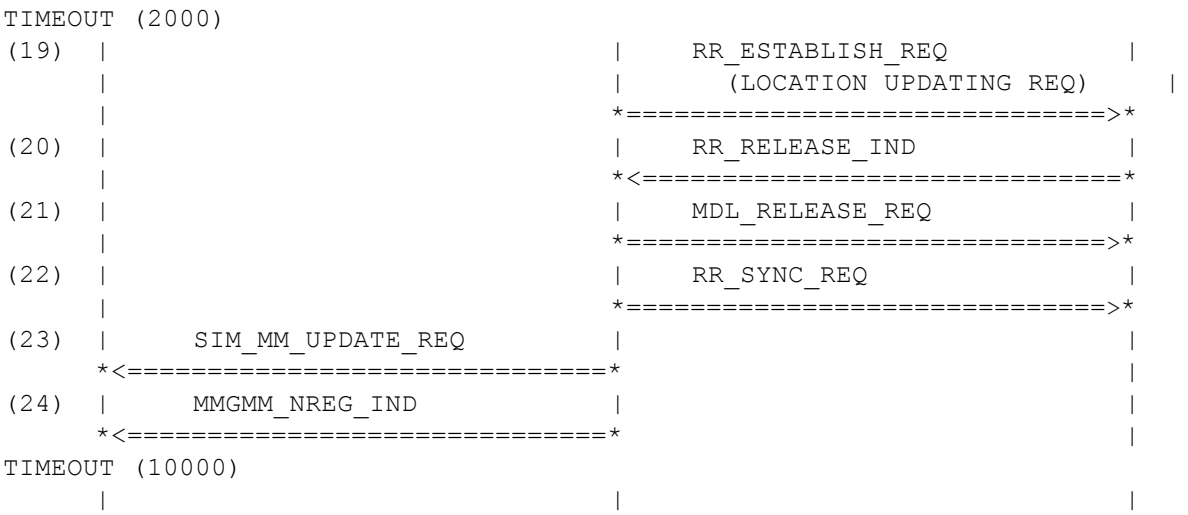
History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.20.11 MMG0438: Attempt to Update, Normal, T3211, RR connection failure

Description: The RR connection establishment fails due to random access failure. After timeout of T3213 a second attempt is started. This attempt fails due to the same failure. The MS shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again.

Preamble: MMG0428





Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_SYNC_REQ		
		op	NOT_USED

	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(7) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(8) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(9) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(11) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

(12) RR_RELEASE_IND

cause	RRCS_RND_ACC_FAIL
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(13) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(14) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(15) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(16) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(17) RR_RELEASE_IND

cause	RRCS_RND_ACC_FAIL
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(18) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(19) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM

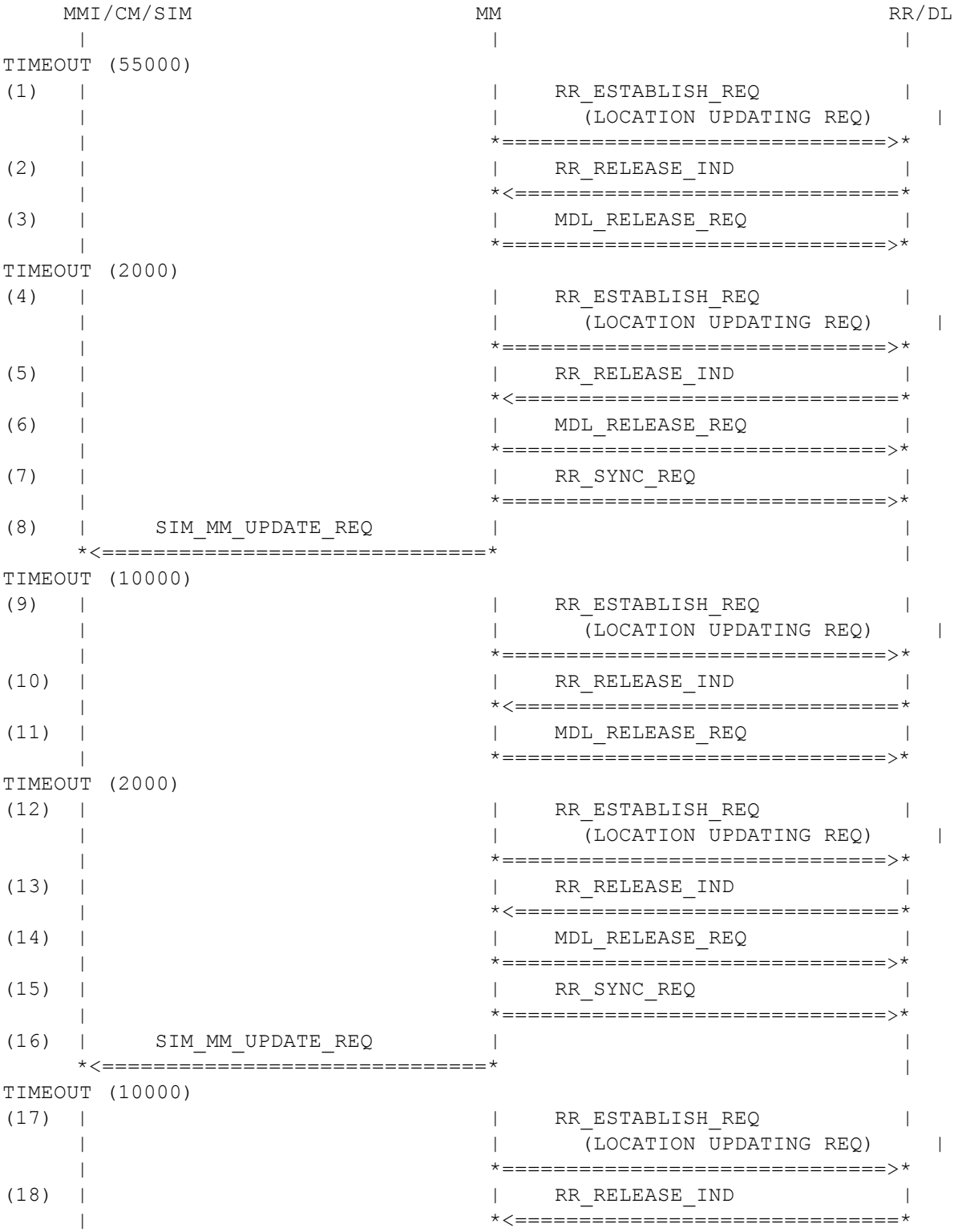
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(20) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(21) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(22) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(23) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(24) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

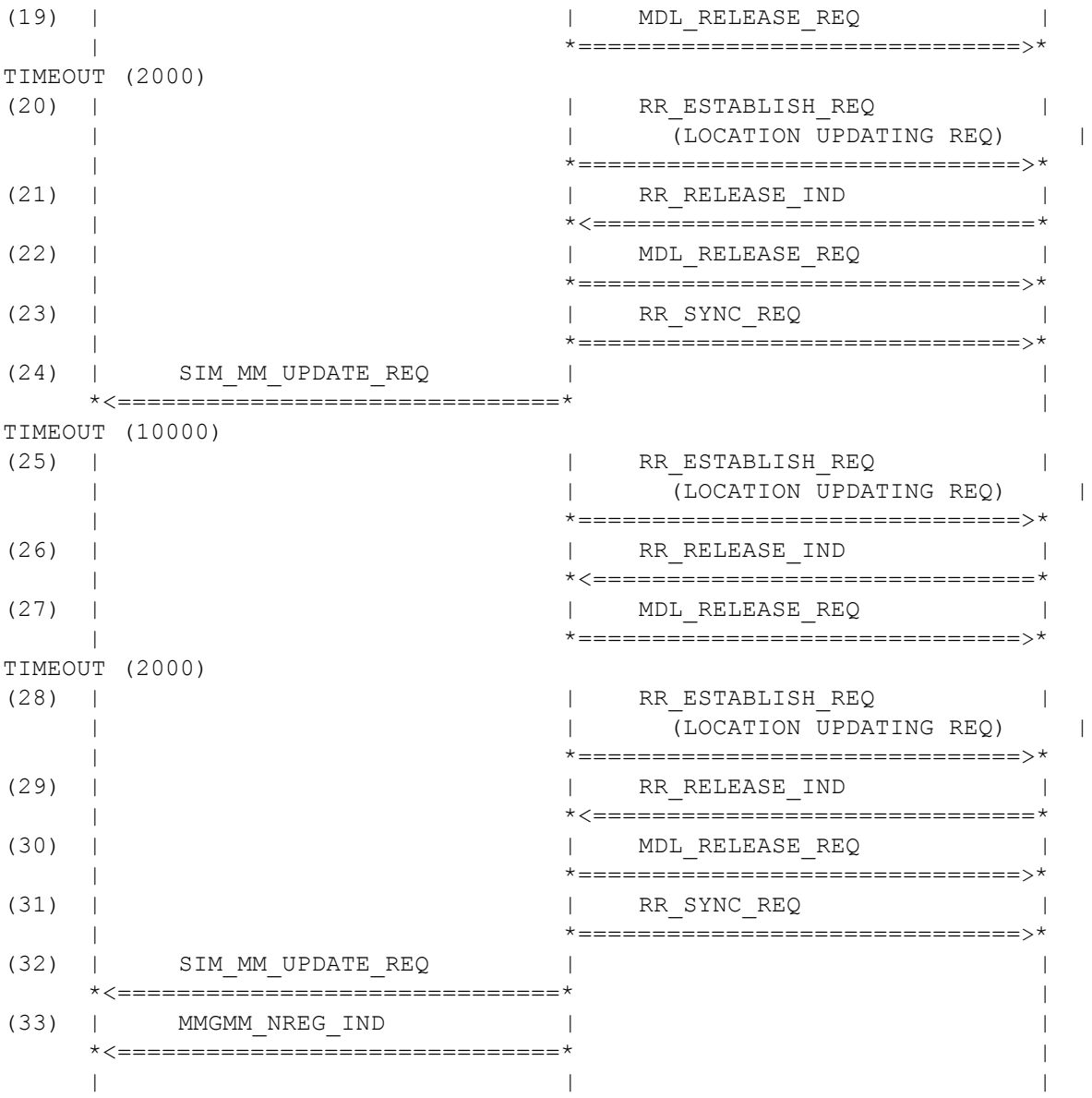
History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.20.12 MMG0439: Periodic, Attempt to Update, T3211, Random Access Failure

Description: After timeout of the periodic location updating timer a new set of four attempts for normal location updating is started.

Preamble: MMG0438





Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
(2)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	

	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(10) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(12) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(13) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(15) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED

(16) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(17) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(18) RR_RELEASE_IND

cause	RRCS_RND_ACC_FAIL
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(19) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(20) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(21) RR_RELEASE_IND

cause	RRCS_RND_ACC_FAIL
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(22) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(23) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(24) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(25) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(26) RR_RELEASE_IND

cause	RRCS_RND_ACC_FAIL
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(27) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(28) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1

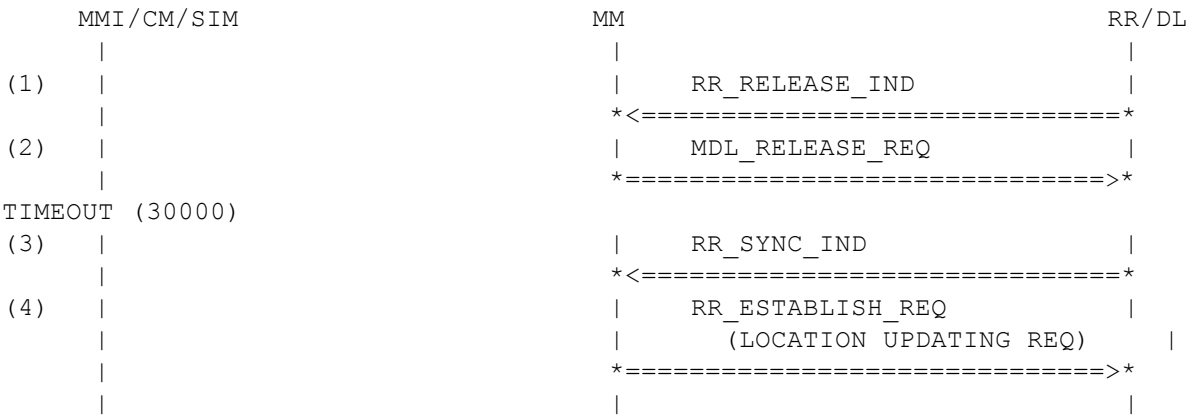
	mob_id	MOB_IDENT_IMSI
	}	
(29) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(30) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(31) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(32) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(33) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.20.13 MMG0440: Random access delayed

Description: MM receives a RR-RELEASE indication primitive from RR; Normal Location Updating cannot be carried out because of random access delay. MM issues a MDL-RELEASE request primitive. After T3122 timeout in RR a new attempt is started.

Preamble: MMG0427



Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_DELAY
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_SYNC_IND		
		ciph	CIPH_NOT_PRES
		mm_info	NOT_USED
		bcch_info	NOT_USED
		synccs	SYNCCS_T3122_TIM_OUT
		chm	CHM_NOT_PRESENT
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2
		mob_class_1	MOB_CLASS_1

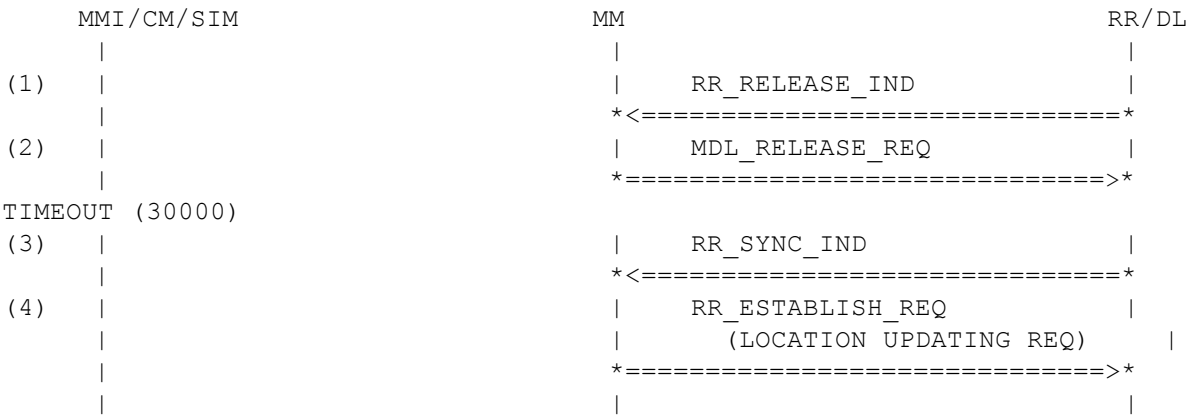
		mob_id	MOB_IDENT_IMSI
		}	

History:	09.07.97	HK	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.20.14 MMG0441: Random access barred

Description: MM receives a RR-RELEASE indication primitive from RR; Normal Location Updating cannot be carried out because of access barred. MM issues a MDL-RELEASE request primitive. After access control class changes in RR a new attempt is started.

Preamble: MMG0427



Parametrization

Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_SYNC_IND		
	ciph	CIPH_NOT_PRES
	mm_info	NOT_USED
	bcch_info	NOT_USED
	synccs	SYNCCS_ACC_CLS_CHA
	chm	CHM_NOT_PRESENT
(4) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_class_1	MOB_CLASS_1

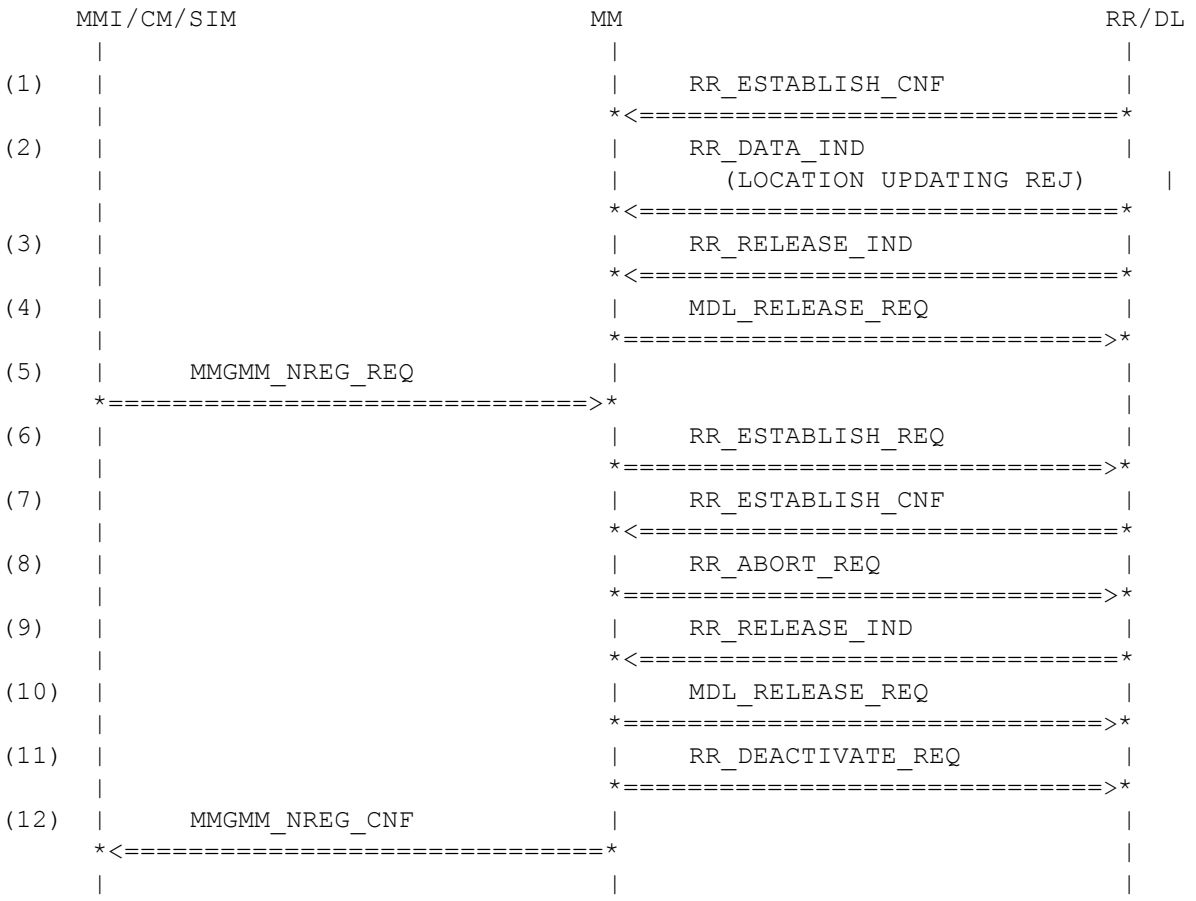
		mob_id	MOB_IDENT_IMSI
		}	

History:	09.07.97	HK	Initial
	27.10.00	HM	Revised (MDL_RELEASE_REQ)

3.20.15 MMG0442: Normal Service, IMSI Detach, Power OFF, Est Cnf

Description: MM is in IDLE Normal Service state. It is switched off. An IMSI Detach followed by the deactivation of the lower layer is started.
[=MMG0445]

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	

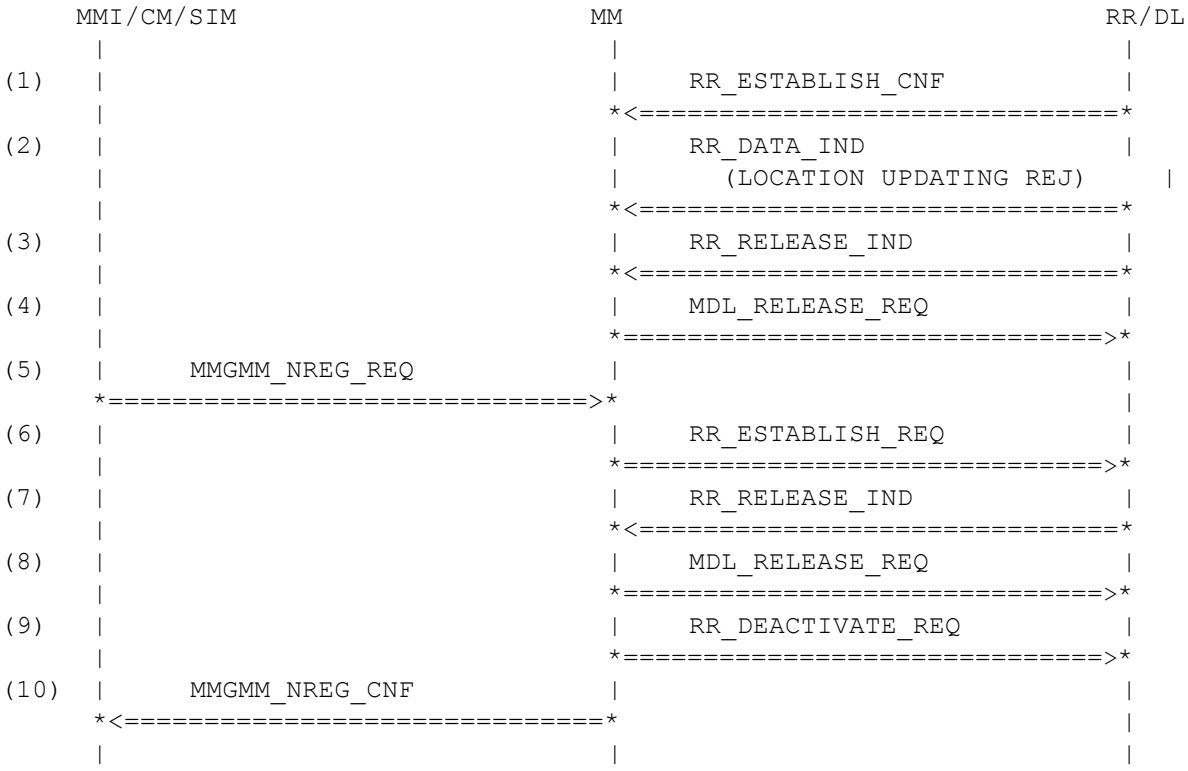
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(9)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(12)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised
	27.04.01	HM	Changed T3220 behaviour

3.20.16 MMG0443: Normal Service, IMSI Detach, Power OFF, Rel Ind

Description: MM is in IDLE Normal Service state. It is switched off. An IMSI Detach followed by the deactivation of the lower layer is started.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

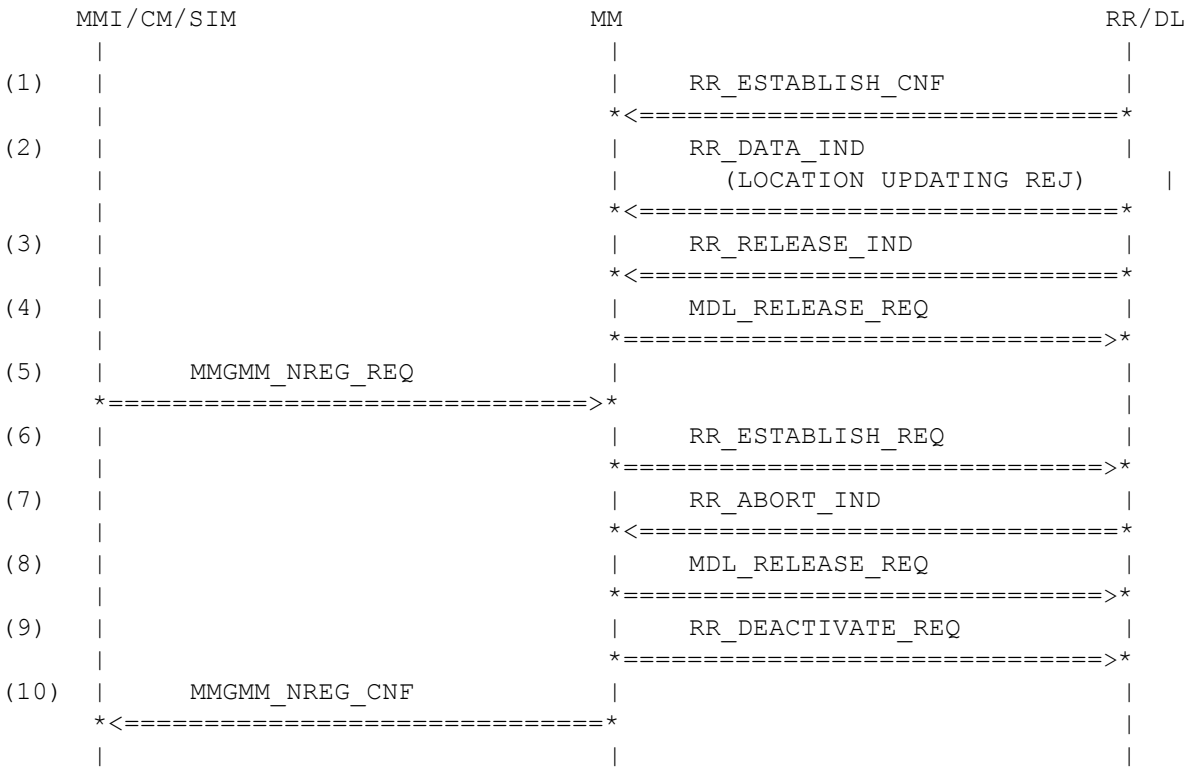
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(10)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised

3.20.17 MMG0444: Normal Service, IMSI Detach, Power OFF, Radio Link Failure

Description: MM is in IDLE Normal Service state. It is switched off. An IMSI Detach followed by the deactivation of the lower layer is started.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

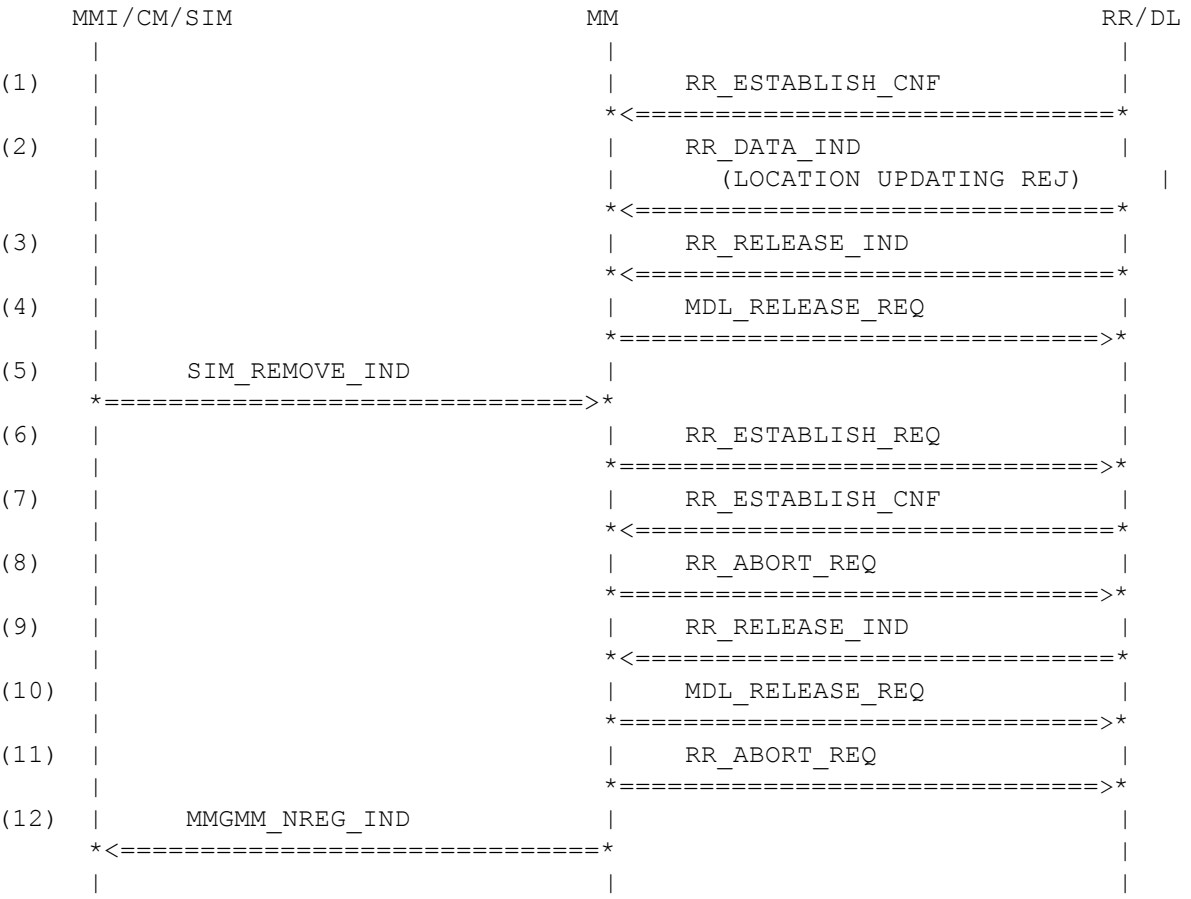
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(10)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised
	10.02.03	LOL	added lac_list

3.20.18 MMG0446: Normal Service, IMSI Detach, SIM Remove by SIM, Est Cnf

Description: MM is in IDLE Normal Service state. The SIM manager has detected a SIM Remove. An IMSI Detach is processed. After timeout T3220 in state IMSI DETACH INITIATED; the MS enters the IDLE NO IMSI state.
[=MMG0449]

Preamble: MMG0403



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	

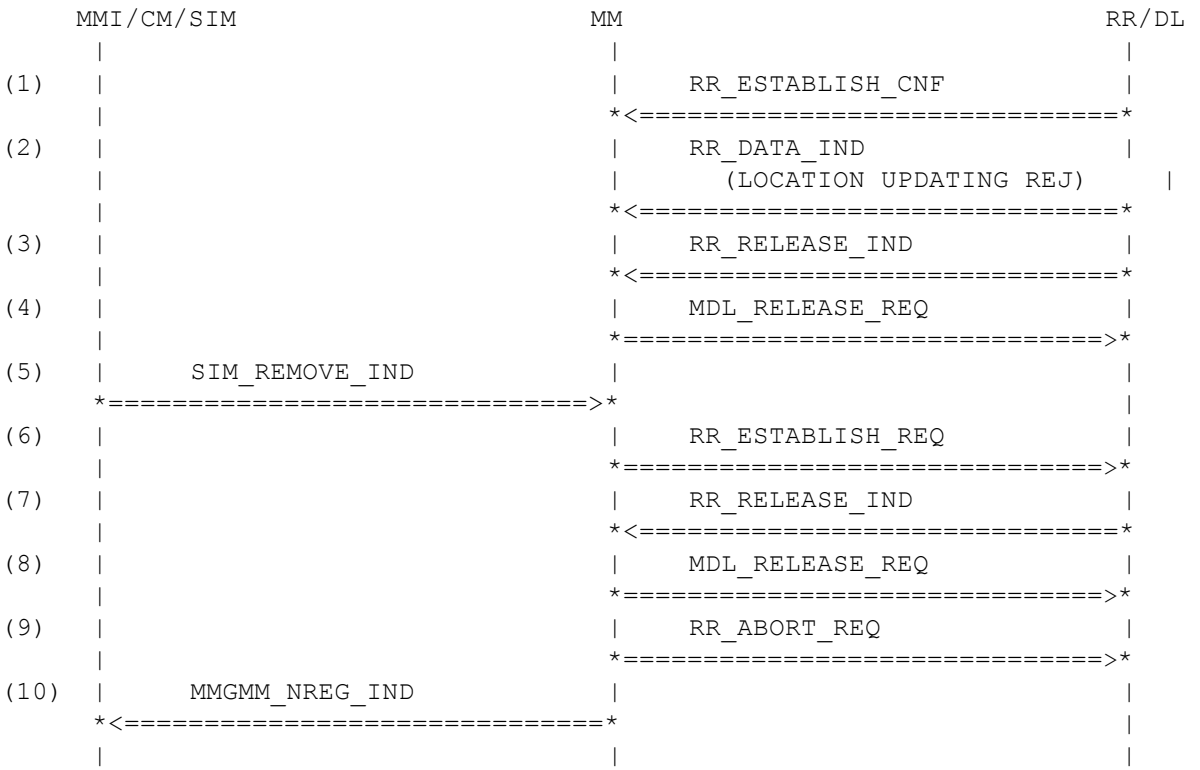
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(9)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(12)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised
	18.04.01	HM	Revised (service)
	27.04.01	HM	Changed behaviour of T3220

3.20.19 MMG0447: Normal Service, IMSI Detach, SIM Remove by SIM, Rel Ind

Description: MM is in IDLE Normal Service state. The SIM manager has detected a SIM Remove. An IMSI Detach is processed. The RR connection establishment fails and the MS enters the IDLE NO IMSI state.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

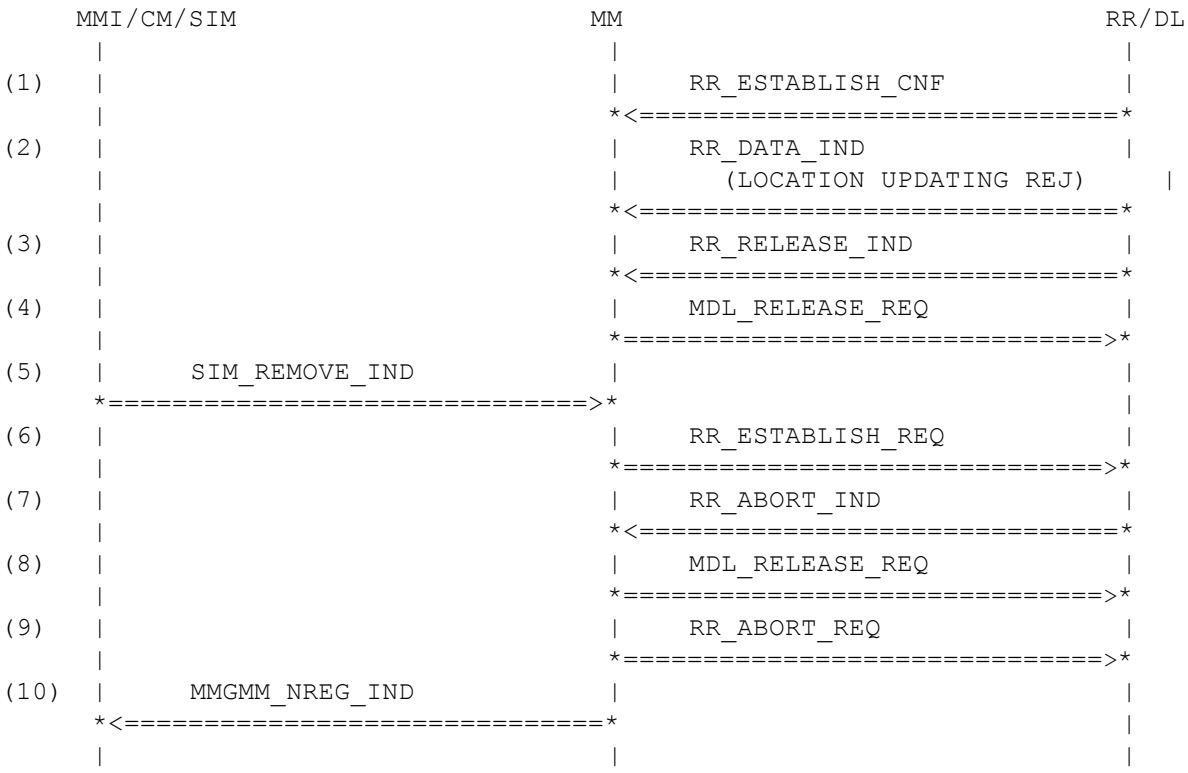
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(10)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised
	18.04.01	HM	Revised (service)

3.20.20 MMG0448: Normal Service, IMSI Detach, SIM Remove, Radio Link Failure

Description: MM is in IDLE Normal Service state. The SIM manager has detected a SIM Remove. An IMSI Detach is processed. After radio link failure, the MS enters the IDLE NO IMSI state.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

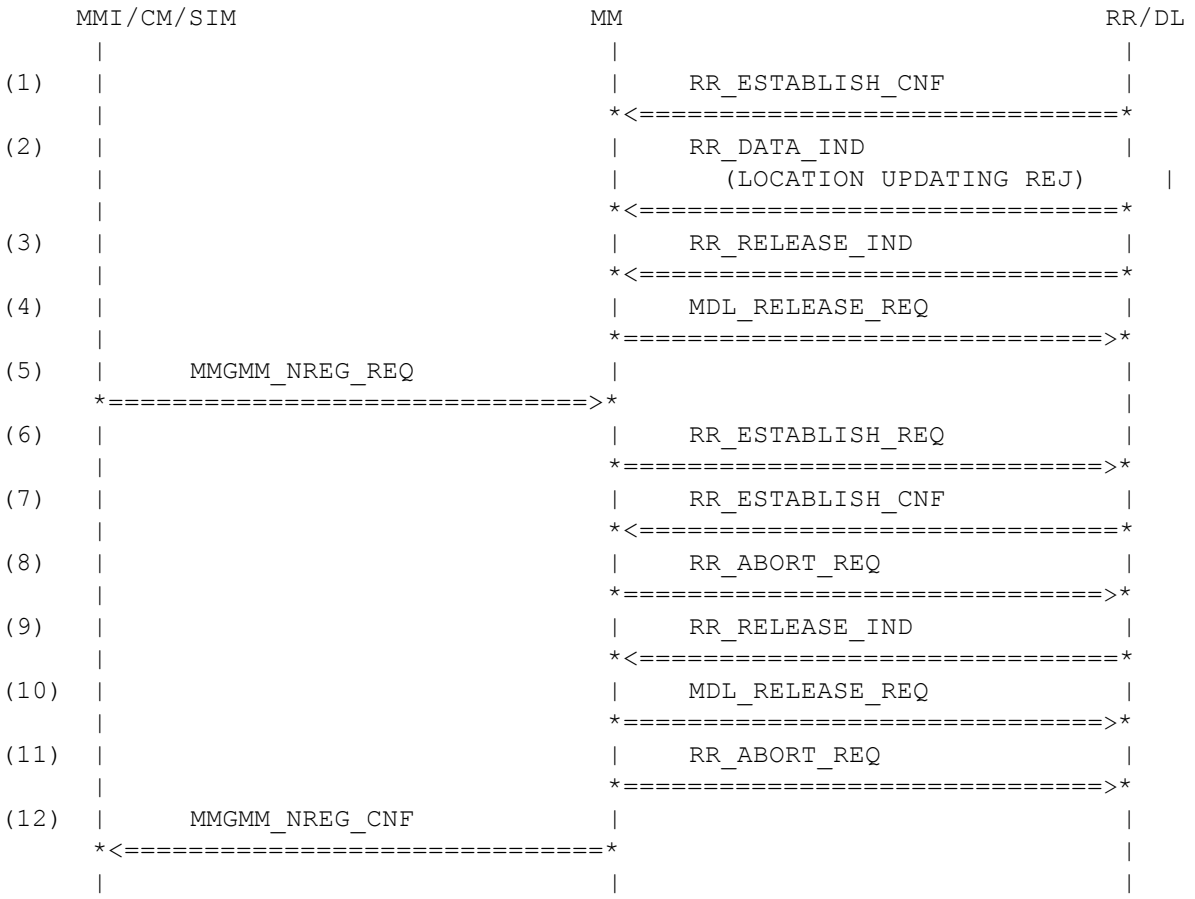
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(10)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised
	18.04.01	HM	Revised (service)
	10.02.03	LOL	added lac_list

3.20.21 MMG0450: Normal Service, IMSI Detach, SIM Remove by MMI, Est Cnf

Description: MM is in IDLE Normal Service state. The MMI requests limited service. An IMSI Detach is processed. After timeout T3220 in state IMSI DETACH INITIATED; the MS enters the IDLE NO IMSI state.
[=MMG0453]

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	

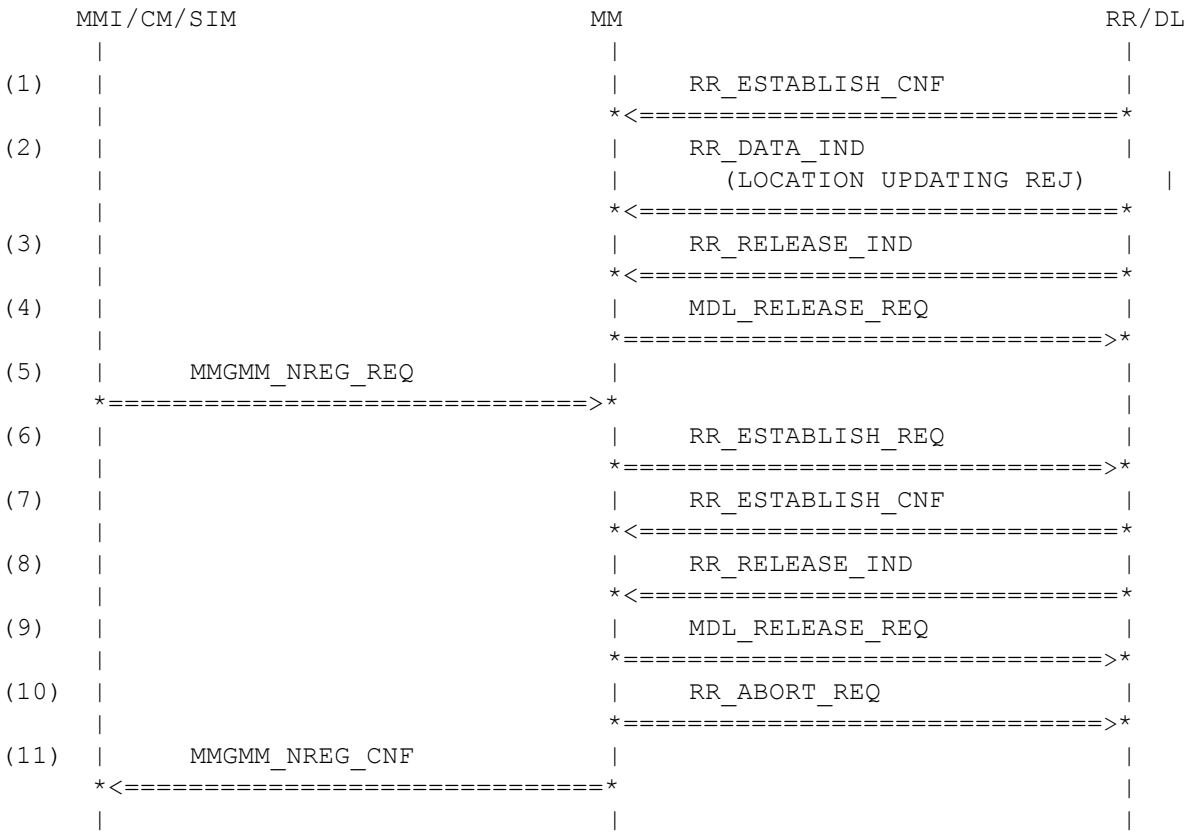
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(9)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(12)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised
	30.04.01	HM	Revised

3.20.22 MMG0451: Normal Service, IMSI Detach, SIM Remove by MMI, Rel Ind

Description: MM is in IDLE Normal Service state. MMI requests limited service. An IMSI Detach is processed. The RR connection establishment is released by the network and the MS enters the IDLE NO IMSI state.

Preamble: MMG0403



Parametrization

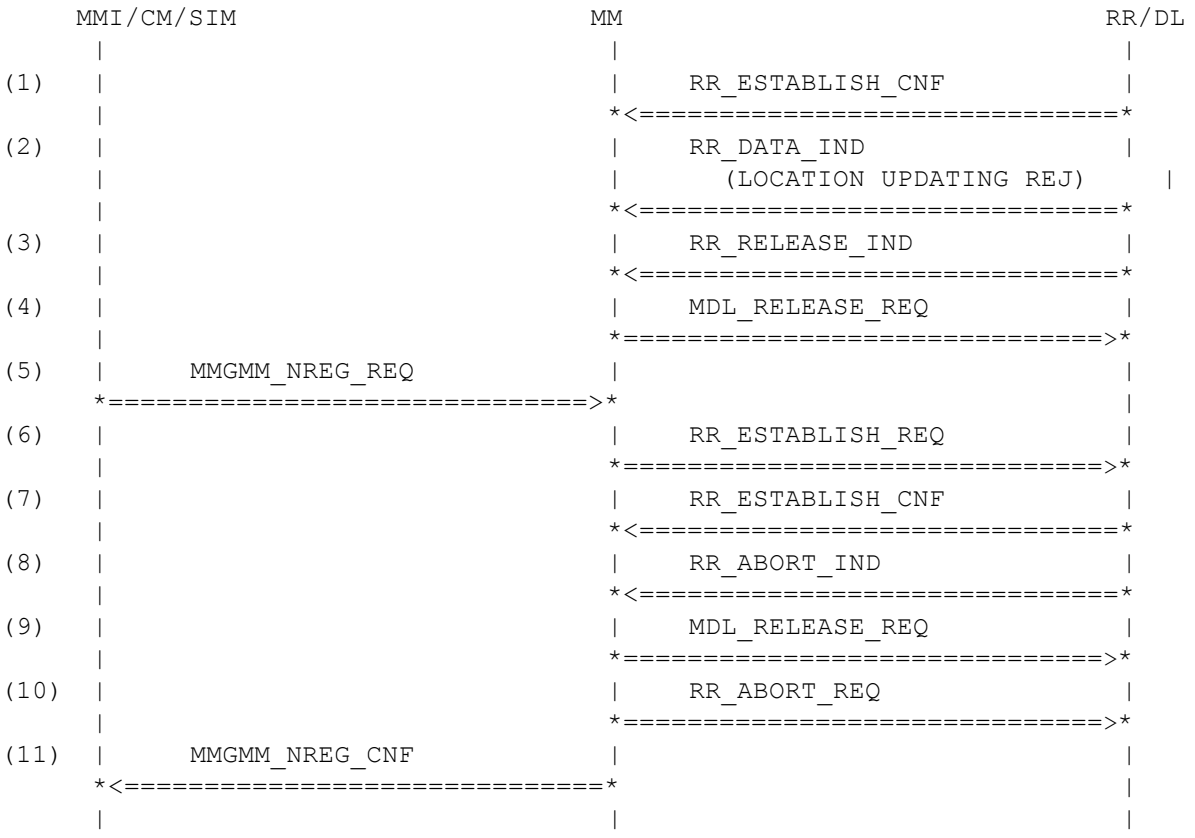
Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM

		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(11)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM
History:	05.05.99	LE	Initial
	27.10.00	HM	Revised

3.20.23 MMG0452: Normal Service, IMSI Detach, SIM Remove by MMI, Radio Link Fail

Description: MM is in IDLE Normal Service state. MMI has requested limited service. An IMSI Detach is processed. After radio link failure, the MS enters the IDLE NO IMSI state.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM

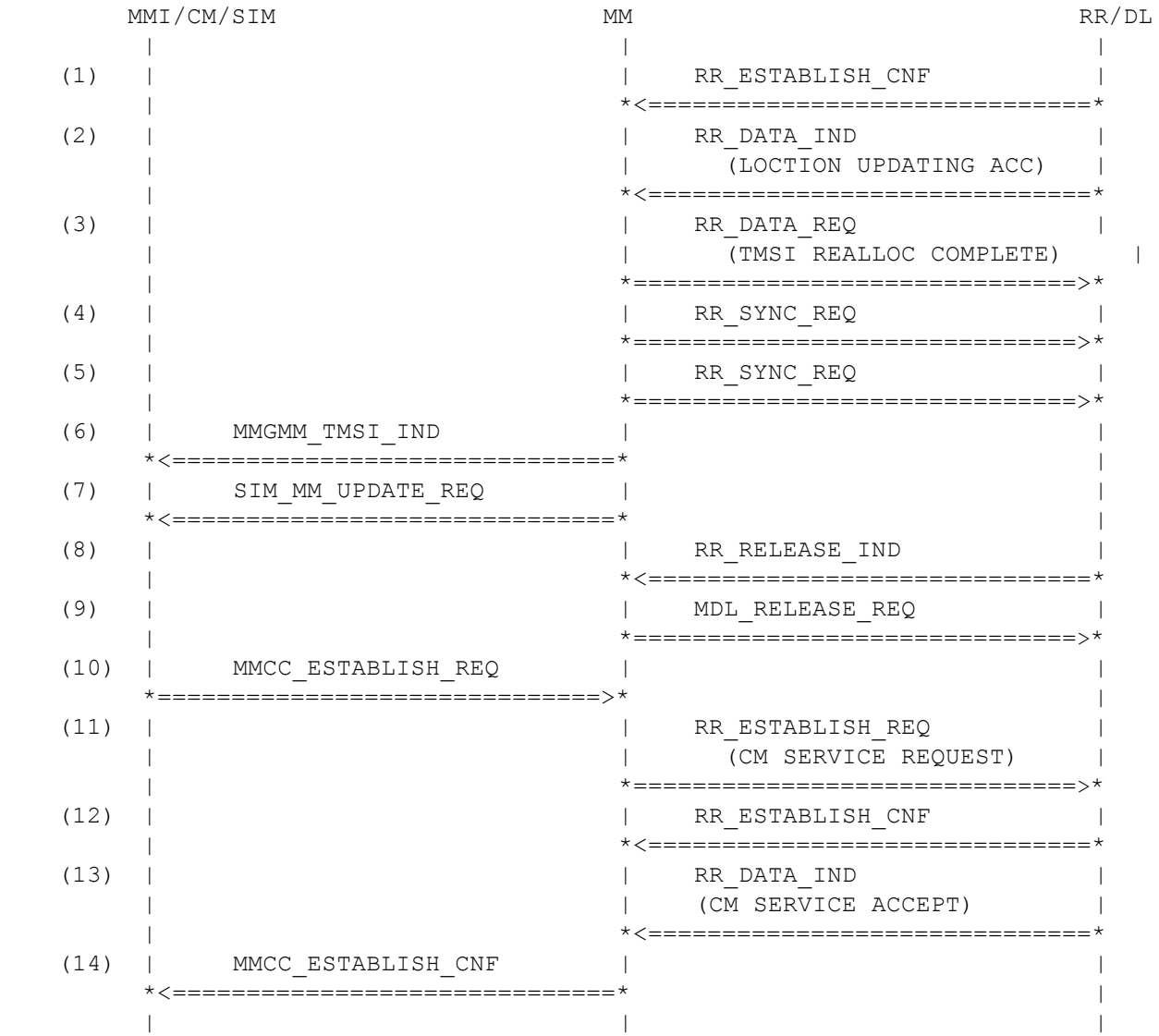
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(11)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised
	10.02.03	LOL	added lac_list

3.20.24 MMG0454: IMSI Attach and CM Connection Establishment

Description: MM is switched on, processes an IMSI attach and starts a connection establishment.

Preamble: MMG0403



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM

		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(6)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

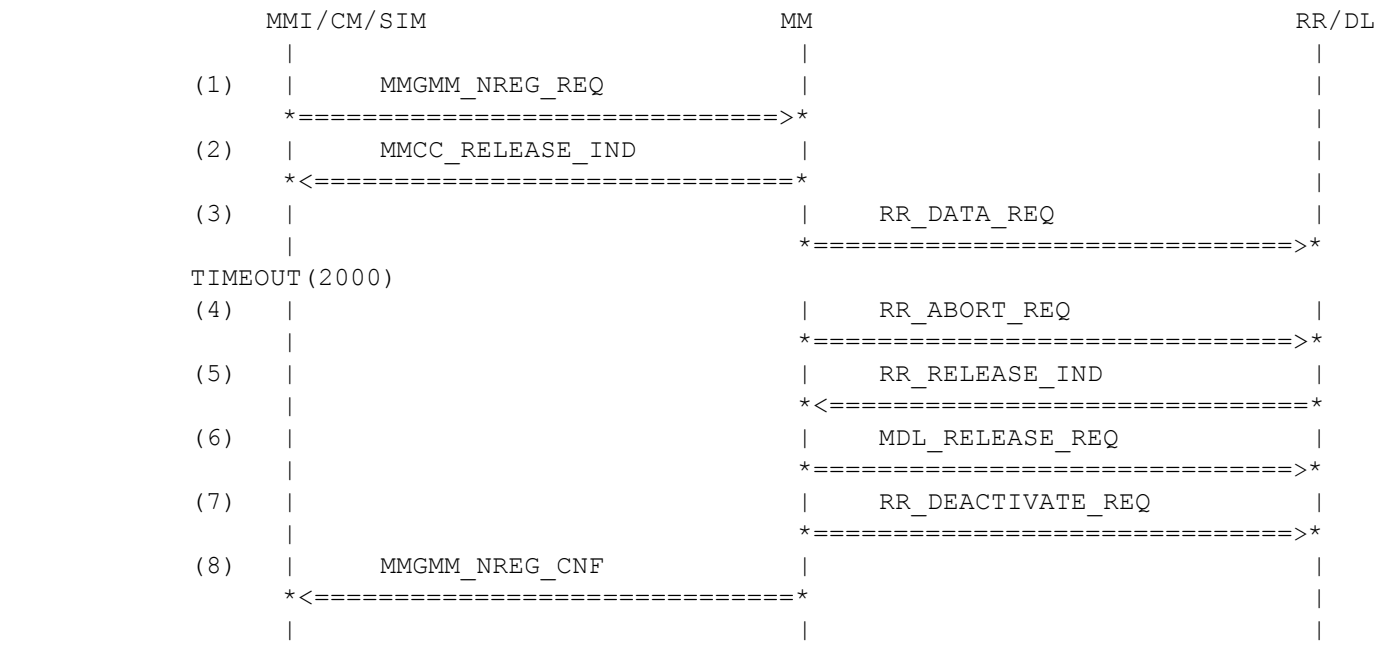
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(11)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(12)	RR_ESTABLISH_CNF		
		param	NOT_USED
(13)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(14)	MMCC_ESTABLISH_CNF		
		ti	TI_2

History:	23.04.99	LE	Initial
	17.01.02	HM	Revised

3.20.25 MMG0455: Connection Active, IMSI Detach, Power OFF, Timeout T3220

Description: MM is in Connection Active state. It is switched off. An IMSI Detach is started. After timeout of T3220 deactivation of the lower layer is started.

Preamble: MMG0454



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	NOT_USED
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_ABORT_REQ		
		abcs	ABCS_NORM

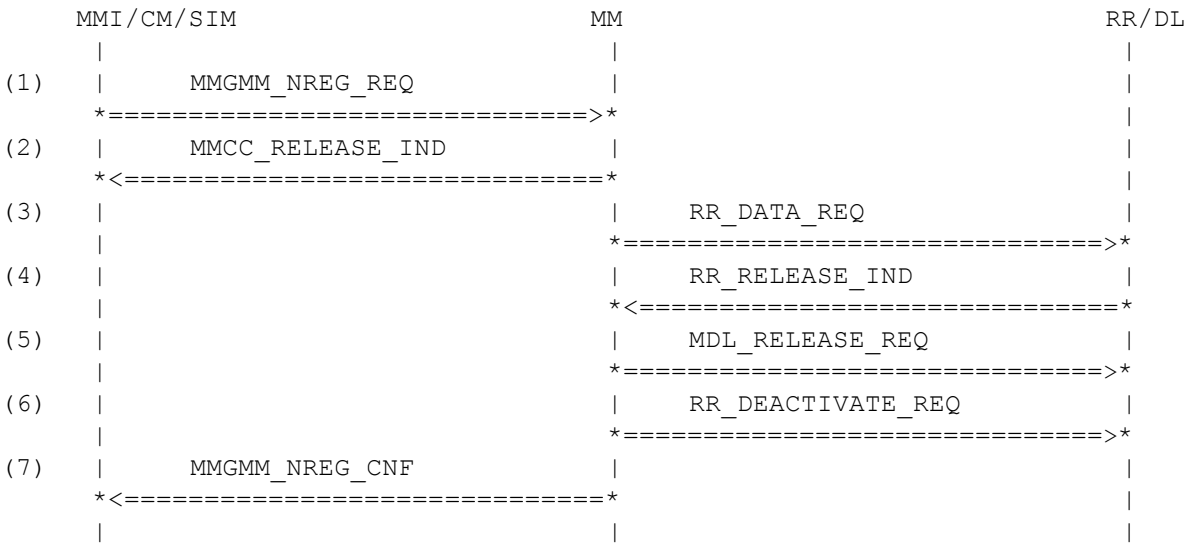
(5)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(8)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	05.05.99	LE	Initial
	24.11.00	HM	Revised
	27.04.01	HM	Changed T3220 behaviour

3.20.26 MMG0456: Connection Active, IMSI Detach, Power OFF, Rel Ind

Description: MM is in Connection Active state. It is switched off. An IMSI Detach is started. The network releases the RR-Connection .Deactivation of the lower layer is started.

Preamble: MMG0454



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	NOT_USED
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

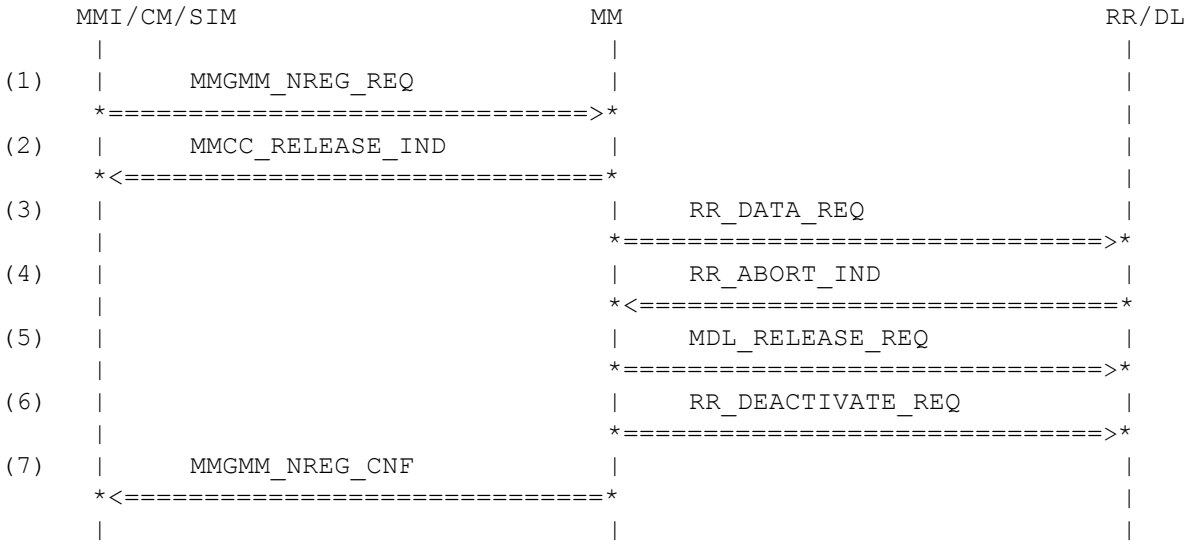
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised

3.20.27 MMG0457: Connection Active, IMSI Detach, Power OFF, Radio Link Failure

Description: MM is in Connection Active state. It is switched off. An IMSI Detach is started. A radio link failure occurs .Deactivation of the lower layer is started.

Preamble: MMG0454



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	NOT_USED
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED

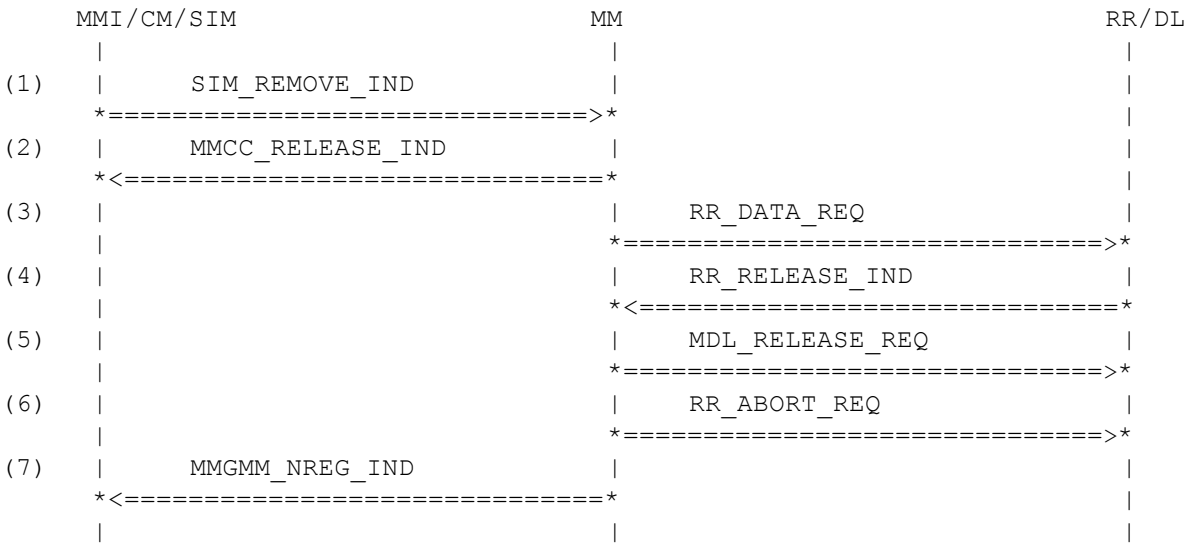
		rxlevel	NOT_USED
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised
	10.02.03	LOL	added lac_list

3.20.28 MMG0458: Active, IMSI Detach, SIM Remove by SIM, Rel Ind

Description: MM is in active state. The SIM manager has detected a SIM Remove. All CM connections are released. An IMSI Detach is processed. The network releases the RR connection and the MS enters the IDLE NO IMSI state.

Preamble: MMG0454



Parametrization

Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	NOT_USED
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

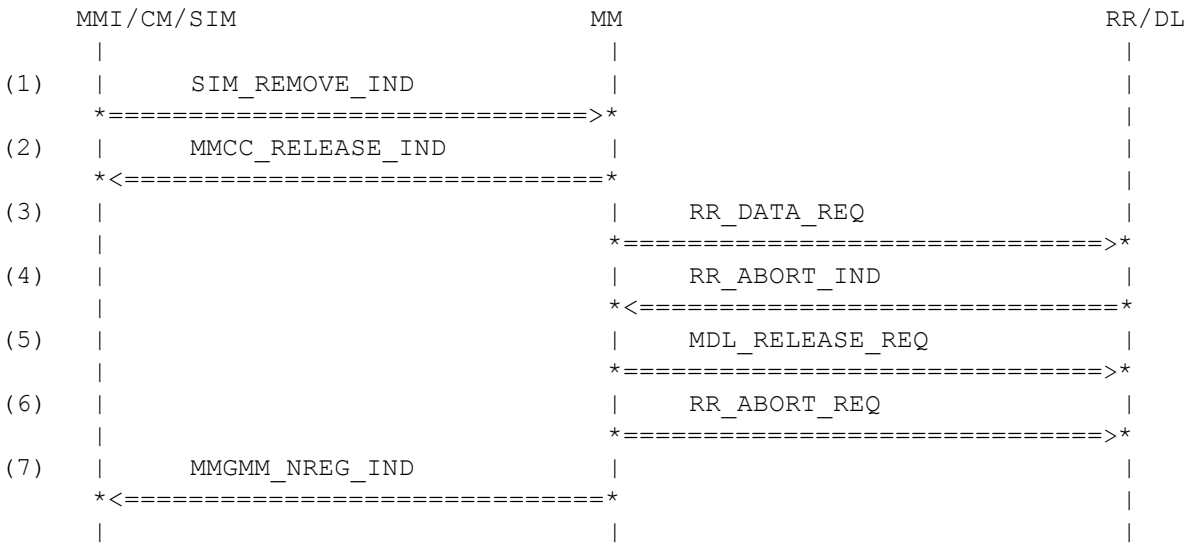
(6)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(7)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised

3.20.29 MMG0459: Active, IMSI Detach, SIM Remove by SIM, Radio Link Fail

Description: MM is in active state. The SIM manager has detected a SIM Remove. All CM connections are released. An IMSI Detach is processed. After radio link failure, the MS enters the IDLE NO IMSI state.

Preamble: MMG0454



Parametrization

Primitive	Parameter	Value
(1) SIM_REMOVE_IND		
	cause	SIM_CAUSE_CARD_REMOVED
(2) MMCC_RELEASE_IND		
	ti	TI_2
	cause	NOT_USED
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(4) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED

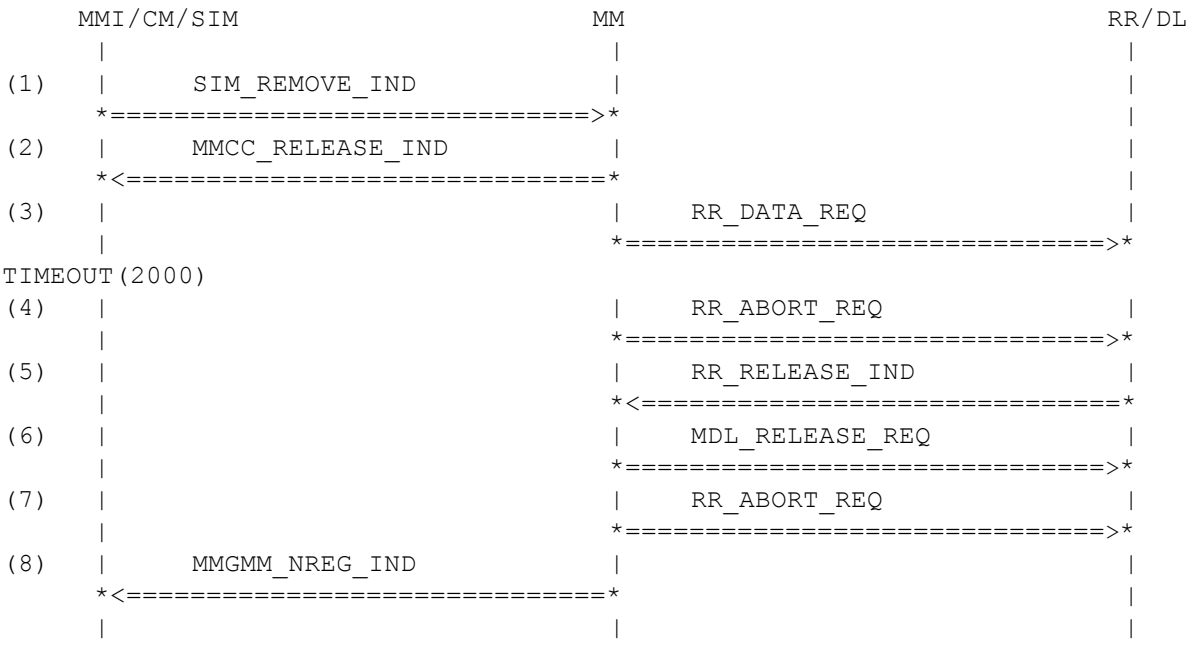
		rxlevel	NOT_USED
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(7)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised
	10.02.03	LOL	added lac_list

3.20.30 MMG0460: Active, IMSI Detach, SIM Remove by SIM, T3220 Timeout

Description: MM is in active state. The SIM manager has detected a SIM Remove. All CM connections are released. An IMSI Detach is processed. After timeout T3220, the MS enters the IDLE NO IMSI state.

Preamble: MMG0454



Parametrization

Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	NOT_USED
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(5)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC

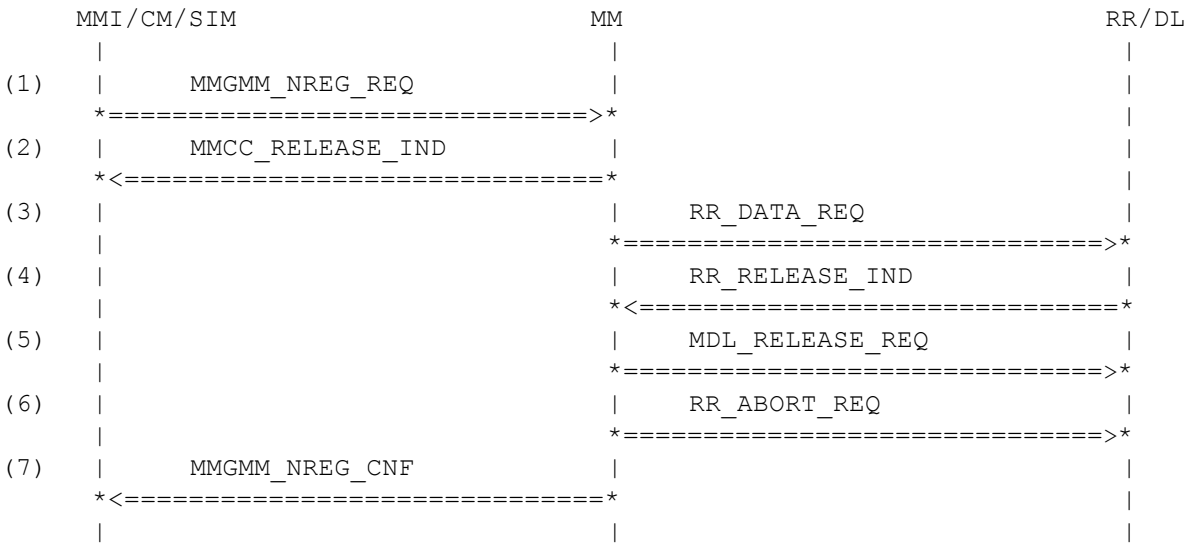
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(8)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	24.11.00	HM	Revised
	28.04.01	HM	Revised

3.20.31 MMG0461: Active, IMSI Detach, SIM Remove by MMI, Rel Ind

Description: MM is in active state. MMI requests limited service. All CM connections are released. An IMSI Detach is processed. The RR connection is released by the network and the MS enters the IDLE NO IMSI state.

Preamble: MMG0454



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	NOT_USED
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

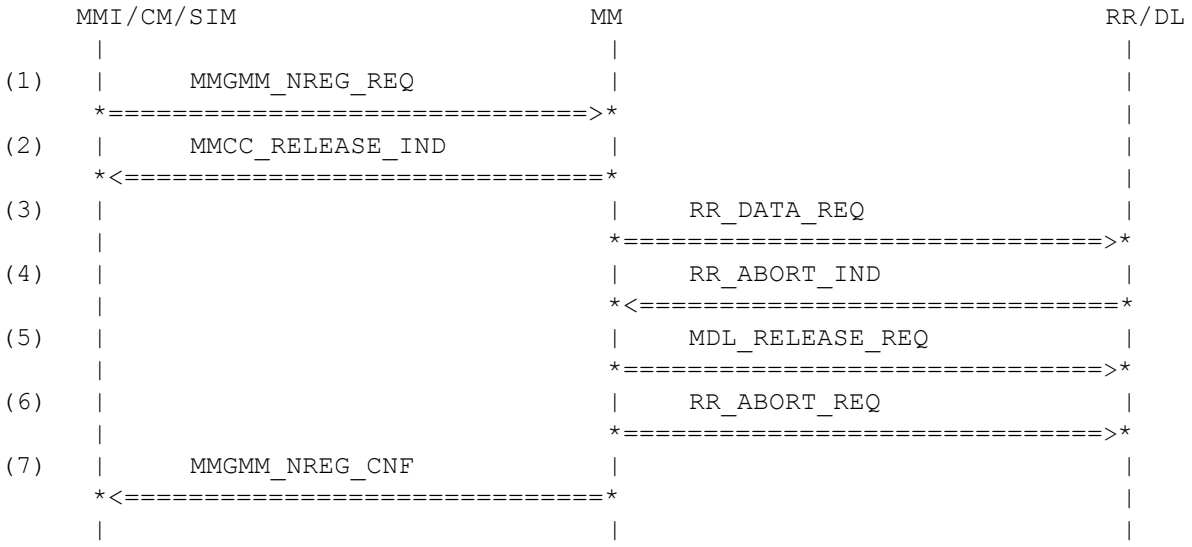
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised

3.20.32 MMG0462: Active, IMSI Detach, SIM Remove by MMI, Radio Link Fail

Description: MM is in active state. MMI has requested limited service. All CM connections are released. An IMSI Detach is processed. After radio link failure, the MS enters the IDLE NO IMSI state.

Preamble: MMG0454



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_SIM_REM
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MMCC_RELEASE_IND		
	ti	TI_2
	cause	NOT_USED
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(4) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED

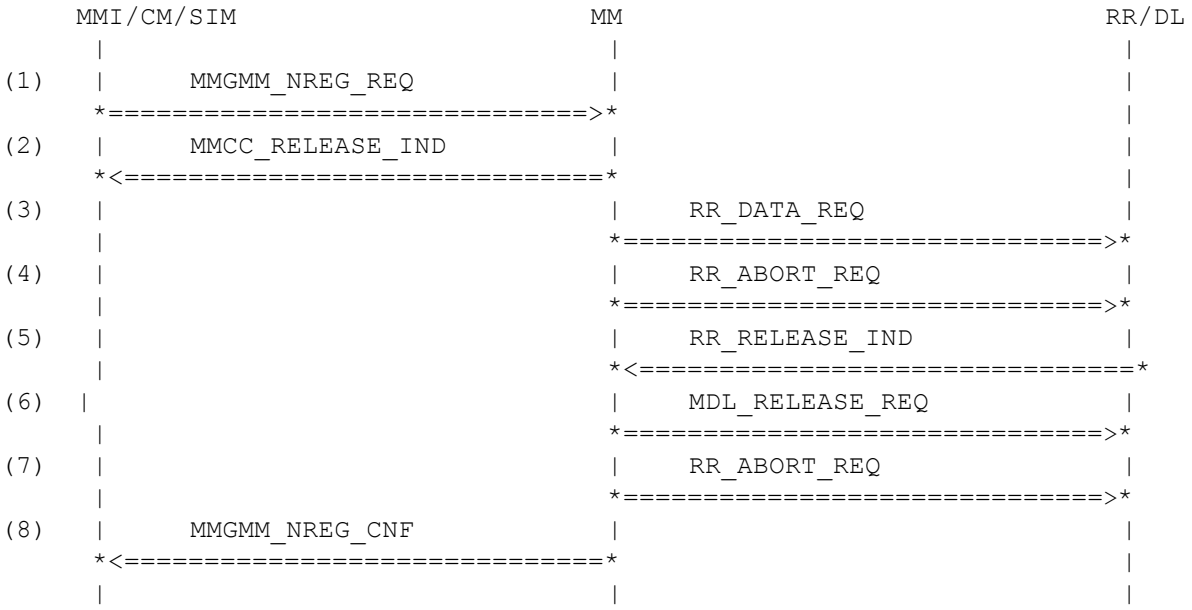
		rxlevel	NOT_USED
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	05.05.99	LE	Initial
	27.10.00	HM	Revised
	10.02.03	LOL	added lac_list

3.20.33 MMG0463: Active, IMSI Detach, SIM Remove by MMI, T3220 Timeout

Description: MM is in Active state. MMI has requested limited service. All CM connections are released. An IMSI Detach is processed. After timeout T3220, the MS enters the IDLE NO IMSI state.

Preamble: MMG0454



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_SIM_REM
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MMCC_RELEASE_IND		
	ti	TI_2
	cause	NOT_USED
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(4) RR_ABORT_REQ		
	abcs	ABCS_NORM
(5) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC

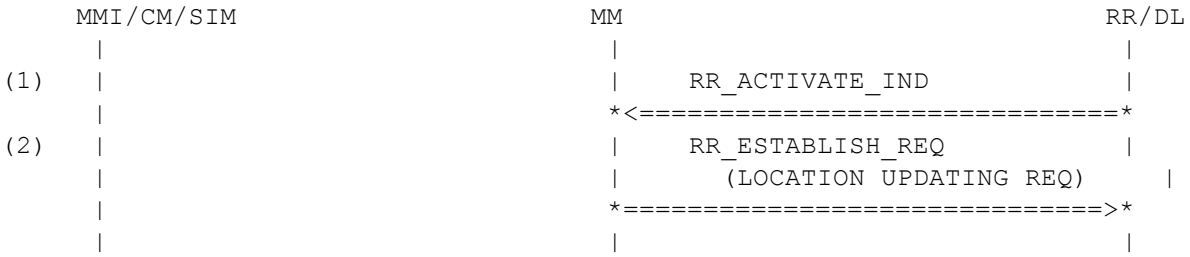
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(8)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	05.05.99	LE	Initial
	29.11.00	HM	Revised
	30.04.01	HM	Revised

3.20.34 MMG0464: Attempt to update, change of location area identification

Description: The MS is in attempting to update state. RR indicates a change of location area identification. A normal location updating is started.

Preamble: MMG0431



Parametrization

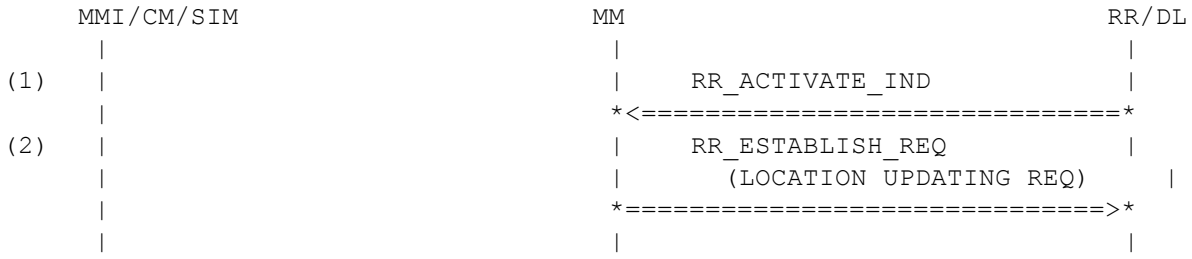
	Primitive	Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History: 04.05.99 LE Initial

3.20.35 MMG0465: Attempt to update, change of cell, random access failure

Description: The MS is in attempting to update state. The state was entered due to random access failure. RR indicates a change of cell. A normal location updating is started.

Preamble: MMG0439



Parametrization

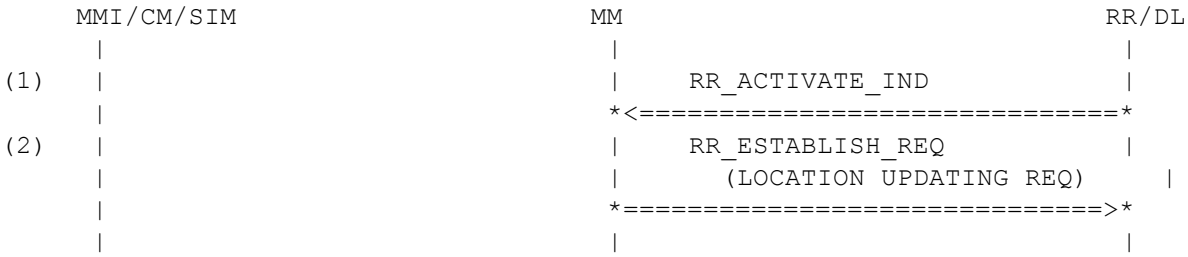
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial

3.20.36 MMG0466: Attempt to update, change of cell, RR connection failure

Description: The MS is in attempting to update state. The state was entered due to RR connection failure. RR indicates a change of cell. A normal location updating is started.

Preamble: MMG0438



Parametrization

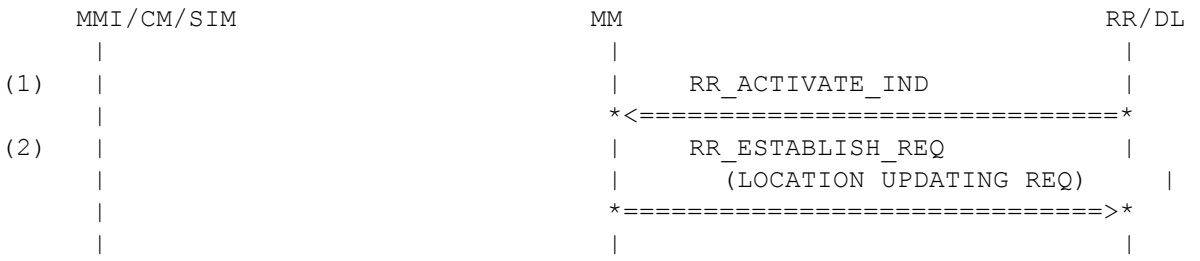
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial

3.20.37 MMG0467: Attempt to update, change of cell, Release before end of proc

Description: The MS is in attempting to update state. The state was entered due to release before end of procedure with cause different to abnormal release, unspecified. RR indicates a change of cell. A normal location updating is started.

Preamble: MMG0432



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial

3.20.38 MMG0468: Attempt to update, change of cell, Release before end of proc

Description: The MS is in attempting to update state. The state was entered due to release before end of procedure with cause to abnormal release, unspecified. RR indicates a change of cell. A normal location updating is started.

Preamble: MMG0428

```
     MMI/CM/SIM                        MM                                RR/DL
      |                                |                                 |
(1)   |                                |    RR_ESTABLISH_CNF             |
      |                                *<===============================*
(2)   |                                |    RR_RELEASE_IND               |
      |                                *<===============================*
(3)   |                                |    MDL_RELEASE_REQ              |
      |                                *===============================>*
(4)   |                                |    RR_SYNC_REQ                  |
      |                                *===============================>*
(5)   |     SIM_MM_UPDATE_REQ          |                                 |
      *<===============================*                                 |
TIMEOUT (10000)
(6)   |                                |    RR_ESTABLISH_REQ             |
      |                                |      (LOCATION UPDATING REQ)     |
      |                                *===============================>*
(7)   |                                |    RR_ESTABLISH_CNF             |
      |                                *<===============================*
(8)   |                                |    RR_RELEASE_IND               |
      |                                *<===============================*
(9)   |                                |    MDL_RELEASE_REQ              |
      |                                *===============================>*
(10)  |                                |    RR_SYNC_REQ                  |
      |                                *===============================>*
(11)  |     SIM_MM_UPDATE_REQ          |                                 |
      *<===============================*                                 |
TIMEOUT (10000)
(12)  |                                |    RR_ESTABLISH_REQ             |
      |                                |      (LOCATION UPDATING REQ)     |
      |                                *===============================>*
(13)  |                                |    RR_ESTABLISH_CNF             |
      |                                *<===============================*
(14)  |                                |    RR_RELEASE_IND               |
      |                                *<===============================*
(15)  |                                |    MDL_RELEASE_REQ              |
      |                                *===============================>*
(16)  |                                |    RR_SYNC_REQ                  |
      |                                *===============================>*
(17)  |     SIM_MM_UPDATE_REQ          |                                 |
      *<===============================*                                 |
(18)  |     MMGMM_NREG_IND             |                                 |
      *<===============================*                                 |
MUTE (1000)
(19)  |                                |    RR_ACTIVATE_IND              |
      |                                *<===============================*
MUTE (10000)
      |                                |                                 |
```

Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(5)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_RELEASE_IND		
		cause	RRCS_NORM

		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(10)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(11)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(12)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(13)	RR_ESTABLISH_CNF		
		param	NOT_USED
(14)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(16)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED

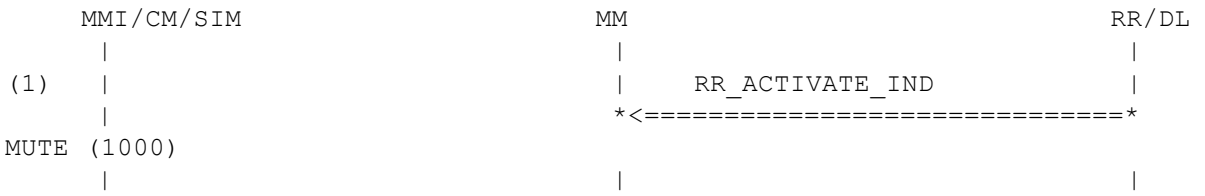
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(17)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(18)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(19)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO

History:	04.05.99	LE	Initial

3.20.39 MMG0469: Attempt to update, change of cell, Location Updating Request

Description: The MS is in attempting to update state. The state was entered due to location updating request. with cause different from retry upon entry into a new cell. RR indicates a change of cell. No normal location updating shall be started.

Preamble: MMG0429



Parametrization

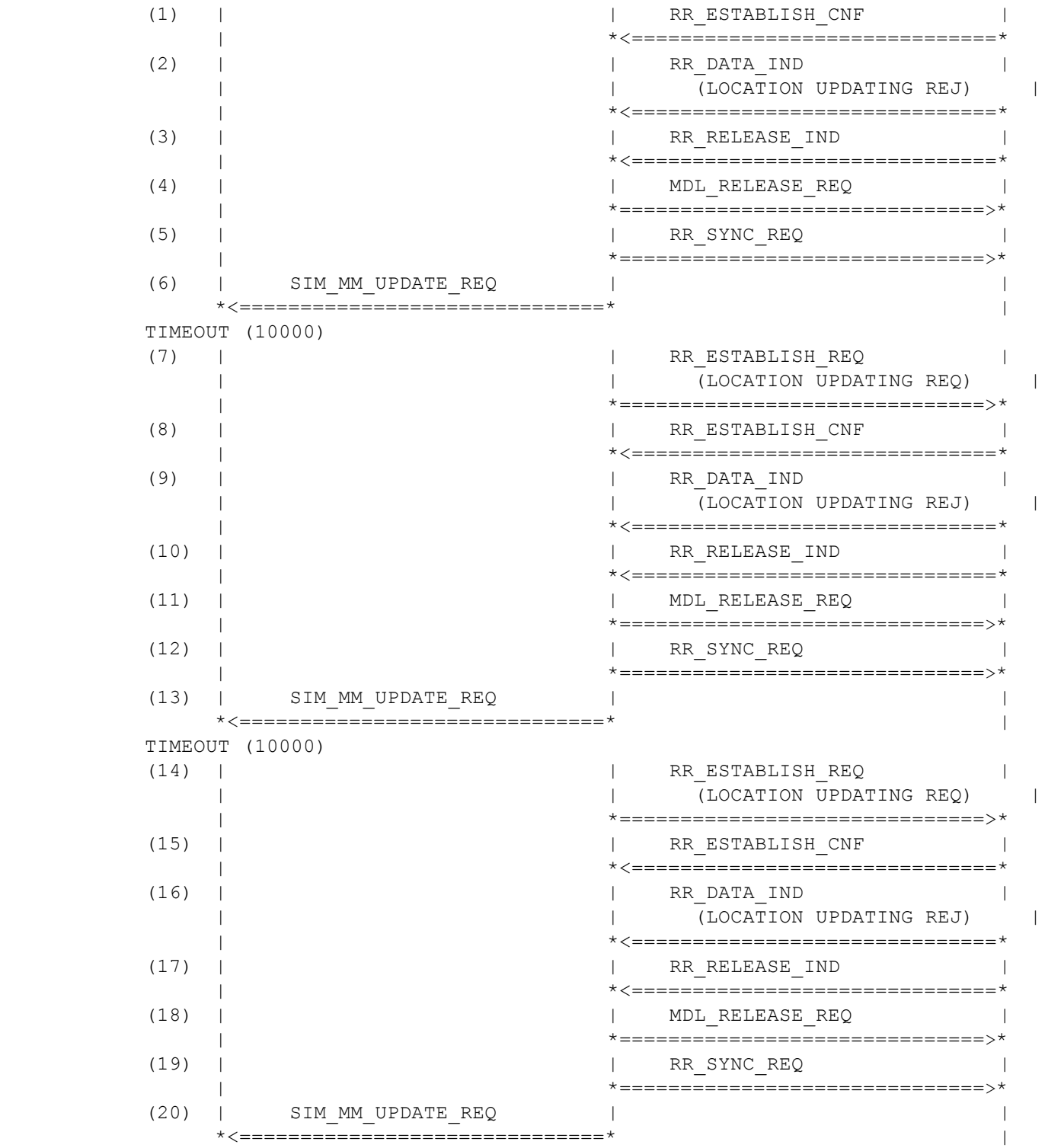
Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1123
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO

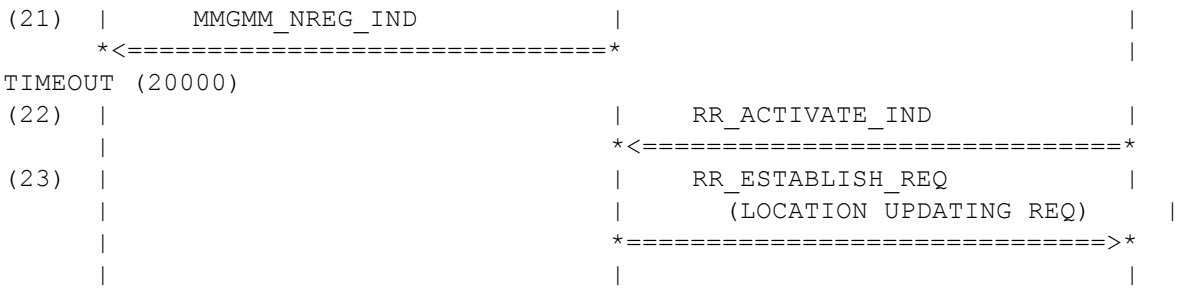
History:	04.05.99	LE	Initial

3.20.40 MMG0470: Attempt to update, change of cell, Location updating reject

Description: The MS is in attempting to update state. The state was entered due to location updating reject with the cause retry upon entry into a new cell. RR indicates a change of cell. A normal location updating is started.

Preamble: MMG0428





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(13)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

(14)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(15)	RR_ESTABLISH_CNF		
		param	NOT_USED
(16)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_RETRY_UPON_NEW_CELL
		}	
(17)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(18)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(19)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(20)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

(21)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_RETRY_IN_NEW_CELL
(22)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(23)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	07.02.01	HM	Revised

3.20.41 MMG0471: Attempt to Update, IMSI Detach, Power OFF

Description: MM is in IDLE Attempting to update state. It is switched off. MM shall not perform IMSI Detach. It shall only deactivate the lower layer.

Preamble: MMG0429

Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 05.05.99 LE Initial

3.20.42 MMG0472: Attempt to Update, IMSI Detach, SIM Remove by SIM

Description: MM is in Attempt to update state. The SIM manager has detected a SIM Remove. MM shall not process IMSI Detach. MM enters the IDLE NO IMSI state.

Preamble: MMG0429

Parametrization

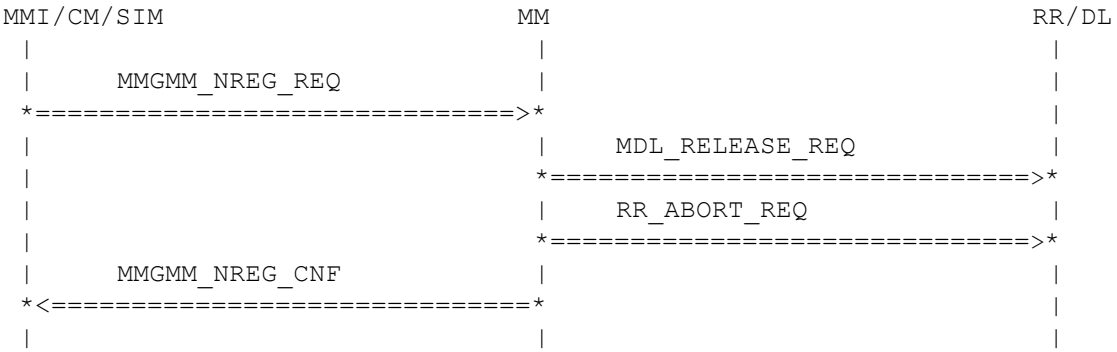
	Primitive	Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:			
	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	29.11.00	HM	Revised
	18.04.01	HM	Revised (service)

3.20.43 MMG0473: Attempt to Update, IMSI Detach, SIM Remove by MMI

Description: MM is in Attempt to Update state. The MMI requests limited service. An IMSI Detach shall not be processed. The MS enters the IDLE NO IMSI state.

Preamble: MMG0429



Parametrization

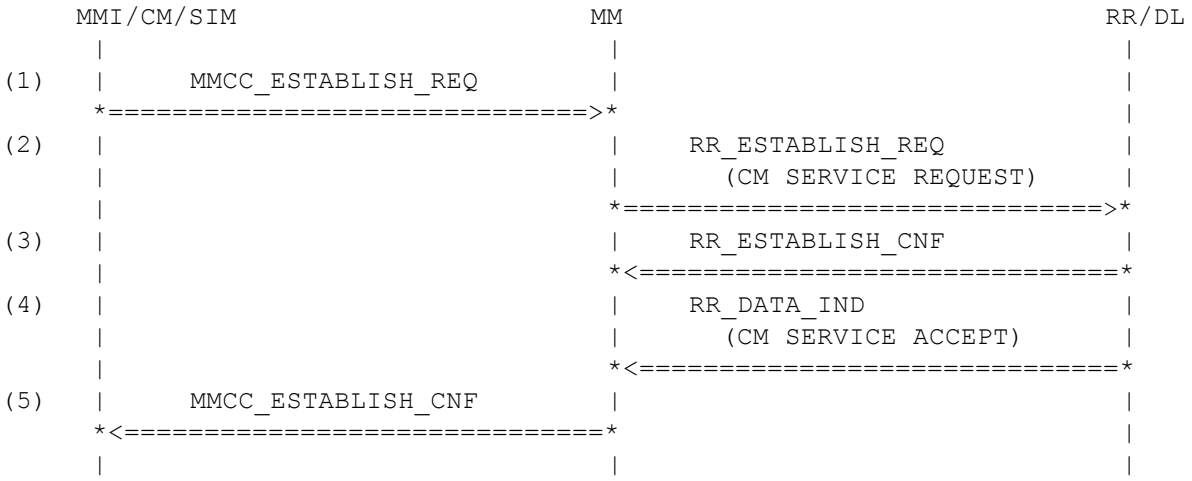
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:			
	05.05.99	LE	Initial
	29.11.00	HM	Revised

3.20.44 MMG0474: Attempt to update, Emergency Call

Description: MM receives an establishment request from CC while in State 19.2 (Idle Attempting to Update). It then sends a CM SERVICE REQUEST message to the network. On receipt of a RR-ESTABLISH confirmation primitive from the network followed by a CM SERVICE ACCEPT message, MM issues as MMCC-ESTABLISH confirmation primitive.

Preamble: MMG0429



Parametrization

Primitive	Parameter	Value
(1) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_EMERGE
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	

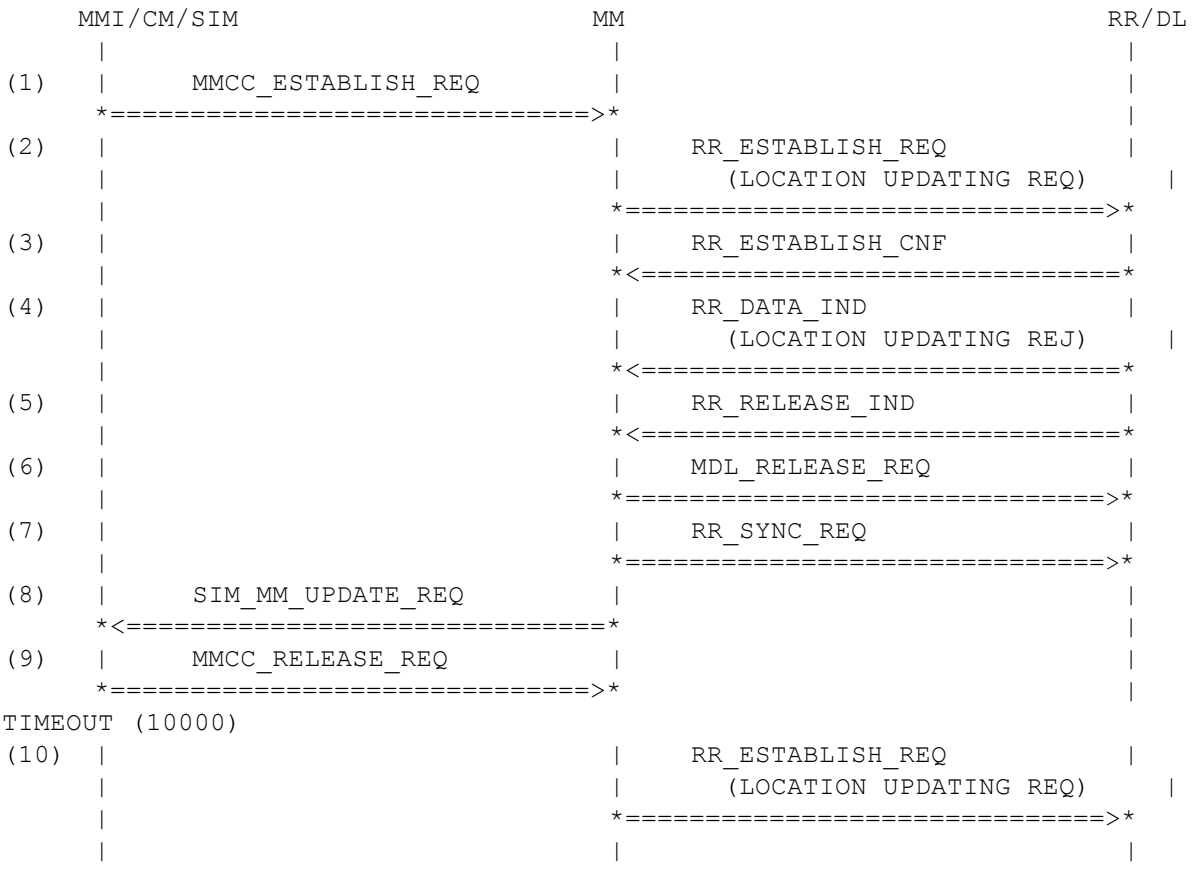
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(5) MMCC_ESTABLISH_CNF		
	ti	TI_3

History:	09.07.97	HK	Initial

3.20.45 MMG0475: Attempt to update, CM connection request (I)

Description: MM receives a MMCC-ESTABLISH request primitive from CC in attempting to update state. This is a trigger to start location updating (with follow on request). MM stores the connection request until Location Updating has been completed. The location updating fails. After timeout in CC the connection attempt is cleared. In the next attempt the follow on request bit shall be cleared.

Preamble: MMG0429



Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL

		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(9)	MMCC_RELEASE_REQ		
		ti	TI_4
(10)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK

pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI

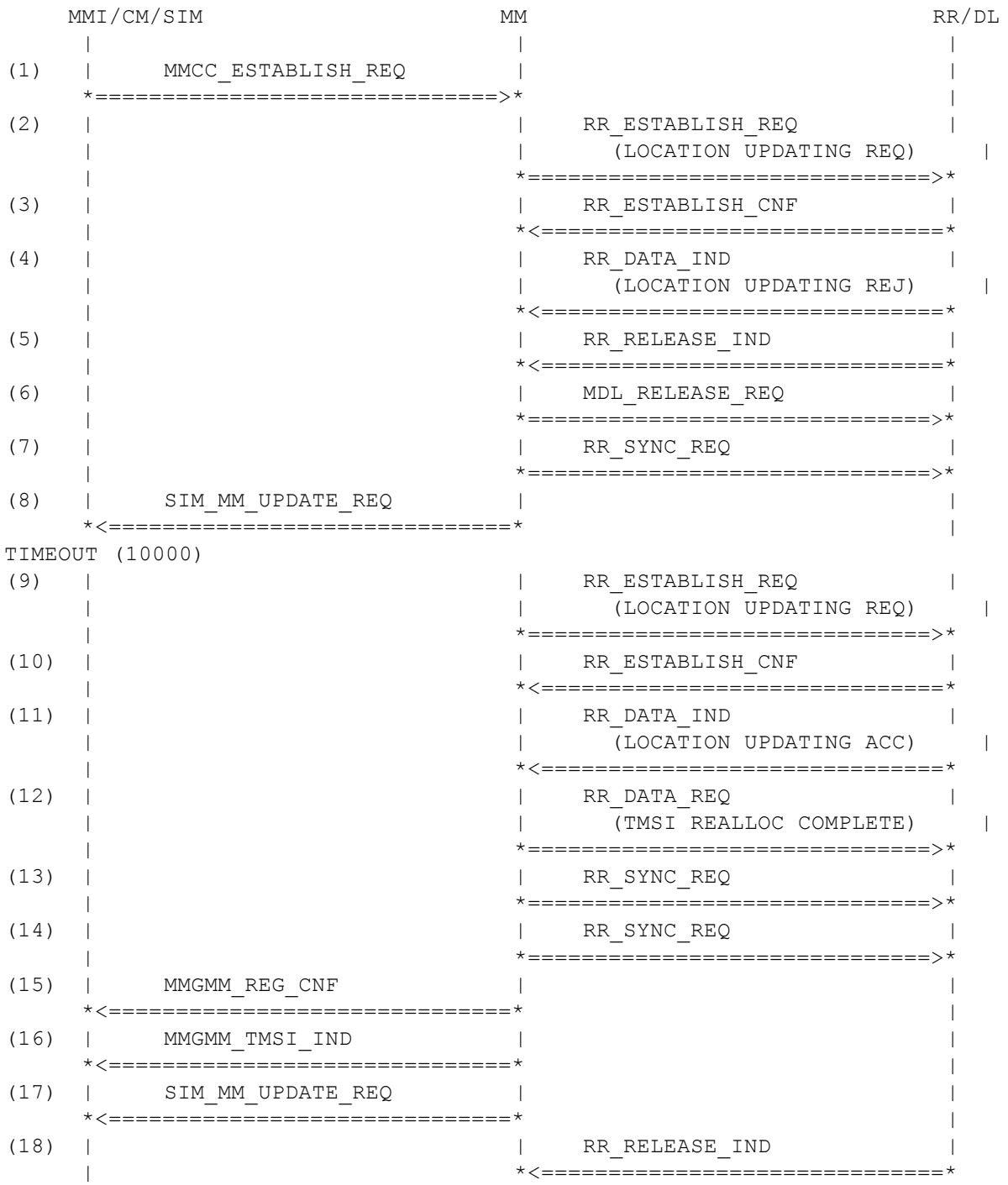
}

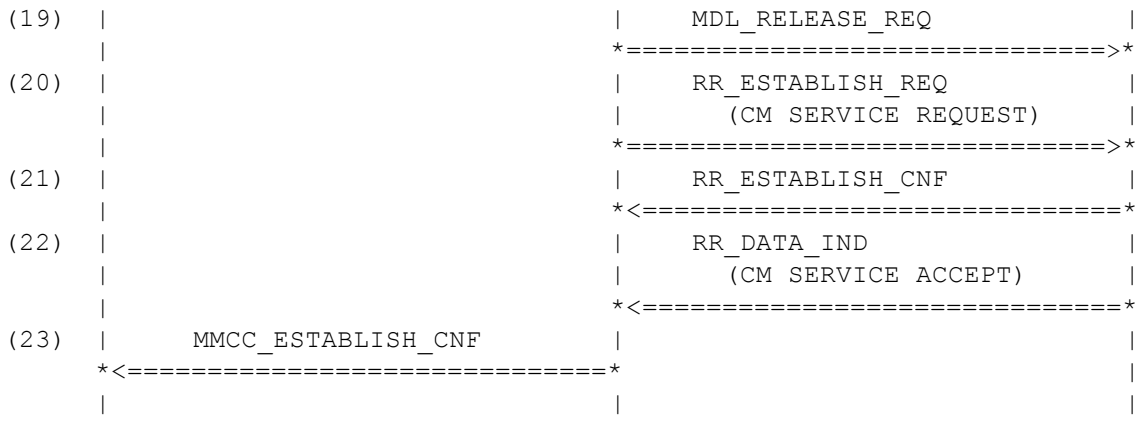
History:	15.09.97	DL	Initial

3.20.46 MMG0476: Attempt to update, CM connection request (II)

Description: MM receives a MMCC-ESTABLISH request primitive from CC in attempting to update state. This is a trigger to start location updating (with follow on request). MM stores the connection request until Location Updating has been completed. The location updating fails. After timeout a second attempt is started. The follow on request bit shall be set. The location updating is successful indicating no follow on proceed. MM sends the CM SERVICE REQUEST message after establishment a new RR-connection after the release of the old one.

Preamble: MMG0429





Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_ESTABLISH_CNF		
		param	NOT_USED
(11)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(12)	RR_DATA_REQ		
		d1	NOT_USED

	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(13)	RR_SYNC_REQ	
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(14)	RR_SYNC_REQ	
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(15)	MMGMM_REG_CNF	
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(16)	MMGMM_TMSI_IND	
	tmsi	TMSI_34125708_ULONG
(17)	SIM_MM_UPDATE_REQ	
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(18)	RR_RELEASE_IND	
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(19)	MDL_RELEASE_REQ	
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

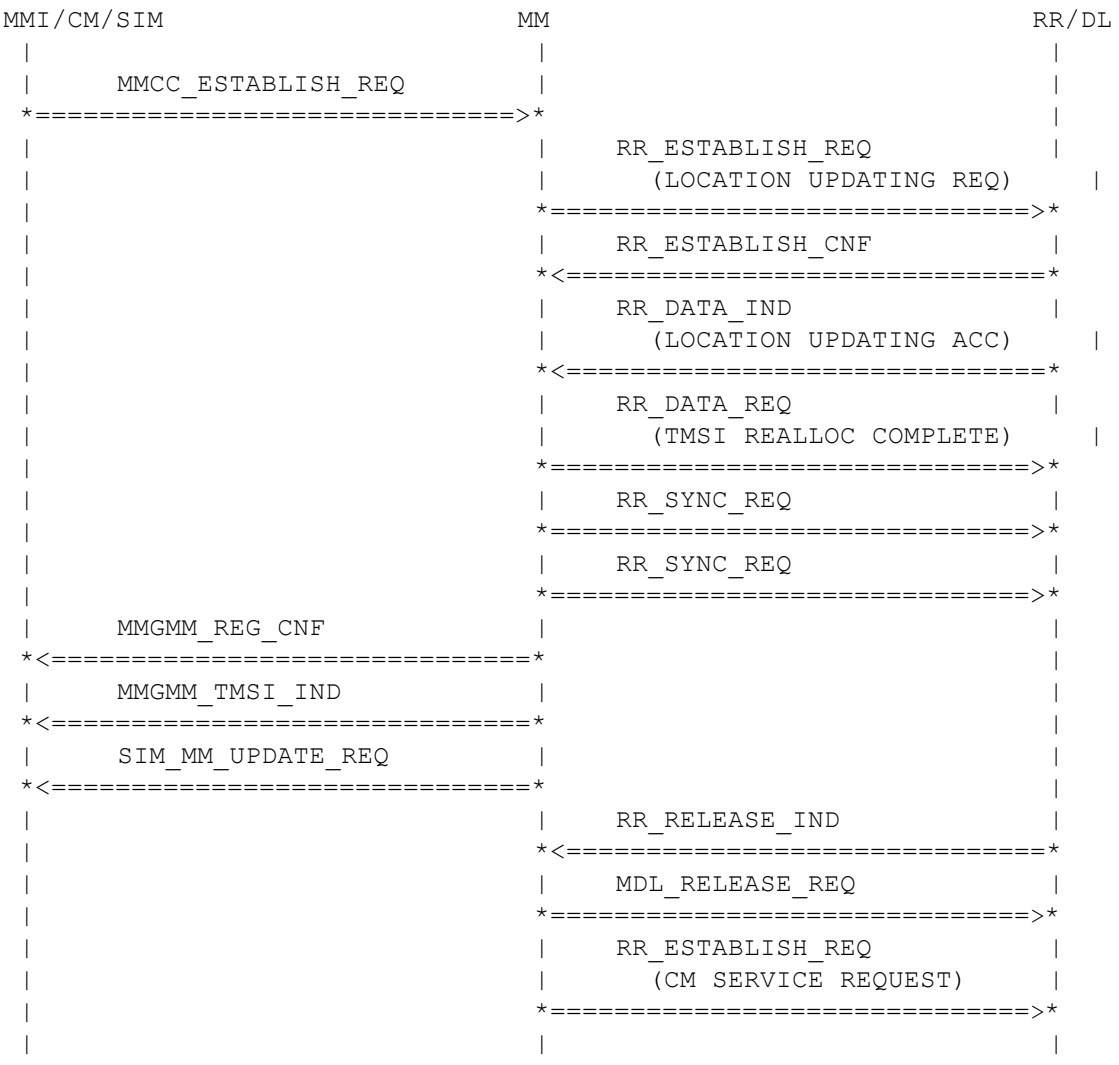
(20)	RR_ESTABLISH_REQ	
	estcs	ESTCS_MOB_ORIG_SPCH
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(21)	RR_ESTABLISH_CNF	
	param	NOT_USED
(22)	RR_DATA_IND	
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(23)	MMCC_ESTABLISH_CNF	
	ti	TI_4

History:	15.09.97	DL	Initial
	17.01.02	HM	Revised

3.20.47 MMG0477: Attempt to update, CM connection request (III)

Description: MM receives a MMCC-ESTABLISH request primitive from CC in attempting to update state. This is a trigger to start location updating (with follow on request). MM stores the connection request until Location Updating has been completed. The follow on request bit shall be set. The location updating is successful indicating no follow on proceed. MM doesn't release the connection request, after release of RR and layer 2 connection a RR_ESTABLISH_REQ is sent to establish the call.

Preamble: MMG0429



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM

		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED

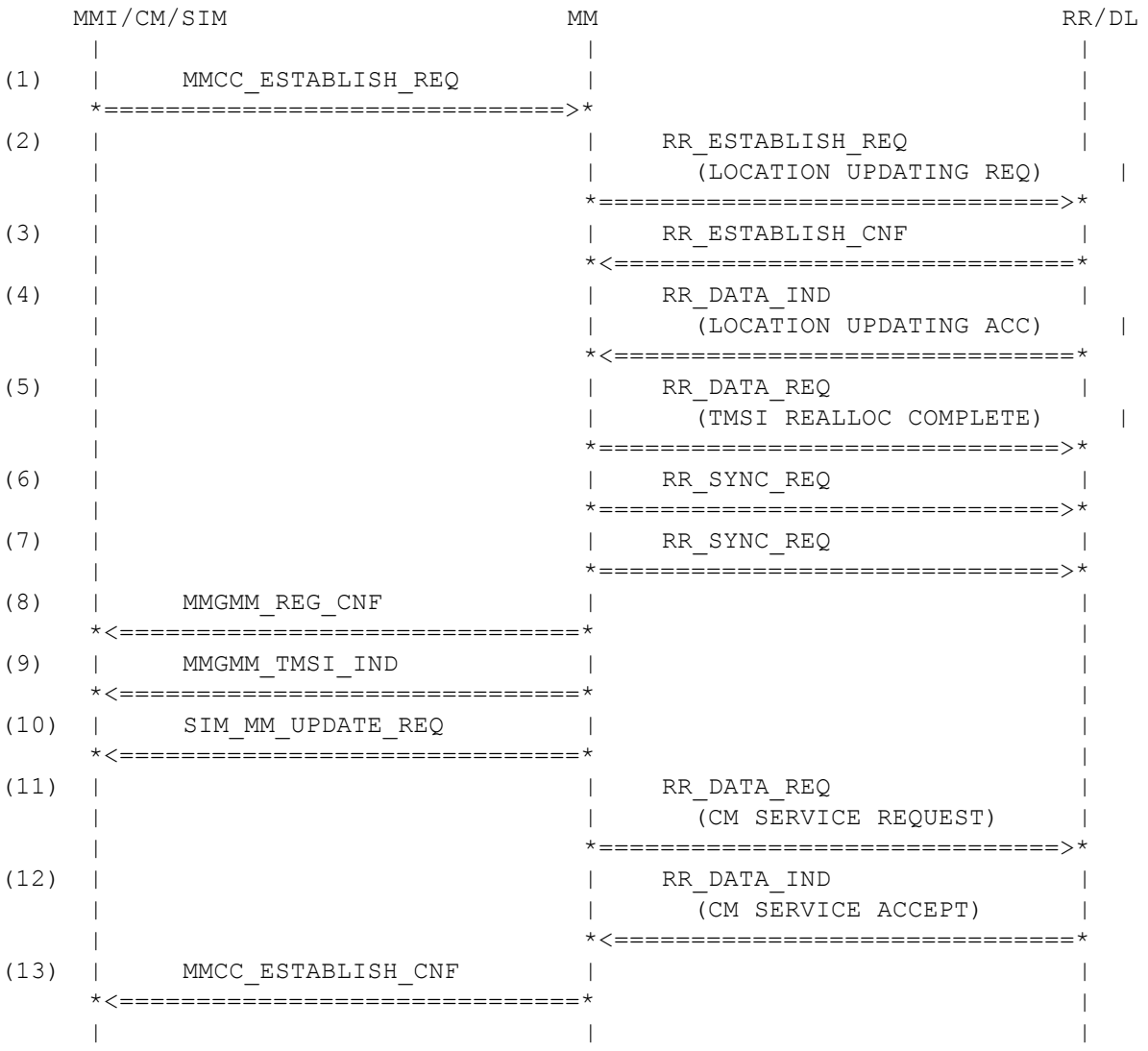
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(8)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(10)		SIM_MM_UPDATE_REQ	
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(11)		RR_RELEASE_IND	
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12)		MDL_RELEASE_REQ	
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(13)		RR_ESTABLISH_REQ	
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_TMSI
		}	

History:	15.09.97	DL	Initial
	16.02.00	HM	Revised
	17.01.02	HM	Revised

3.20.48 MMG0478: Attempt to update, CM connection request (IV)

Description: MM receives a MMCC-ESTABLISH request primitive from CC in attempting to update state. This is a trigger to start location updating (with follow on request). MM stores the connection request until Location Updating has been completed. The follow on request bit shall be set. The location updating is successful indicating follow on proceed. MM sends the CM SERVICE REQUEST on the existing RR-connection.

Preamble: MMG0429



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM

		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	IE_FOLLOW_PROCEED
		}	
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED

		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(8)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(10)		SIM_MM_UPDATE_REQ	
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(11)		RR_DATA_REQ	
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(12)		RR_DATA_IND	
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(13)		MMCC_ESTABLISH_CNF	
		ti	TI_4

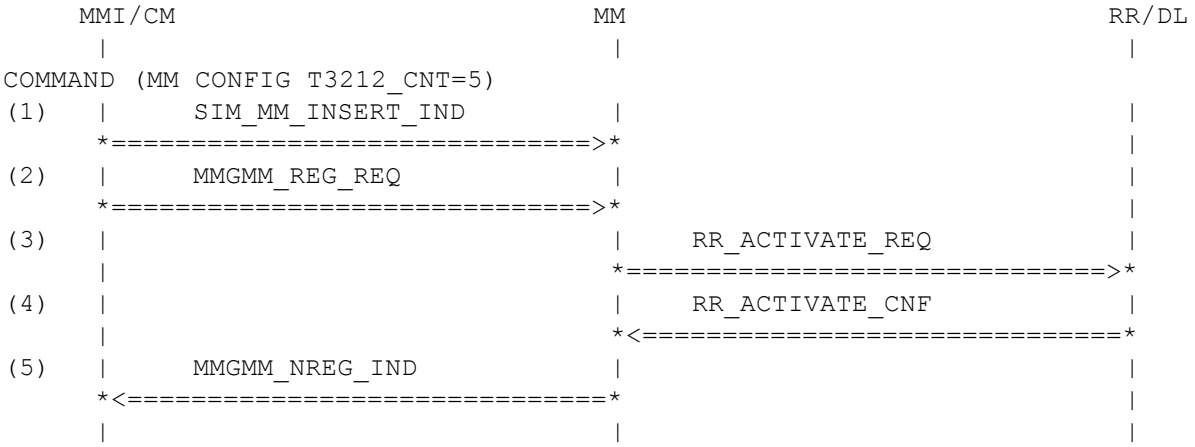
History:	15.09.97	DL	Initial
	17.01.02	HM	Revised

3.21 MM Idle Mode Behaviour (Limited Service)

3.21.1 MMG0479: Limited Service State

Description: MM receives a SIM-INSERT indication primitive and initiates cell selection by issuing a RR-ACTIVATE request primitive. RR indicates only limited service. The periodic location updating timer shall not be started.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL

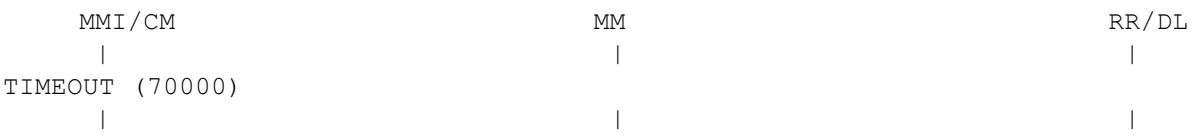
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(4) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_LS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(5) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:	04.05.99	LE	Initial
	24.02.00	HM	Revised
	02.03.00	HM	Revised (search_running)

3.21.2 MMG0480: Limited, not perform Periodic LUP

Description: The testcase waits 70 seconds. If the periodic LUP timer is started in the preamble, the testcase will fail, else MM has the expected behaviour. T3212 is decreased to 60 seconds by a dynamic config.

Preamble: MMG0479



Parametrization

Primitive	Parameter	Value

History:	09.06.99	LE	Initial

3.21.3 MMG0481: Limited, IMSI Detach, Power OFF

Description: MM is in IDLE limited service state. It is switched off. MM shall not perform IMSI Detach. It shall only deactivate the lower layer.

Preamble: MMG0479

Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 09.06.99 LE Initial

3.21.4 MMG0482: Limited, IMSI Detach, SIM Remove by SIM

Description: MM is in Limited service state. The SIM manager has detected a SIM Remove. MM shall not process IMSI Detach. MM enters the IDLE NO IMSI state.

Preamble: MMG0479

Parametrization

Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:			
	09.06.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	29.11.00	HM	Revised

3.21.5 MMG0483: Limited, IMSI Detach, SIM Remove by MMI

Description: MM is in Limited service state. The MMI requests limited service. An IMSI Detach shall not be processed. The MS enters the IDLE NO IMSI state.

Preamble: MMG0479

Parametrization

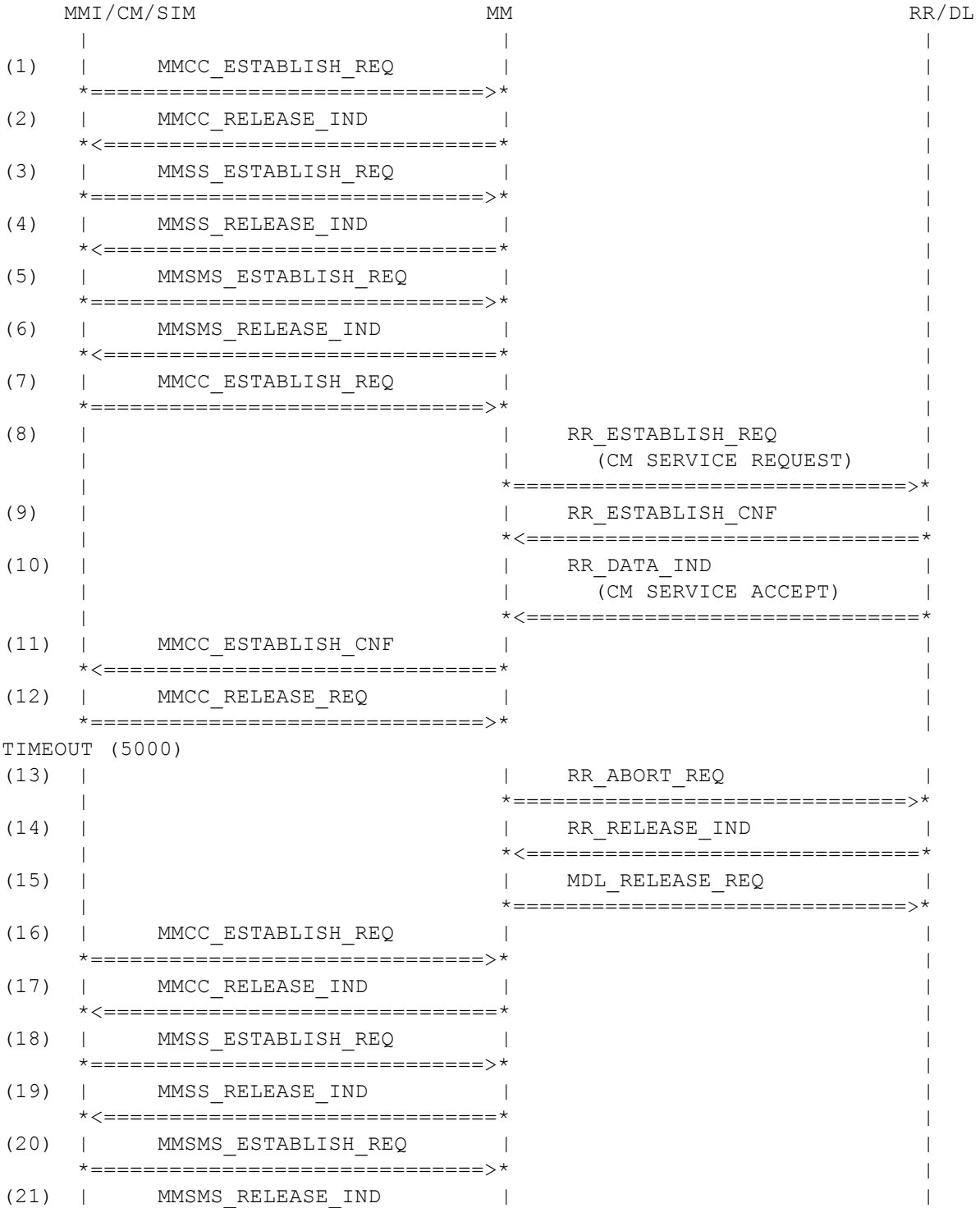
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

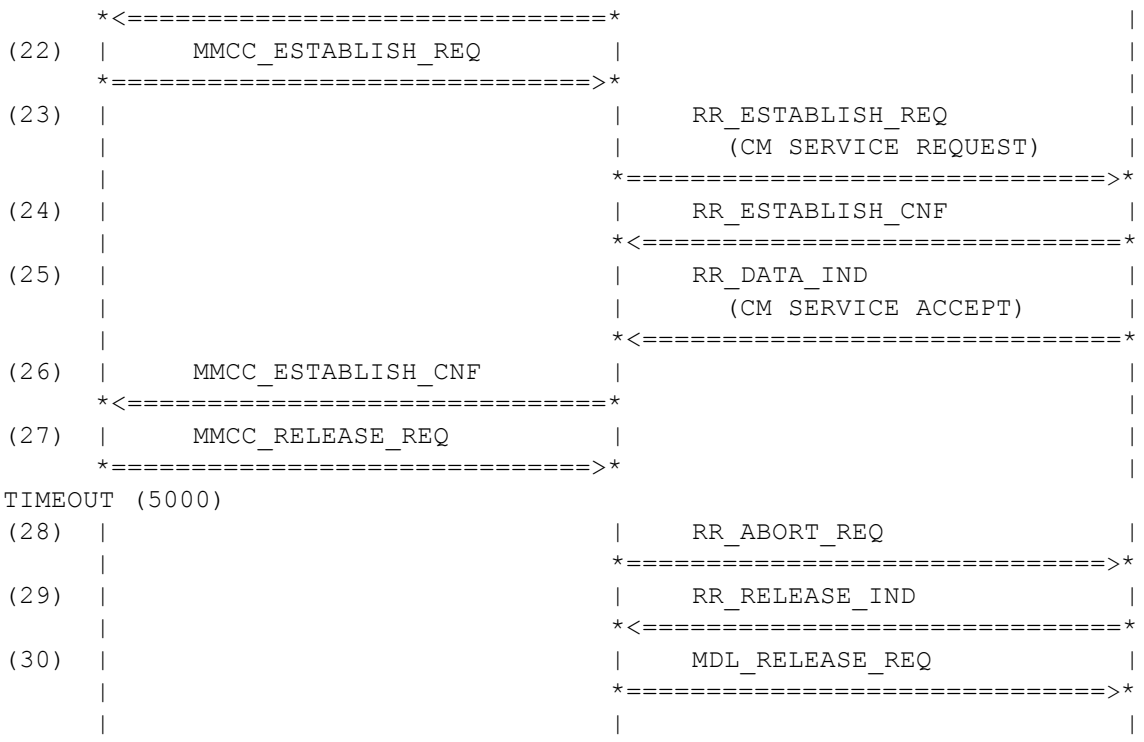
History:			
	09.06.99	LE	Initial
	29.11.00	HM	Revised

3.21.6 MMG0484: Limited, Call attempts, Emergency Calls

Description: MM is in idle limited service state. It shall reject all requests from CM entities except emergency calls. First the rejects are tested, then an emergency call. Then the whole sequence is tested again to check coming back in limited service state.

Preamble: MMG0479





Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMCC_RELEASE_IND		
		ti	TI_4
		cause	MMCS_NO_REGISTRATION
(3)	MMSS_ESTABLISH_REQ		
		ti	TI_3
(4)	MMSS_RELEASE_IND		
		ti	TI_3
		cause	MMCS_NO_REGISTRATION
(5)	MMSMS_ESTABLISH_REQ		
		ti	TI_5
(6)	MMSMS_RELEASE_IND		
		ti	TI_5
		cause	MMCS_NO_REGISTRATION
(7)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_EMERGE
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_EMRG_CAL

		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_EMERGENCY
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)		RR_DATA_IND	
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(11)		MMCC_ESTABLISH_CNF	
		ti	TI_3
(12)		MMCC_RELEASE_REQ	
		ti	TI_3
(13)		RR_ABORT_REQ	
		abcs	ABCS_NORM
(14)		RR_RELEASE_IND	
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15)		MDL_RELEASE_REQ	
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(16)		MMCC_ESTABLISH_REQ	
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(17)		MMCC_RELEASE_IND	
		ti	TI_4
		cause	MMCS_NO_REGISTRATION
(18)		MMSS_ESTABLISH_REQ	
		ti	TI_3
(19)		MMSS_RELEASE_IND	
		ti	TI_3
		cause	MMCS_NO_REGISTRATION

(20)	MMSMS_ESTABLISH_REQ	
	ti	TI_5
(21)	MMSMS_RELEASE_IND	
	ti	TI_5
	cause	MMCS_NO_REGISTRATION
(22)	MMCC_ESTABLISH_REQ	
	ti	TI_3
	estcs	ESTCS_EMERGE
(23)	RR_ESTABLISH_REQ	
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(24)	RR_ESTABLISH_CNF	
	param	NOT_USED
(25)	RR_DATA_IND	
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(26)	MMCC_ESTABLISH_CNF	
	ti	TI_3
(27)	MMCC_RELEASE_REQ	
	ti	TI_3
(28)	RR_ABORT_REQ	
	abcs	ABCS_NORM
(29)	RR_RELEASE_IND	
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(30)	MDL_RELEASE_REQ	
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

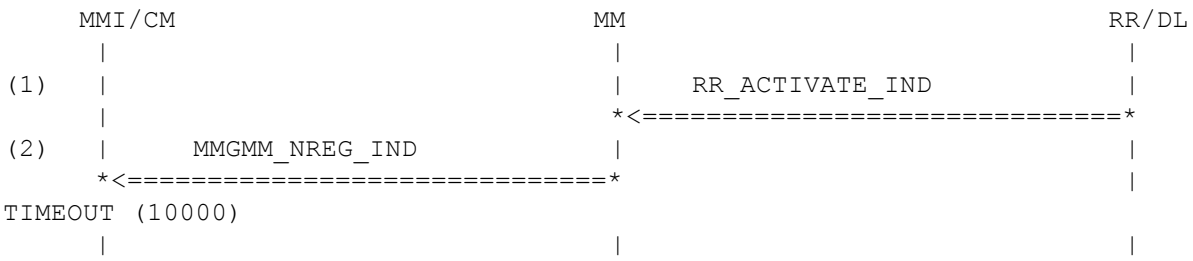
History:	09.06.99	LE	Initial
	02.02.01	HM	Revised

3.21.7 MMG0485: Limited, new cell, new LA, but only limited service

Description: MM is in service state Idle limited service. A.) A new cell is entered. B.) A new location area is entered. RR indicates only limited service. No reaction of MM is exspected.

Preamble: MMG0479

Variants: <A>....<B>



Parametrization

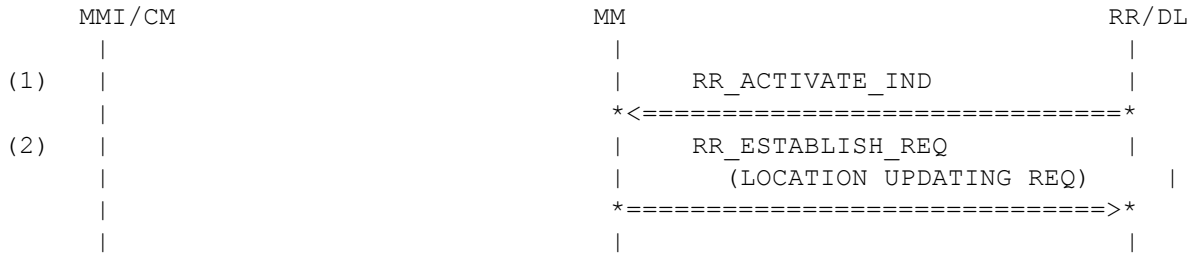
Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_LS
	mm_info	MM_INFO
<A>	cid	CELL_ID_1123
<B>	cid	CELL_ID_1122
	plmn	PLMN_123_44
<A>	lac	LAC_0002
<B>	lac	LAC_0001
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(2) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:			
	09.06.99	LE	Initial
	02.03.00	HM	Revised (search_running, variants)

3.21.8 MMG0487: Limited, new location area, full service

Description: MM is in service state Idle limited service. A new location area is entered. RR indicates full service. MM shall start normal location updating.

Preamble: MMG0479



Parametrization

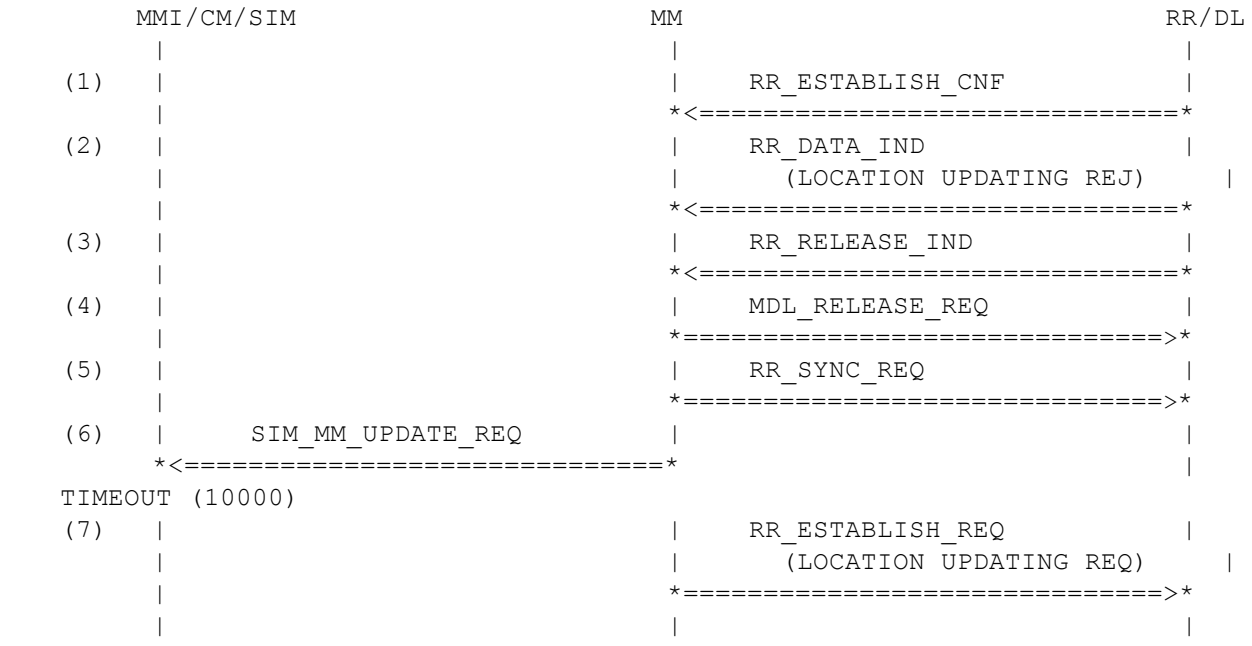
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	09.06.99	LE	Initial

3.21.9 MMG0488: Limited Service, LUP Reject Cause #17

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is NOT UPDATED and the the MM IDLE substate after the RR connection release is idle attempting to update. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type.

Preamble: MMG0487



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK

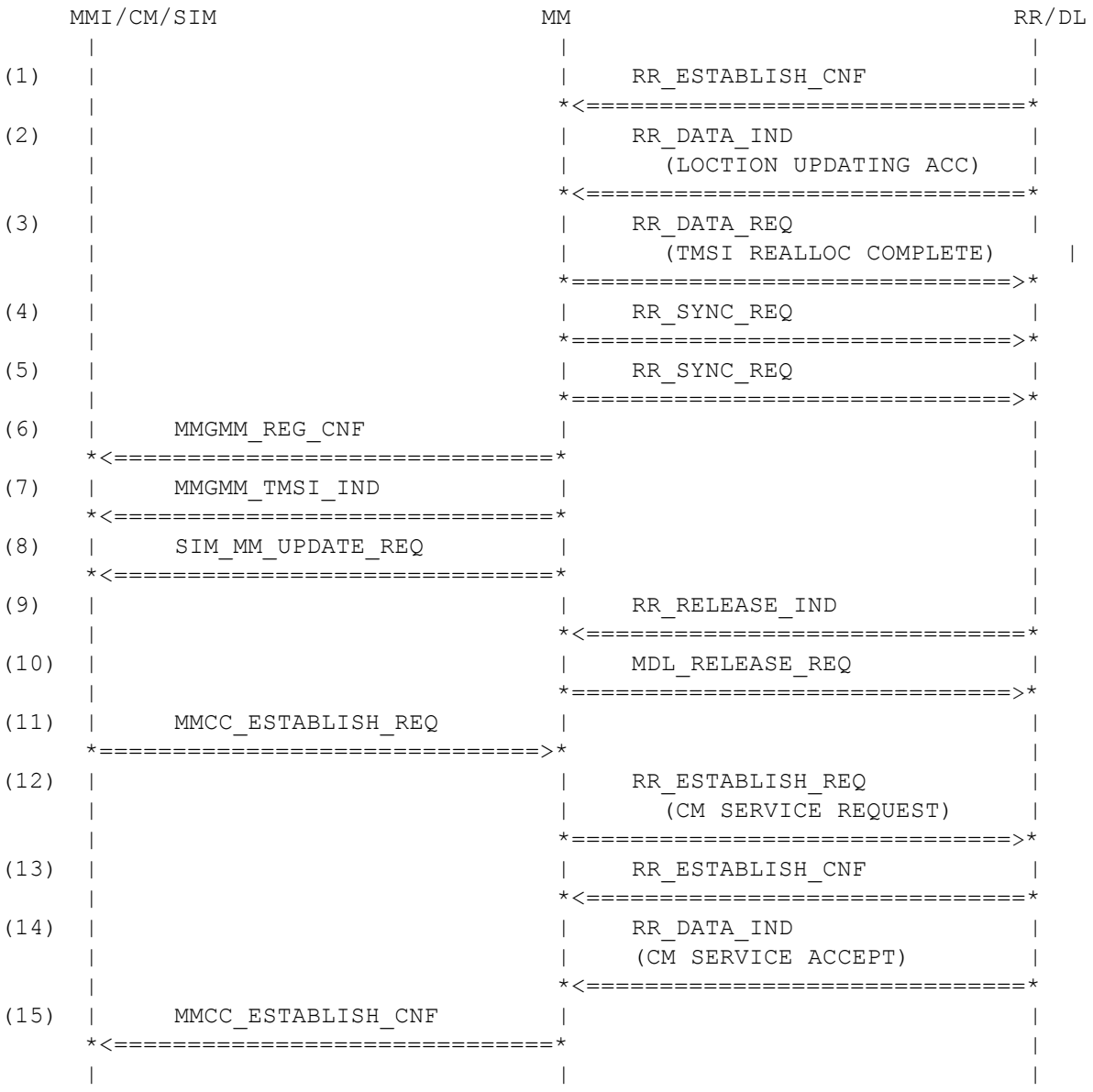
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History:	09.06.99	LE	Initial

3.21.10 MMG0489: Limited Service, Location updating accept

Description: MM is in idle limited service. After cell reselection a location updating is started. A connection establishment is started after successful location updating.

Preamble: MMG0487



Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED

		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_0002
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_0002_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED

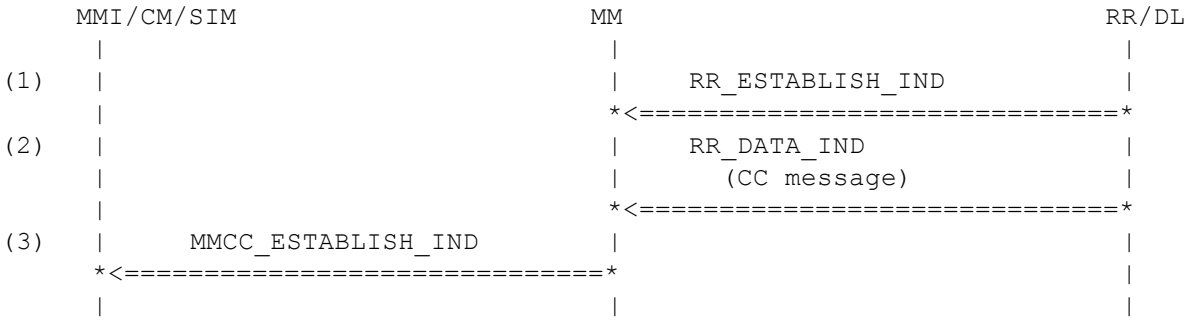
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(9)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(12)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(13)	RR_ESTABLISH_CNF		
		param	NOT_USED
(14)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(15)	MMCC_ESTABLISH_CNF		
		ti	TI_2

History:	09.06.99	LE	Initial
	17.01.02	HM	Revised

3.21.11 MMG0490: Limited Service, Mobile terminated Connection

Description: MM is in limited service state. RR will be paged. It is checked whether MM starts connection establishment.

Preamble: MMG0479



Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_IND		
	param	NOT_USED
(2) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(3) MMCC_ESTABLISH_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE

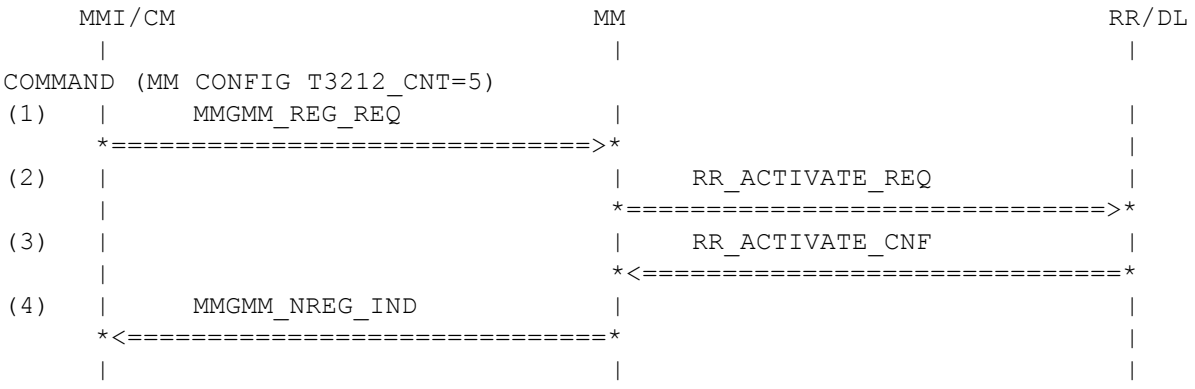
History: 09.06.99 LE Initial

3.22 MM Idle Mode Behaviour (No IMSI Service)

3.22.1 MMG0491: No IMSI State

Description: MM is in state idle no imsi_struct and initiates cell selection by issuing a RR-ACTIVATE request primitive. RR indicates only limited service. The periodic location updating timer shall not be started.

Preamble: MMG0022



Parametrization

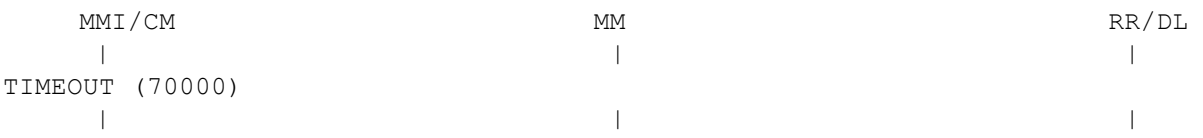
Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE

		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
History:	04.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)

3.22.2 MMG0492: No Imsi, not perform Periodic LUP

Description: The testcase waits 70 seconds. If the periodic LUP timer is started in the preamble, the testcase will fail, else MM has the expected behaviour. T3212 is decreased to 60 seconds by a dynamic config.

Preamble: MMG0491



Parametrization

Primitive	Parameter	Value

History:	09.06.99	LE	Initial

3.22.3 MMG0493: No IMSI, IMSI Detach, Power OFF

Description: MM is in IDLE No IMSI service state. It is switched off. MM shall not perform IMSI Detach. It shall only deactivate the lower layer.

Preamble: MMG0491

Parametrization

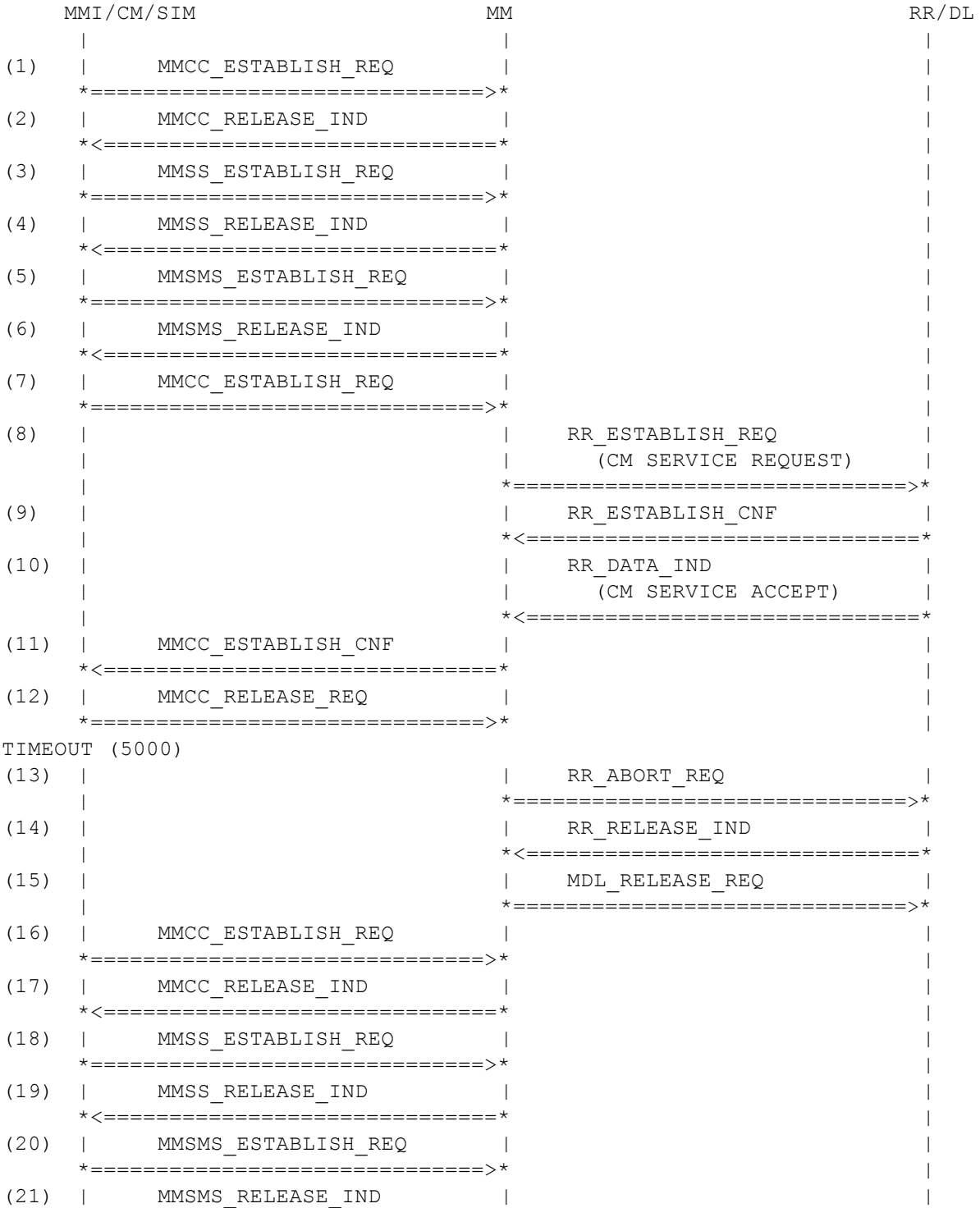
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

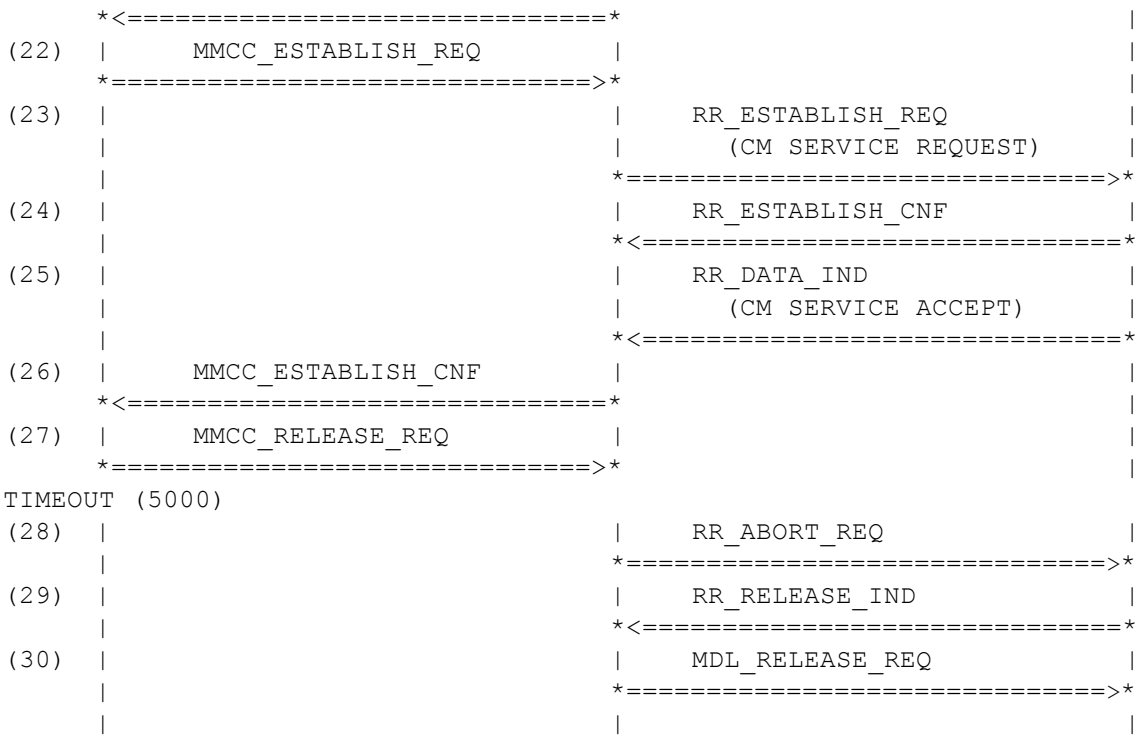
History: 09.06.99 LE Initial

3.22.4 MMG0494: No IMSI, Call attempts, Emergency Calls

Description: MM is in idle idle no IMSI service state. It shall reject all requests from CM entities except emergency calls. First the rejects are tested, then an emergency call. Then the whole sequence is tested again to check coming back in limited service state.

Preamble: MMG0491





Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMCC_RELEASE_IND		
		ti	TI_4
		cause	MMCS_NO_REGISTRATION
(3)	MMSS_ESTABLISH_REQ		
		ti	TI_3
(4)	MMSS_RELEASE_IND		
		ti	TI_3
		cause	MMCS_NO_REGISTRATION
(5)	MMSMS_ESTABLISH_REQ		
		ti	TI_5
(6)	MMSMS_RELEASE_IND		
		ti	TI_5
		cause	MMCS_NO_REGISTRATION
(7)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_EMERGE
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_EMRG_CAL

		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_EMERGENCY
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMEI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)		RR_DATA_IND	
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(11)		MMCC_ESTABLISH_CNF	
		ti	TI_3
(12)		MMCC_RELEASE_REQ	
		ti	TI_3
(13)		RR_ABORT_REQ	
		abcs	ABCS_NORM
(14)		RR_RELEASE_IND	
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15)		MDL_RELEASE_REQ	
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(16)		MMCC_ESTABLISH_REQ	
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(17)		MMCC_RELEASE_IND	
		ti	TI_4
		cause	MMCS_NO_REGISTRATION
(18)		MMSS_ESTABLISH_REQ	
		ti	TI_3
(19)		MMSS_RELEASE_IND	
		ti	TI_3
		cause	MMCS_NO_REGISTRATION

(20)
MMSMS_ESTABLISH_REQ
ti TI_5

(21)
MMSMS_RELEASE_IND
ti TI_5
cause MMCS_NO_REGISTRATION

(22)
MMCC_ESTABLISH_REQ
ti TI_3
estcs ESTCS_EMERGE

(23)
RR_ESTABLISH_REQ
estcs ESTCS_EMRG_CAL
sdu
{
component MM
direction UPLINK
pd U_CM_SERV_REQ
ti TI_0
cm_serv_type ST_EMERGENCY
ciph_key_num CIPH_KEY_NUM_RES
mob_class_2 MOB_CLASS_2
mob_id MOB_IDENT_IMEI
}

(24)
RR_ESTABLISH_CNF
param NOT_USED

(25)
RR_DATA_IND
d1 NOT_USED
d2 NOT_USED
sdu
{
component MM
direction DOWNLINK
pd D_CM_SERV_ACCEPT
ti TI_0
}

(26)
MMCC_ESTABLISH_CNF
ti TI_3

(27)
MMCC_RELEASE_REQ
ti TI_3

(28)
RR_ABORT_REQ
abcs ABCS_NORM

(29)
RR_RELEASE_IND
cause RRCS_ABNORM_UNSPEC
sapi SAPI_0
gprs_resumption GPRS_RESUMPTION_NOT_ACK

(30)
MDL_RELEASE_REQ
ch_type NOT_PRESENT_8BIT
sapi SAPI_0

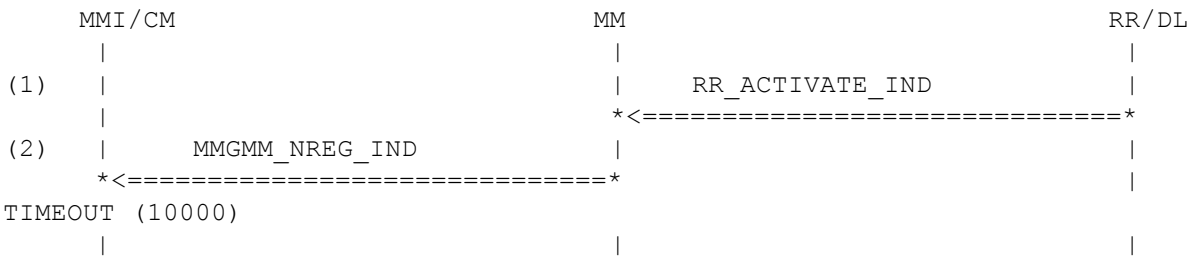
History:	09.06.99	LE	Initial
	02.02.01	HM	Revised

3.22.5 MMG0495: No IMSI, new cell, new LA, but only limited service

Description: MM is in service state Idle no IMSI. A.) A new cell is entered. B.) A new LA is entered. RR indicates only limited service. No reaction of MM is exspected.

Preamble: MMG0491

Variants: <A>....<B>



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
<A>		cid	CELL_ID_1123
<B>		cid	CELL_ID_1122
		plmn	PLMN_123_44
<A>		lac	LAC_0002
<B>		lac	LAC_0001
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

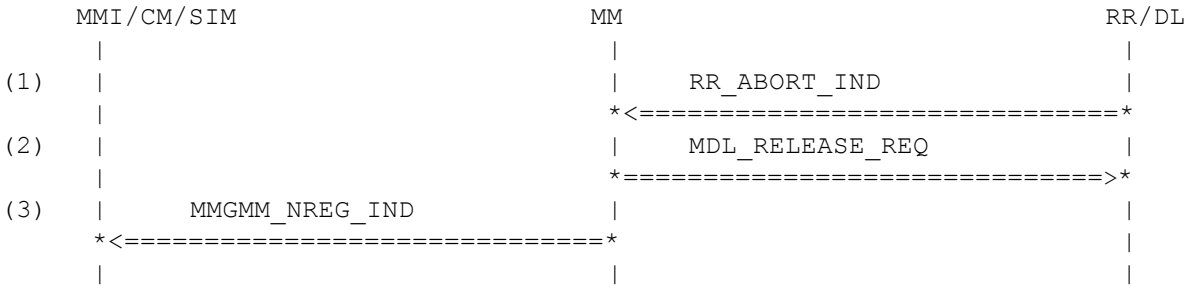
History:			
	09.06.99	LE	Initial
	02.03.00	HM	Revised (search_running, variants)

3.23 MM Idle Mode Behaviour (No Cell available)

3.23.1 MMG0497: No Cell available indication from Normal Service

Description: MM is in state Idle Normal Service. RR indicates that no cell is available. MM enters the no cell available state.

Preamble: MMG0024



Parametrization

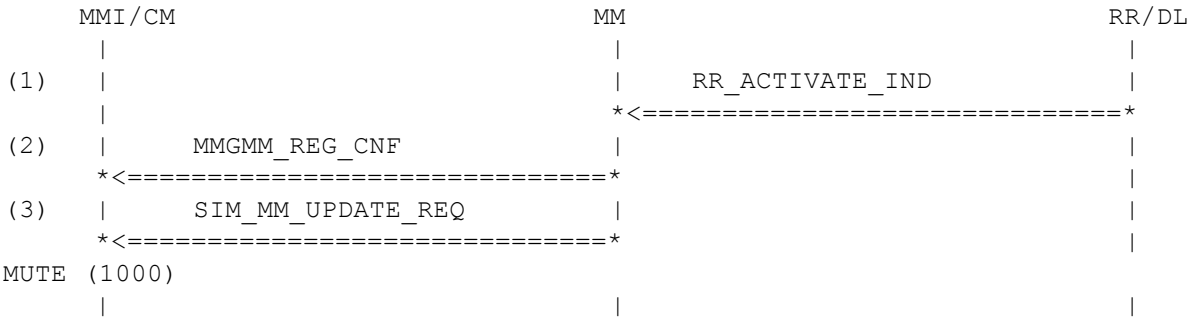
Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM_NO_SERV
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) MMGMM_NREG_IND		
	service	NREG_NO_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

History:			
	09.06.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	10.02.03	LOL	added lac_list

3.23.2 MMG0498: No Cell available, same cell

Description: MM is in service state No Cell available. RR indicates the availability of full service. It is the same cell as before. It is assumed that no location updating is started.

Preamble: MMG0497



Parametrization

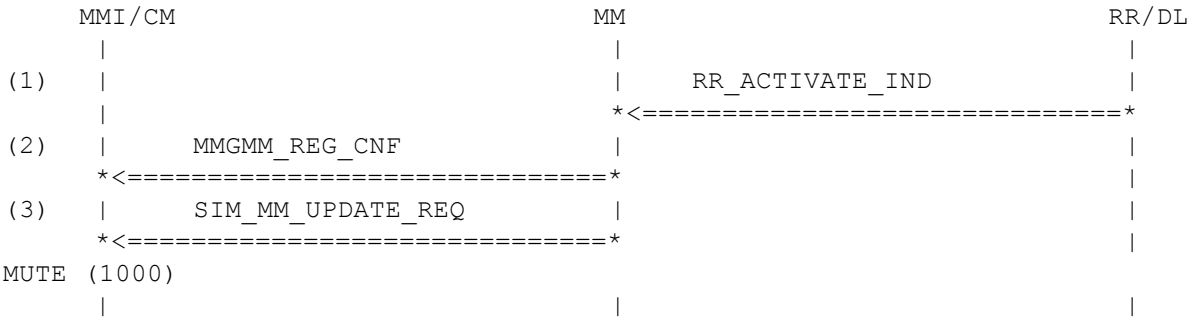
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(3)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:			
	03.05.99	LE	Initial
	31.01.02	HM	Revised

3.23.3 MMG0499: No Cell available, same location area

Description: MM is in service state No Cell available. RR indicates the availability of full service. It is a different cell but the same location area. It is assumed that no location updating is started.

Preamble: MMG0497



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO
		cid	CELL_ID_1123
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1123
		resumption	NOT_USED
(3)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1123

History:			
	03.05.99	LE	Initial
	30.01.02	HM	Revised

3.23.4 MMG0500: No IMSI, IMSI Detach, Power OFF

Description: MM is in IDLE No cell available service state. It is switched off. MM shall not perform IMSI Detach. It shall only deactivate the lower layer.

Preamble: MMG0497

Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 09.06.99 LE Initial

3.23.5 MMG0501: No Cell available, IMSI Detach, SIM Remove by SIM

Description: MM is in no cell available state. The SIM manager has detected a SIM Remove. MM shall not process IMSI Detach. MM remains in the same state.

Preamble: MMG0497

Parametrization

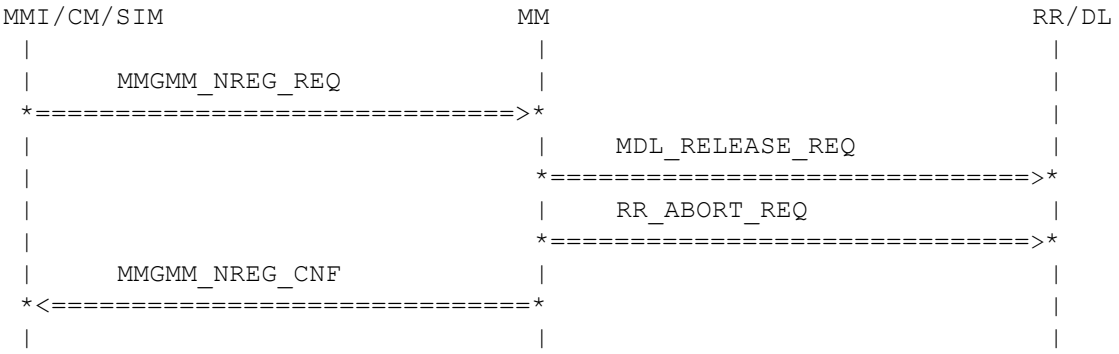
	Primitive	Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(4)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:			
	05.05.99	LE	Initial
	02.03.00	HM	Revised (search_running)
	29.11.00	HM	Revised

3.23.6 MMG0502: No Cell available, IMSI Detach, SIM Remove by MMI

Description: MM is in no cell available state. The MMI requests limited service. An IMSI Detach shall not be processed. The MS remains in the same state.

Preamble: MMG0497



Parametrization

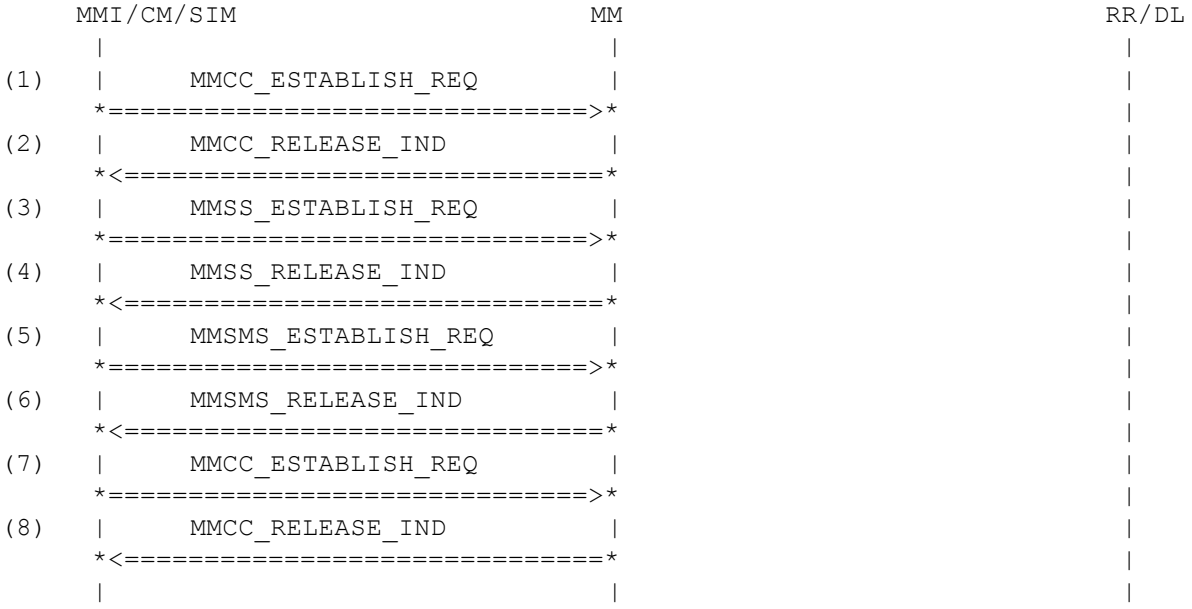
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:			
	05.05.99	LE	Initial
	29.11.00	HM	Revised

3.23.7 MMG0503: No cell available, Call attempts by upper layer

Description: MM is in idle no cell available state. It shall reject all requests from CM entities including emergency calls.

Preamble: MMG0497



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_4
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMCC_RELEASE_IND		
		ti	TI_4
		cause	MMCS_NO_REGISTRATION
(3)	MMSS_ESTABLISH_REQ		
		ti	TI_3
(4)	MMSS_RELEASE_IND		
		ti	TI_3
		cause	MMCS_NO_REGISTRATION
(5)	MMSMS_ESTABLISH_REQ		
		ti	TI_5
(6)	MMSMS_RELEASE_IND		
		ti	TI_5
		cause	MMCS_NO_REGISTRATION

(7)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_EMERGE
(8)	MMCC_RELEASE_IND		
		ti	TI_3
		cause	MMCS_NO_REGISTRATION

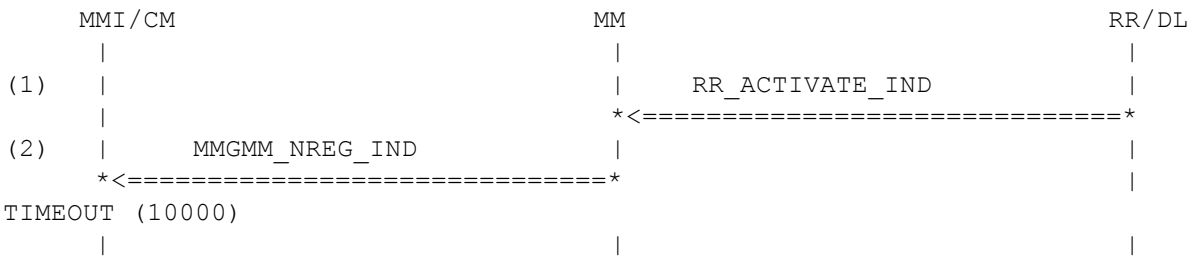
History:	09.06.99	LE	Initial

3.23.8 MMG0504: No cell available, new cell, new LA, but only limited service

Description: MM is in service state Idle no cell available. A.) A new cell is entered. B.) A new LA is entered. RR indicates only limited service. No reaction of MM is exspected.

Preamble: MMG0497

Variants: <A>....<B>



Parametrization

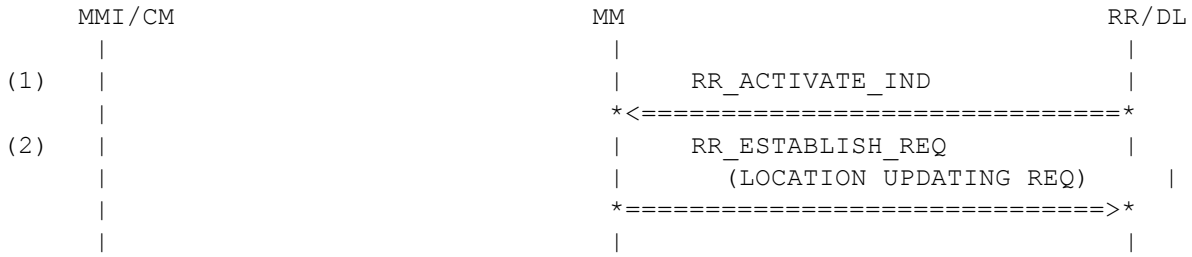
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		mm_info	MM_INFO
<A>		cid	CELL_ID_1123
<B>		cid	CELL_ID_1122
		plmn	PLMN_123_44
<A>		lac	LAC_0002
<B>		lac	LAC_0001
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

History:			
	09.06.99	LE	Initial
	02.03.00	HM	Revised (search_running, variants)

3.23.9 MMG0506: No Cell available, new cell, new location area, full service

Description: MM is in service state No cell available. A new cell is entered in a new location area. A normal location updating is started.

Preamble: MMG0497



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

History: 09.06.99 LE Initial

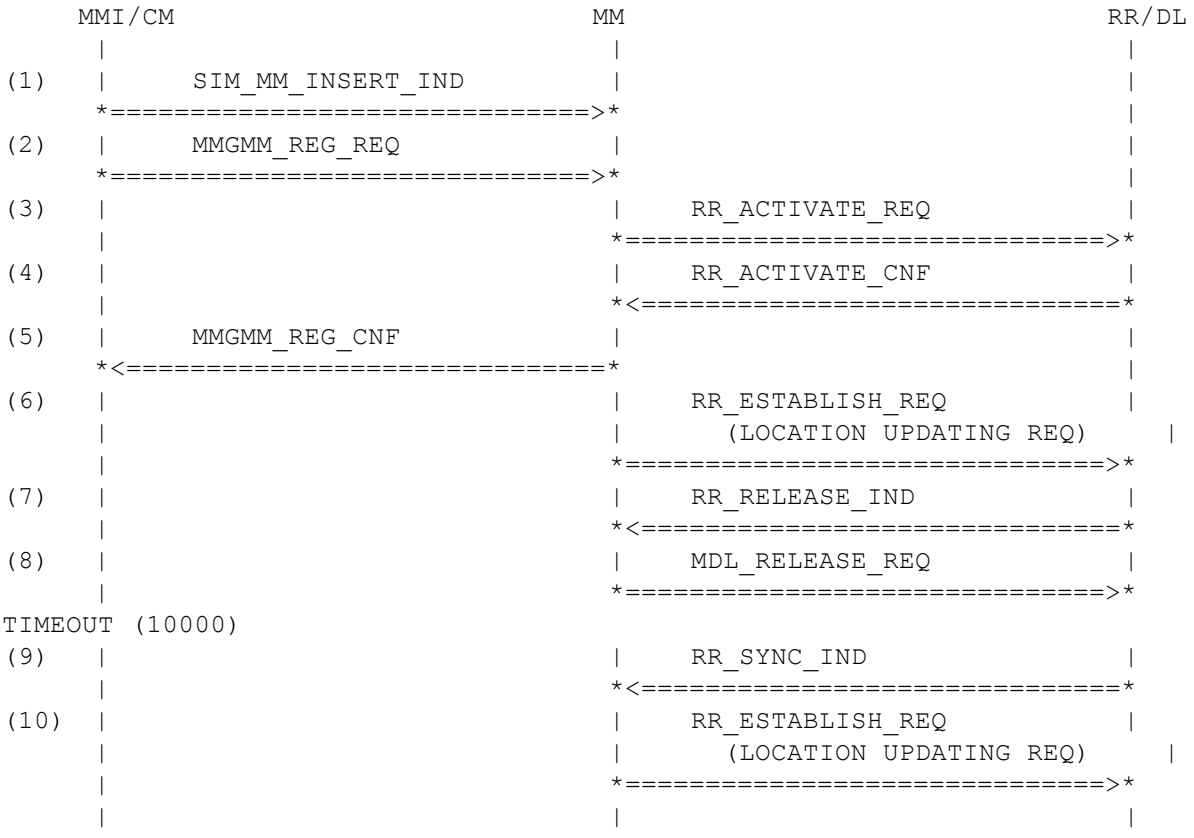
3.24 Additional registration testcases

3.24.1 MMG0520: MM needs IMSI ATTACH after switch on. Cell temporary barred

Description: The mobile is switched on. A SIM is inserted. The mobile station is updated on the cell, but an IMSI ATTACH is needed. The cell is barred. After a short period of time, an access class change is indicated. A second attempt is expected. The difference between this and MM520 is that here no registration attempt is tried before the SIM is inserted.
<A> Previous registration to limited service without SIM
<B> No previous registration to limited service

Variants: <A>....<B>

Preamble: <A> MMG0022
<B> MMG0001



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE

	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(4) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(5) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(6) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(7) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK

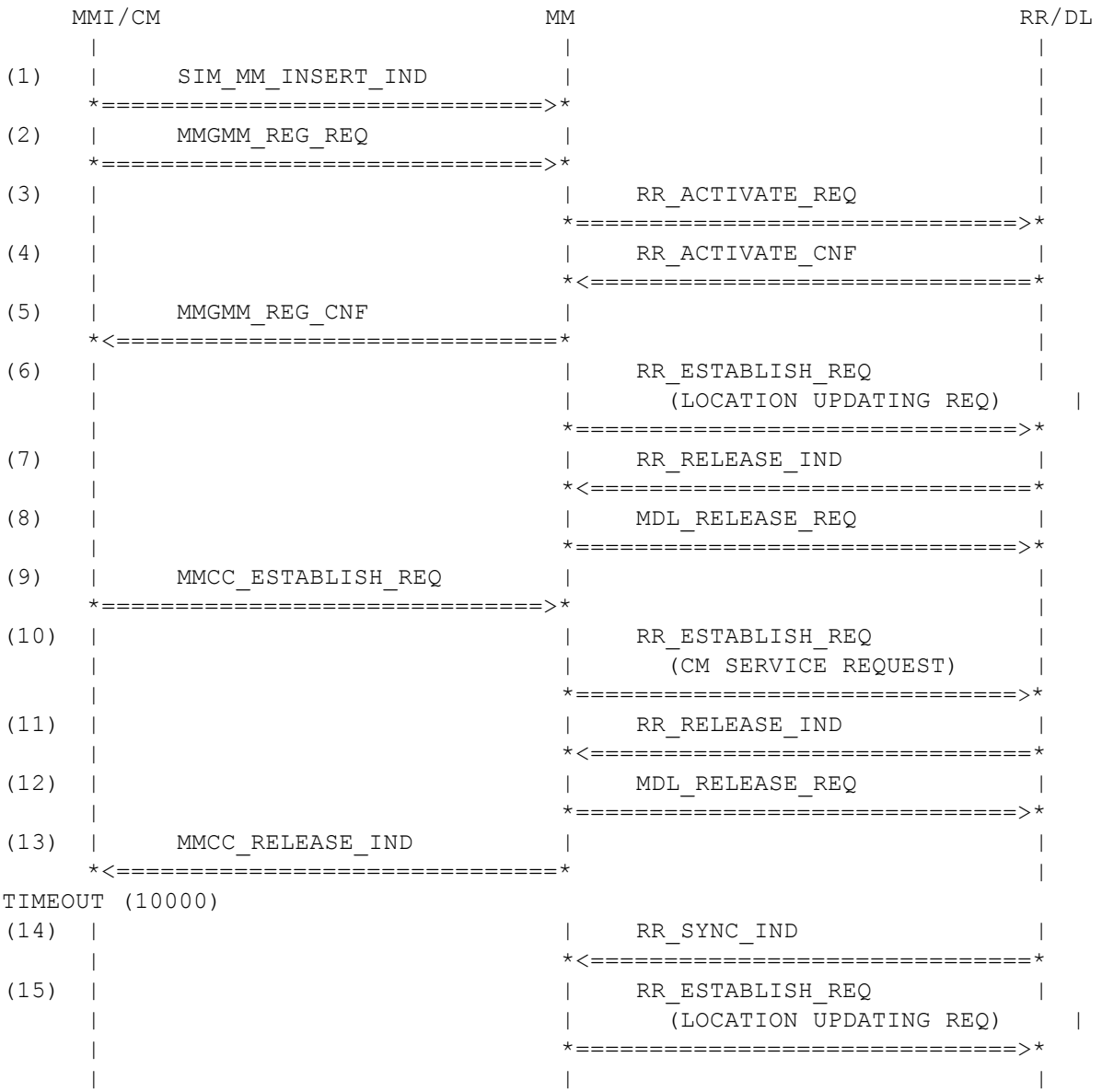
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_SYNC_IND		
		ciph	CIPH_NOT_PRES
		mm_info	NOT_USED
		bcch_info	NOT_USED
		synccs	SYNCCS_ACC_CLS_CHA
		chm	CHM_NOT_PRESENT
(10)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
History:	19.02.01	HM	Initial

3.24.2 MMG0521: MM needs IMSI ATTACH after switch on. Cell temporary barred

Description: The mobile is switched on. A SIM is inserted. The mobile station is updated on the cell, but an IMSI ATTACH is needed. The cell is barred. A call attempt is made and rejected due to the fact that the cell is barred. After a short period of time, an access class change is indicated. A second attempt is expected.
<A> Previous registration to limited service without SIM
<B> No previous registration to limited service

Variants: <A>....<B>

Preamble: <A> MMG0022
<B> MMG0001



Parametrization

Primitive	Parameter	Value

(1) SIM_MM_INSERT_IND

op_mode	NORMAL_SIM_INS
imsi_field	IMSI_FIELD_1
loc_info	LOC_INFO_123_33_2147_FFFFFFFF
acc_ctrl	ACC_CTRL_2143
bcch_inf	BCCH_INF_1
kc_n	KC_EMPTY
pref_plmn	PREF_PLMN_NONE
forb_plmn	FORB_PLMN_NONE
phase	PHASE_2_SIM
hplmn	THPLMN_01

(2) MMGMM_REG_REQ

service_mode	SERVICE_MODE_FULL
reg_type	REG_GPRS_INACTIVE
mobile_class	MMGMM_CLASS_CC

(3) RR_ACTIVATE_REQ

plmn	PLMN_123_33X
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_ECL
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(4) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO_ATT
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(5) MMGMM_REG_CNF

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
resumption	NOT_USED

(6) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_ATTACH
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147

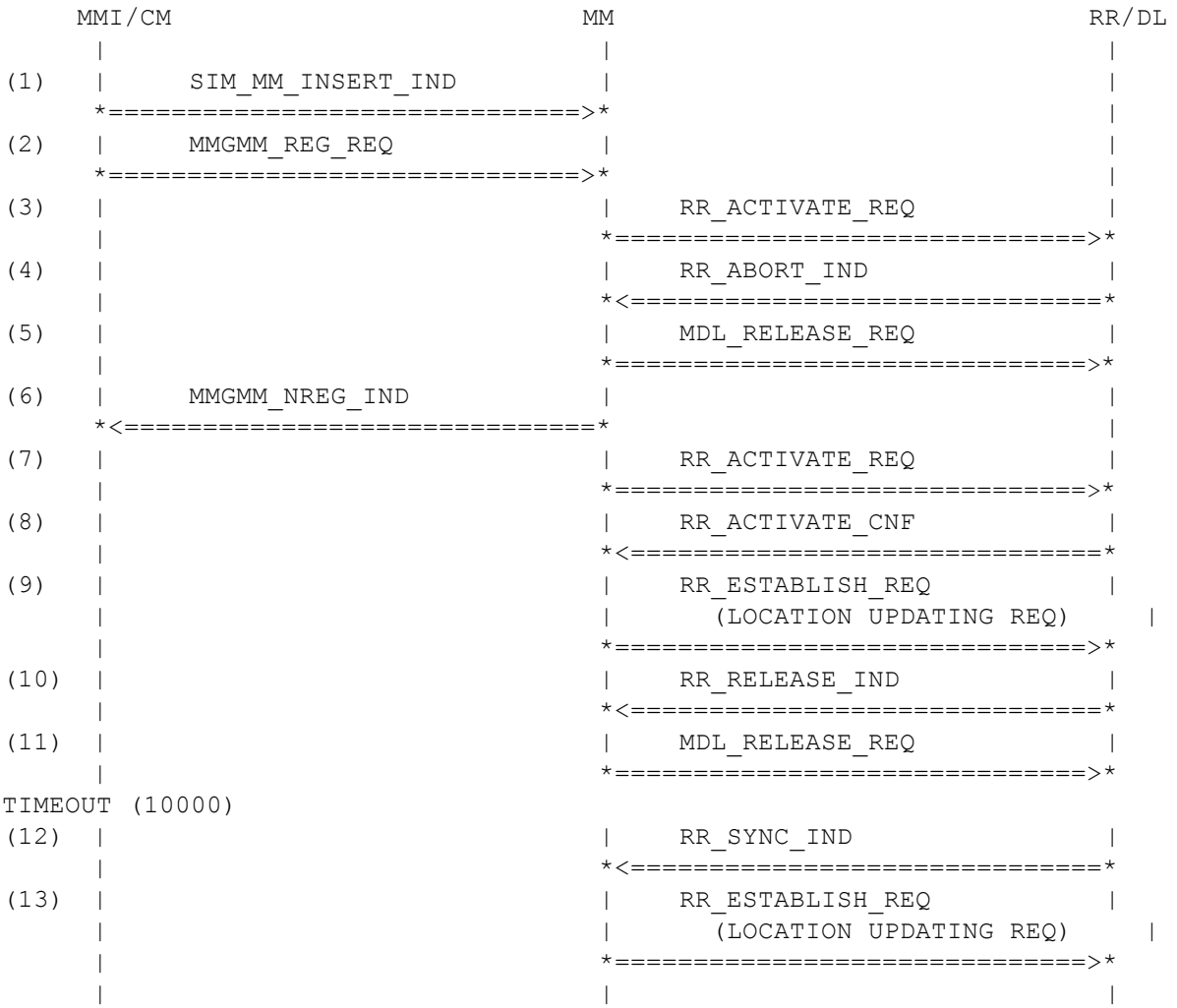
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(7) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(9) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_MOB_ORIG_SPCH
(10) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(11) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(13) MMCC_RELEASE_IND		
	ti	TI_2
	cause	RRCS_ACCESS_BARRED
(14) RR_SYNC_IND		
	ciph	CIPH_NOT_PRES
	mm_info	NOT_USED
	bcch_info	NOT_USED
	synccs	SYNCCS_ACC_CLS_CHA
	chm	CHM_NOT_PRESENT
(15) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ

		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
History:	19.02.01	HM	Initial

3.24.3 MMG0522: MM doesn't find LPLMN, needs NORMAL UPDATE, cell barred

Description: The mobile is switched on. A SIM is inserted. The mobile station doesn't find the requested PLMN, but another PLMN is available. A location updating attempt is performed, but the cell is barred. After some time the change of the access class is indicated by RR; the location updating attempt is started immediately.

Preamble: MMG0001



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE

		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_PLMN_123_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(7)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_31
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(8)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122

plmn	PLMN_123_31	
lac	LAC_2147	
power	RF_CLASS_2	
gprs_indication	GPRS_NO	

(9) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(10) RR_RELEASE_IND

cause	RRCS_ACCESS_BARRED
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(11) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(12) RR_SYNC_IND

ciph	CIPH_NOT_PRES
mm_info	NOT_USED
bcch_info	NOT_USED
synccs	SYNCCS_ACC_CLS_CHA
chm	CHM_NOT_PRESENT

(13) RR_ESTABLISH_REQ

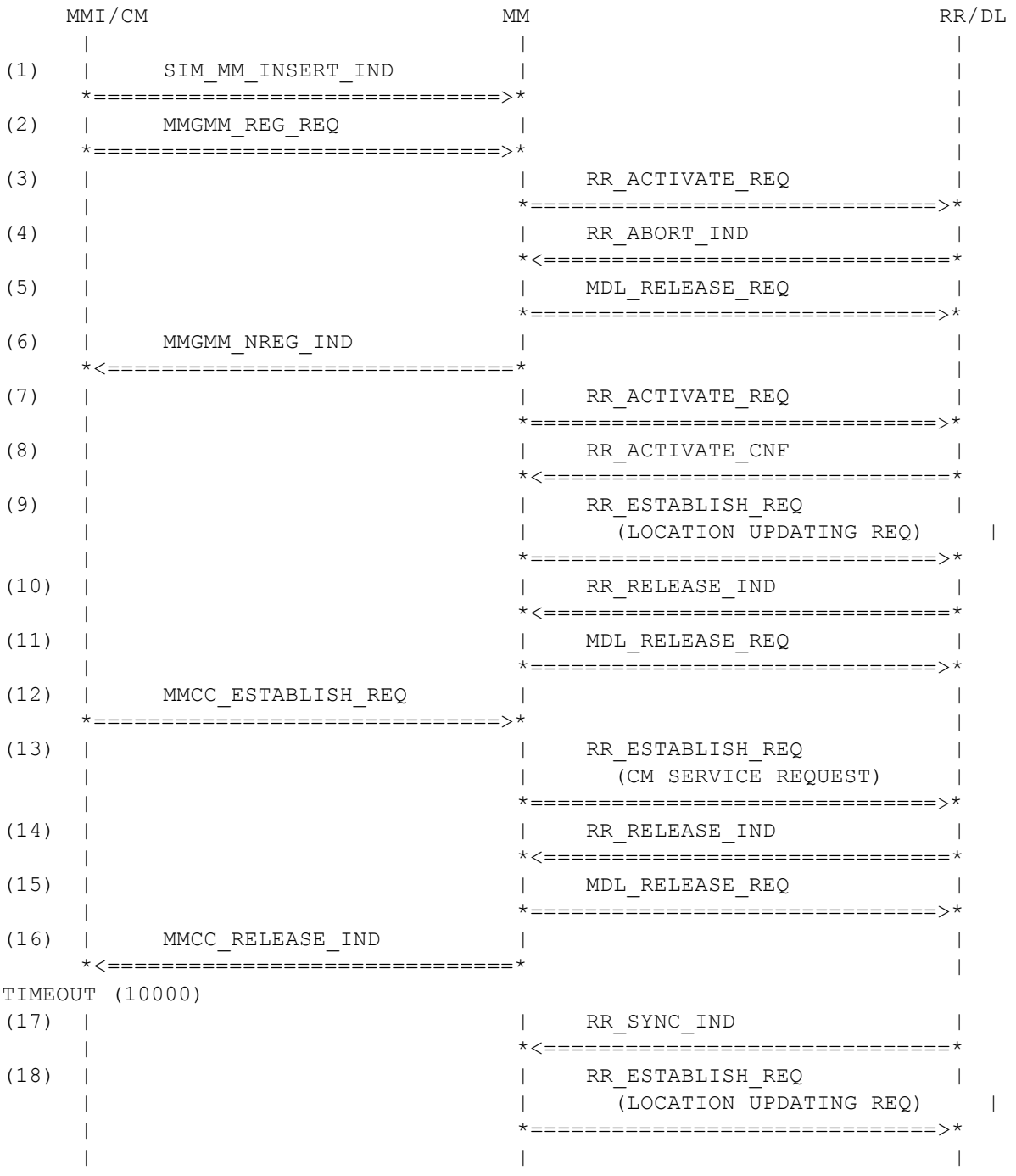
estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

History:			
	19.02.01	HM	Initial
	10.02.03	LOL	added lac_list

3.24.4 MMG0523: MM doesn't find LPLMN, needs NORMAL UPDATE, cell barred

Description: The mobile is switched on. A SIM is inserted. The mobile station doesn't find the requested PLMN, but another PLMN is available. A location updating attempt is performed, but the cell is barred. A call attempt is made and rejected due to the fact that the cell is barred. After some time the change of the access class is indicated by RR; the location updating attempt is started immediately.

Preamble: MMG0001



Parametrization

Primitive	Parameter	Value
(7) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(8) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(9) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(10) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_FOUND
	plmn	PLMN_LIST_PLMN_123_31
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20
	power	RF_CLASS_2
(11) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(12) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(13) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES

	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(14) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_31
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(15) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(16) RR_RELEASE_IND		
	cause	RRCS_ACCESS_BARRED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(17) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(18) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_MOB_ORIG_SPCH
(19) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2

		mob_id	MOB_IDENT_IMSI
		}	
(20)	RR_RELEASE_IND		
		cause	RRCS_ACCESS_BARRED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(21)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(22)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_ACCESS_BARRED
(23)	RR_SYNC_IND		
		ciph	CIPH_NOT_PRES
		mm_info	NOT_USED
		bcch_info	NOT_USED
		synccs	SYNCCS_ACC_CLS_CHA
		chm	CHM_NOT_PRESENT
(24)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

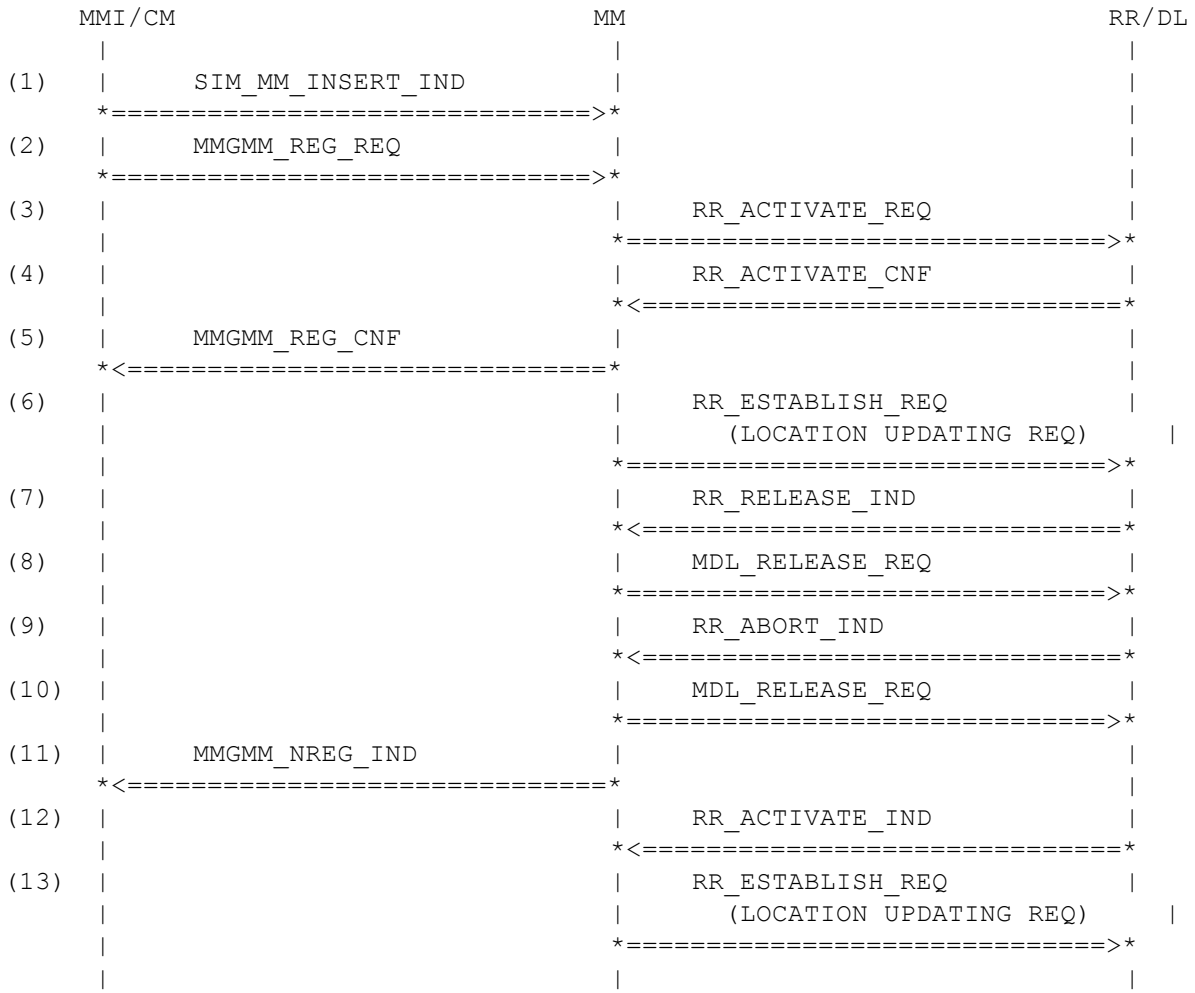
History:	19.02.01	HM	Initial
	10.02.03	LOL	added lac_list

3.24.5 MMG0524: MM needs IMSI ATTACH after switch on. Cell temporary barred

Description: The mobile is switched on. A SIM is inserted. The mobile station is updated on the cell, but an IMSI ATTACH is needed. The cell is barred. After a short period of time, the coverage is lost. After some time, coverage is gained again on the first cell. An IMSI ATTACH is expected.
<A> No service, access barred
<B> Limited service, access barred
<C> No service, random access failure
<D> Limited service, random access failure
[The newly introduced testcase currently doesn't run, the reason for this is a minor implementation problem in the protocol stack.]

Variants: <A>....<D>

Preamble: MMG0001



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1

	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_123_32
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(4) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(5) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(6) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

(7)	RR_RELEASE_IND		
	<A>	cause	RRCS_ACCESS_BARRED
	<B>	cause	RRCS_ACCESS_BARRED
	<C>	cause	RRCS_RND_ACC_FAIL
	<D>	cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ABORT_IND		
	<A>	op	OP_SIM_AUTO_PLMNSRCH_NS
	<B>	op	OP_SIM_AUTO_PLMNSRCH_LS
	<C>	op	OP_SIM_AUTO_PLMNSRCH_NS
	<D>	op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
	<A>	plmn_avail	NO_PLMN_FOUND
	<B>	plmn_avail	ONE_PLMN_FOUND
	<C>	plmn_avail	NO_PLMN_FOUND
	<D>	plmn_avail	ONE_PLMN_FOUND
		plmn	PLMN_LIST_FORB
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20
		power	RF_CLASS_2
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	MMGMM_NREG_IND		
	<A>	service	NREG_NO_SERVICE
	<B>	service	NREG_LIMITED_SERVICE
	<C>	service	NREG_NO_SERVICE
	<D>	service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(12)	RR_ACTIVATE_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(13)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0

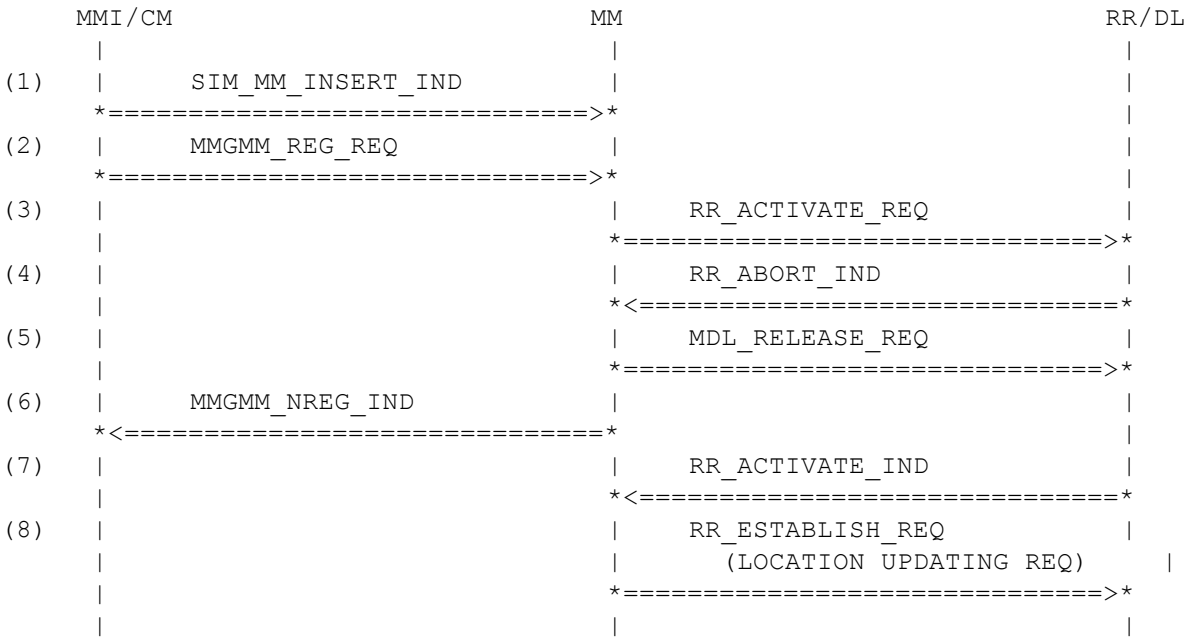
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
History:	19.02.01	HM	Initial
	10.02.03	LOL	added lac_list

3.24.6 MMG0525: MM needs IMSI ATTACH after switch on in tunnel

Description: The mobile is switched on. A SIM was inserted which has an update state in the area. At switch on, there is no service as the switch on was in a tunnel. After some time, the mobile phone leaves the tunnel and MM receives an RR_ACTIVATE_IND which indicates a cell selection in the updated location area, but the IMSI ATTACH is of course still needed.
<A> No service after switch on
<B> Only limited service after switch on

Variants: <A>....<B>

Preamble: MMG0001



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_123_32
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC

(3) RR_ACTIVATE_REQ

plmn	PLMN_123_33X
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_ECL
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(4) RR_ABORT_IND

<A>	op	OP_SIM_AUTO_PLMNSRCH_NS
<B>	op	OP_SIM_AUTO_PLMNSRCH_LS
	cause	RRCS_ABORT_CEL_SEL_FAIL
<A>	plmn_avail	NO_PLMN_FOUND
<B>	plmn_avail	ONE_PLMN_FOUND
	plmn	PLMN_LIST_FORB
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20
	power	RF_CLASS_2

(5) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(6) MMGMM_NREG_IND

<A>	service	NREG_NO_SERVICE
<B>	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT

(7) RR_ACTIVATE_IND

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO_ATT
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(8) RR_ESTABLISH_REQ

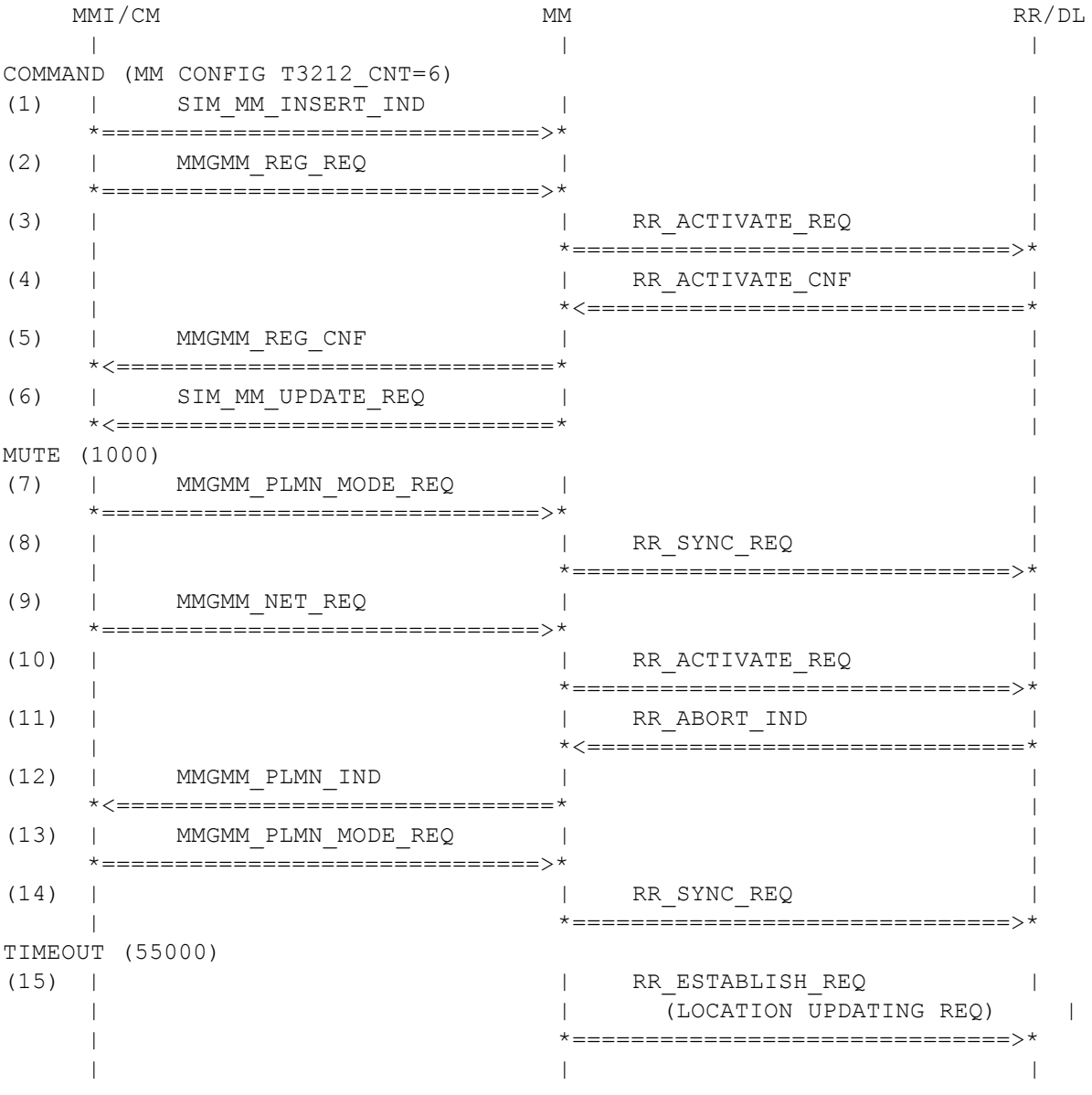
estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_ATTACH
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1

		mob_id	MOB_IDENT_IMSI
		}	
History:	22.02.01	HM	Initial
	10.02.03	LOL	added lac_list

3.24.7 MMG0526: MM IDLE updated, T3212 running, manual network search I

Description: The mobile is switched on. A SIM was inserted. An IMSI ATTACH update is performed. After a while the user starts a manual network search. It is checked that this does not restart T3212.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1

		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(7)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(8)	RR_SYNC_REQ		
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED

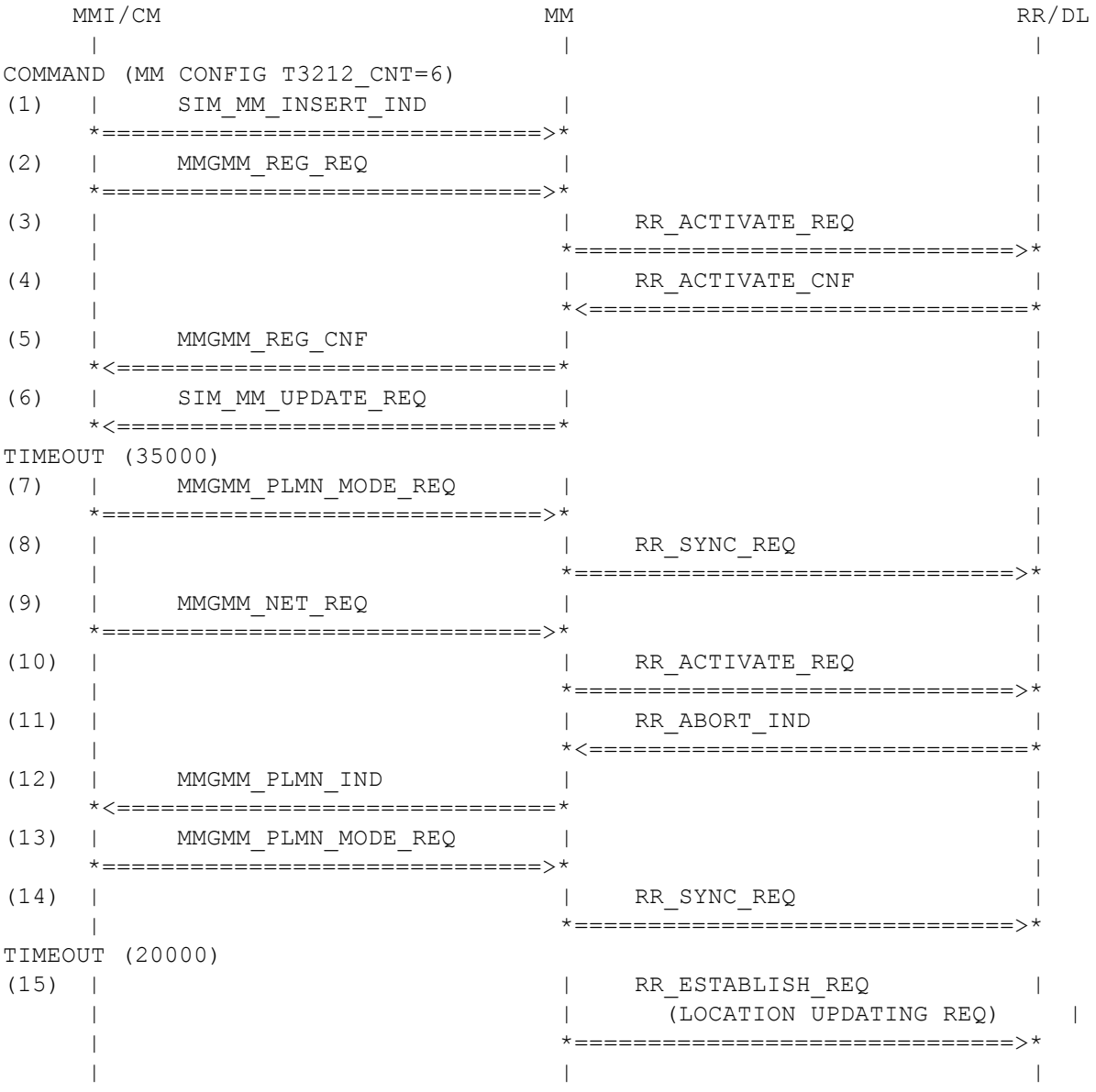
	synccs	NOT_PRESENT_16BIT
	accc	NOT_USED
	thplmn	NOT_USED
(9) MMGMM_NET_REQ		
(10) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_MAN_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(11) RR_ABORT_IND		
	op	OP_SIM_MAN_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_2_PLMN
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(12) MMGMM_PLMN_IND		
	cause	MMCS_SUCCESS
	plmn	PLMN_LIST_2_PLMN_0XFF
	forb_ind	FORB_PLMN_ID
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED
(13) MMGMM_PLMN_MODE_REQ		
	mode	MODE_AUTO
(14) RR_SYNC_REQ		
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_PRESENT_16BIT
	accc	NOT_USED
	thplmn	NOT_USED
(15) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ

		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
History:	28.02.01	HM	Initial
	30.01.02	HM	Revised
	10.02.03	LOL	added lac_list

3.24.8 MMG0527: MM IDLE updated, T3212 running, manual network search II

Description: The mobile is switched on. A SIM was inserted. An IMSI ATTACH update is performed. After a while the user starts a manual network search. It is checked that this does not restart T3212.

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1

	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_CC
(3) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(4) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_PER
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(5) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(6) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(7) MMGMM_PLMN_MODE_REQ		
	mode	MODE_MAN
(8) RR_SYNC_REQ		
	op	OP_SIM_MAN_PLMNSRCH_NS
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED

	synccs	NOT_PRESENT_16BIT
	accc	NOT_USED
	thplmn	NOT_USED

(9) MMGMM_NET_REQ

(10) RR_ACTIVATE_REQ

plmn	PLMN_NO_ID
op	OP_SIM_MAN_NETSRCH_NS
cksn	CKSN_NO_KEY
kcv	KCV_DELETED
accc	ACC_CLASS_0000
imsi_struct	MOB_ID_NO_ID
tmsi_struct	NOT_USED
thplmn	NOT_USED
bcch_info	NOT_USED
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(11) RR_ABORT_IND

op	OP_SIM_MAN_NETSRCH_FS
cause	RRCS_ABORT_CEL_SEL_FAIL
plmn_avail	TWO_PLMN_FOUND
plmn	PLMN_LIST_2_PLMN
lac_list	LAC_LIST_2
rxlevel	RXLEVEL_20_18
power	RF_CLASS_2

(12) MMGMM_PLMN_IND

cause	MMCS_SUCCESS
plmn	PLMN_LIST_2_PLMN_0XFF
forb_ind	FORB_PLMN_ID
lac_list	LAC_LIST_2
rxlevel	RXLEVEL_20_18_A
gprs_status	NOT_USED

(13) MMGMM_PLMN_MODE_REQ

mode	MODE_AUTO

(14) RR_SYNC_REQ

op	OP_SIM_AUTO_NETSRCH_NS
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_PRESENT_16BIT
accc	NOT_USED
thplmn	NOT_USED

(15) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ

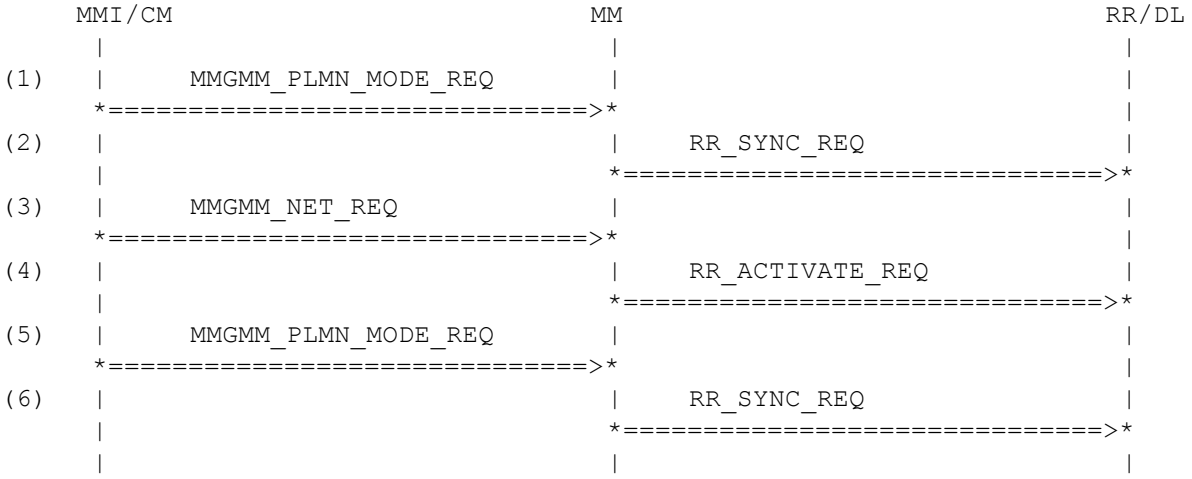
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
History:	28.02.01	HM	Initial
	30.01.02	HM	Revised
	10.02.03	LOL	added lac_list

3.25 Network search

3.25.1 MMG0530: Aborted manual NW srch in MM_IDLE_ATTEMPT_TO_UPDATE

Description: The mobile is in MM_IDLE_ATTEMPT_TO_UPDATE state, manual network mode selected. The user starts a manual PLMN search. While this is running, the user aborts the operation. It is not expected that MM really stops searching PLMNs, but if a call attempt will be made in the next testcase, MM has to remember that it came from MM_IDLE_ATTEMPT_TO_UPDATE state.

Preamble: MMG0410



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_NET_REQ		
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_MAN_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	NOT_USED

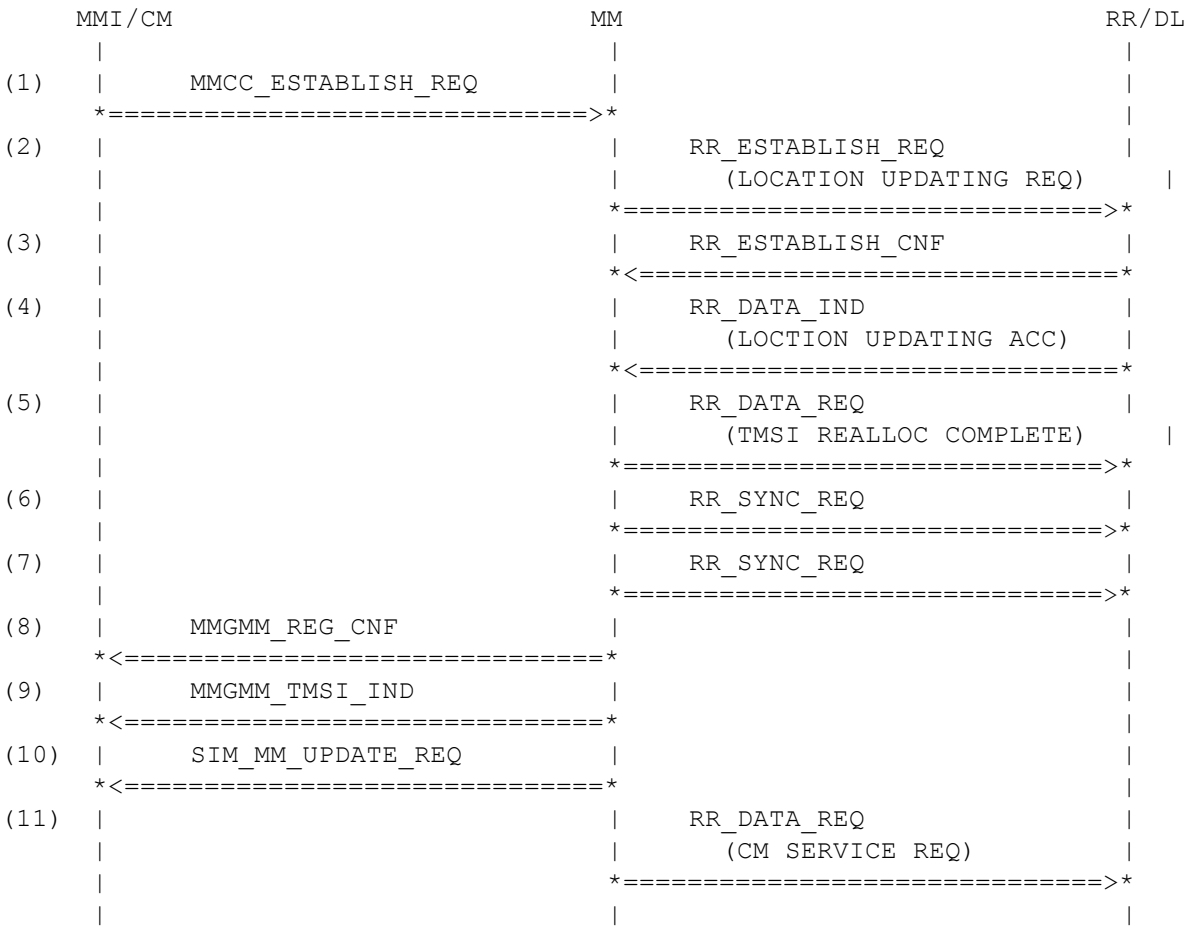
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(6)	RR_SYNC_REQ		
		op	OP_SIM_MAN_NETSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED

History: 28.02.01 HM Initial

3.25.2 MMG0531: MM_IDLE_ATTEMPT_TO_UPDATE, MO call

Description: The mobile is in MM_IDLE_ATTEMPT_TO_UPDATE or MM_PLMN_SEARCH_NORMAL_SERVICE state. The user makes a call attempt. As the mobile station was in MM_IDLE_ATTEMPT_TO_UPDATE state if it was not searching and the searching is now really stopped by the call attempt, it is expected that before the actual call attempt is made first a location updating procedure is performed.

Preamble: MMG0410



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_MOB_ORIG_DATA
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ

		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	IE_FOLLOW_PROCEED
		}	
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED

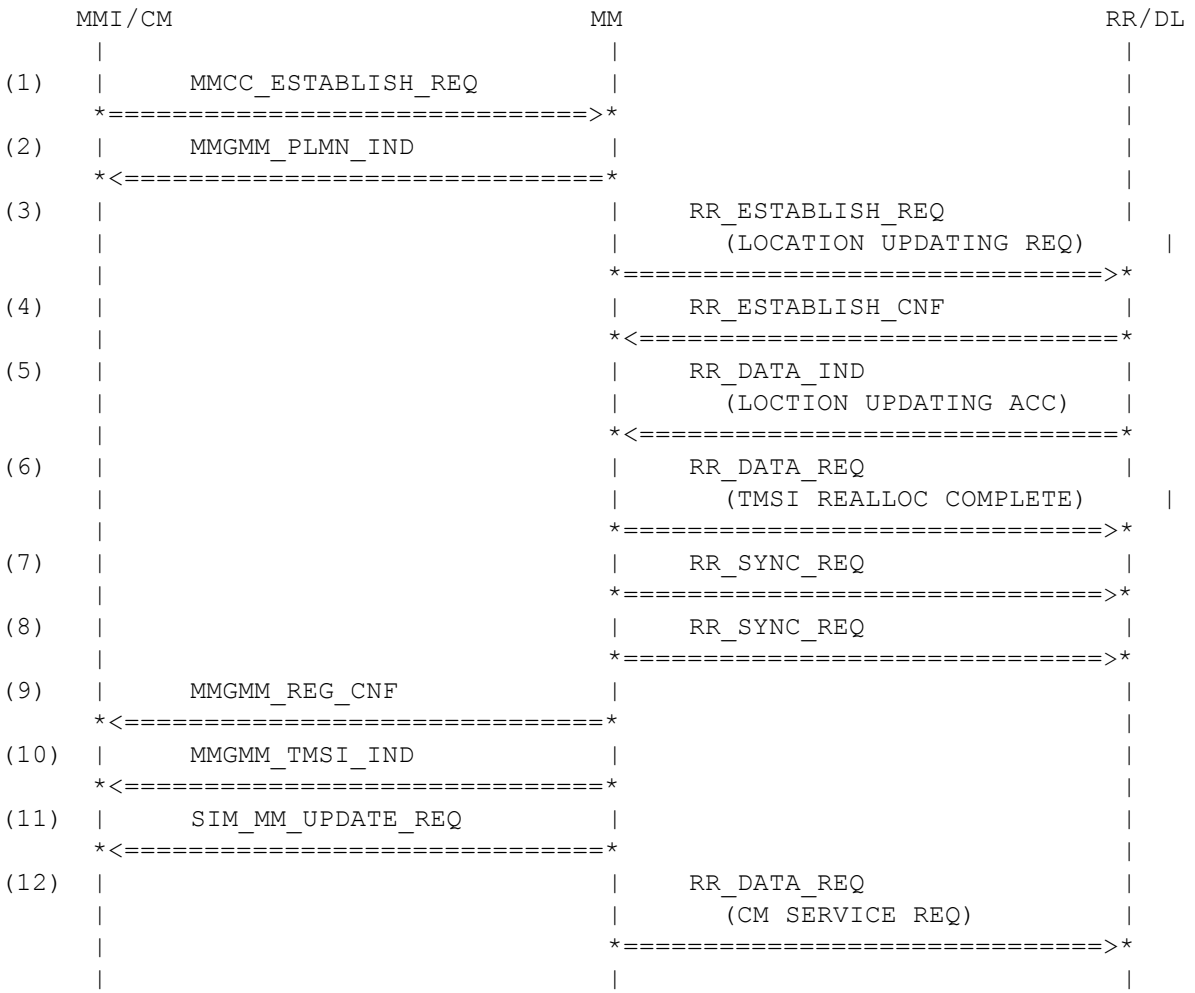
(8)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(10)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(11)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_NEW_TMSI
		}	

History:	28.02.01	HM	Initial
	18.01.02	HM	Revised
	19.08.02	HM	Revised

3.25.3 MMG0532: MM_PLMN_SEARCH_NORMAL_SERVICE, MO call

Description: The mobile is in MM_IDLE_ATTEMPT_TO_UPDATE or MM_PLMN_SEARCH_NORMAL_SERVICE state. The user makes a call attempt. As the mobile station was in MM_IDLE_ATTEMPT_TO_UPDATE state if it was not searching and the searching is now really stopped by the call attempt, it is expected that before the actual call attempt is made first a location updating procedure is performed.

Preamble: MMG0530



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_3
		estcs	ESTCS_MOB_ORIG_DATA
(2)	MMGMM_PLMN_IND		
		cause	MMCS_PLMN_NOT_IDLE_MODE
		plmn	NOT_USED
		forb_ind	NOT_USED
		lac_list	NOT_USED

		rxlevel	NOT_USED
		gprs_status	NOT_USED
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_ESTABLISH_CNF		
		param	NOT_USED
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	IE_FOLLOW_PROCEED
		}	
(6)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED

(8) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	PLMN_123_33
lac	LAC_2147
synccs	SYNCCS_LAI_ALLOW
accc	NOT_USED
thplmn	NOT_USED

(9) MMGMM_REG_CNF

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
resumption	NOT_USED

(10) MMGMM_TMSI_IND

tmsi	TMSI_34125708_ULONG

(11) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_2147_34125708
bcch_inf	BCCH_INF_1
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(12) RR_DATA_REQ

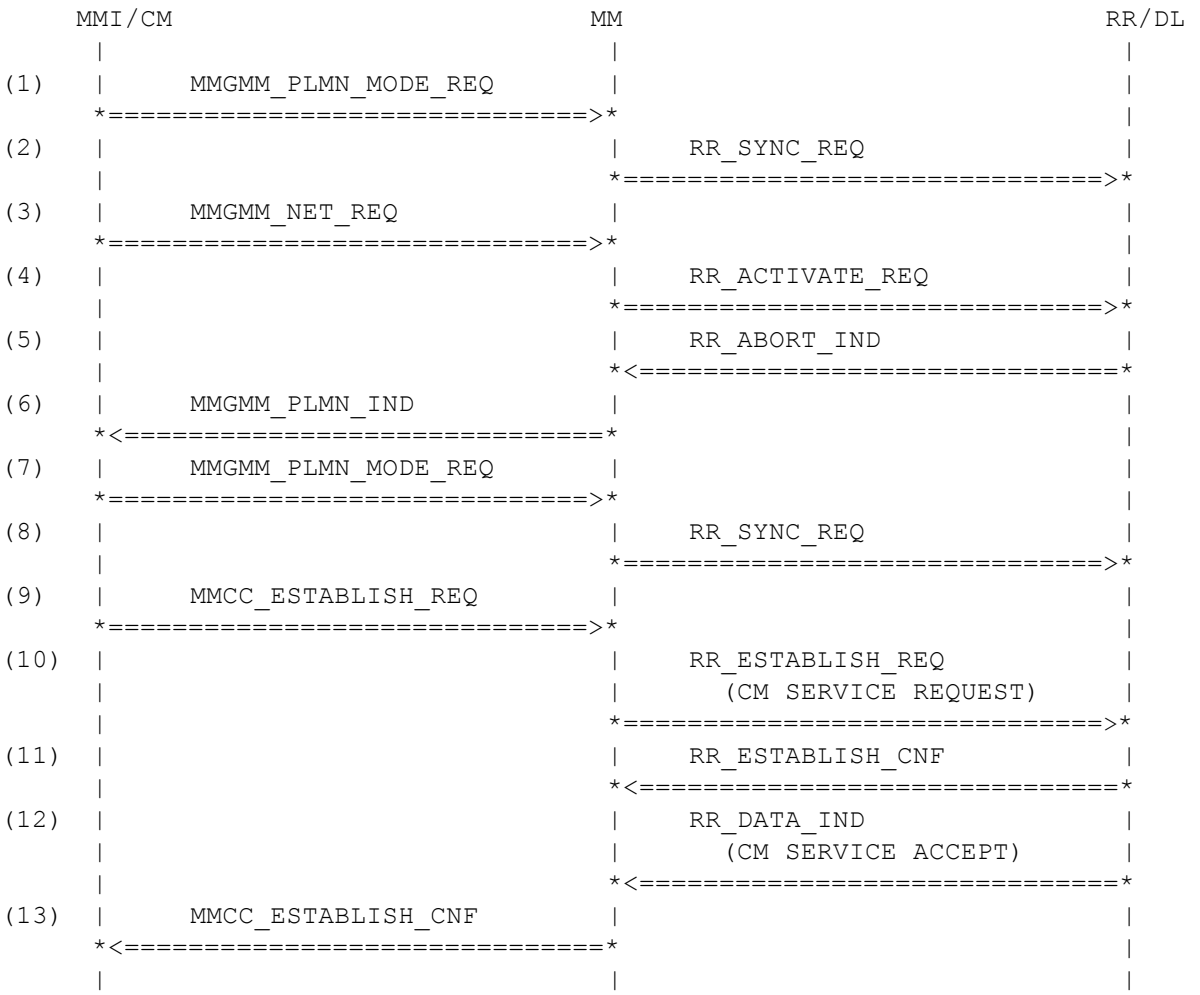
d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_CM_SERV_REQ
ti	TI_0
cm_serv_type	ST_MOC
ciph_key_num	CIPH_KEY_NUM_RES
mob_class_2	MOB_CLASS_2
mob_id	MOB_IDENT_NEW_TMSI
}	

History:			
	28.02.01	HM	Initial
	18.01.02	HM	Revised
	19.08.02	HM	Revised
	10.02.03	LOL	added lac_list

3.25.4 MMG0533: Manual NW search in MM_IDLE_ATTEMPT_TO_UPDATE

Description: The mobile is in MM_IDLE_ATTEMPT_TO_UPDATE state, manual network mode selected. The user starts a manual PLMN search. After the search is finished, the user tries an emergency call.

Preamble: MMG0410



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT

	accc	NOT_USED
	thplmn	NOT_USED
(3) MMGMM_NET_REQ		
(4) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_MAN_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(5) RR_ABORT_IND		
	op	OP_SIM_MAN_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_2_PLMN
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(6) MMGMM_PLMN_IND		
	cause	MMCS_SUCCESS
	plmn	PLMN_LIST_2_PLMN_0XFF
	forb_ind	FORB_PLMN_ID
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED
(7) MMGMM_PLMN_MODE_REQ		
	mode	MODE_MAN
(8) RR_SYNC_REQ		
	op	OP_SIM_MAN_NETSRCH_NS
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_PRESENT_16BIT
	accc	NOT_USED
	thplmn	NOT_USED
(9) MMCC_ESTABLISH_REQ		
	ti	TI_3
	estcs	ESTCS_EMERGE
(10) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM

direction		UPLINK
pd		U_CM_SERV_REQ
ti		TI_0
cm_serv_type		ST_EMERGENCY
ciph_key_num		CIPH_KEY_NUM_RES
mob_class_2		MOB_CLASS_2
mob_id		MOB_IDENT_IMSI
}		

(11) RR_ESTABLISH_CNF

param	NOT_USED

(12) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_CM_SERV_ACCEPT
ti	TI_0
}	

(13) MMCC_ESTABLISH_CNF

ti	TI_3

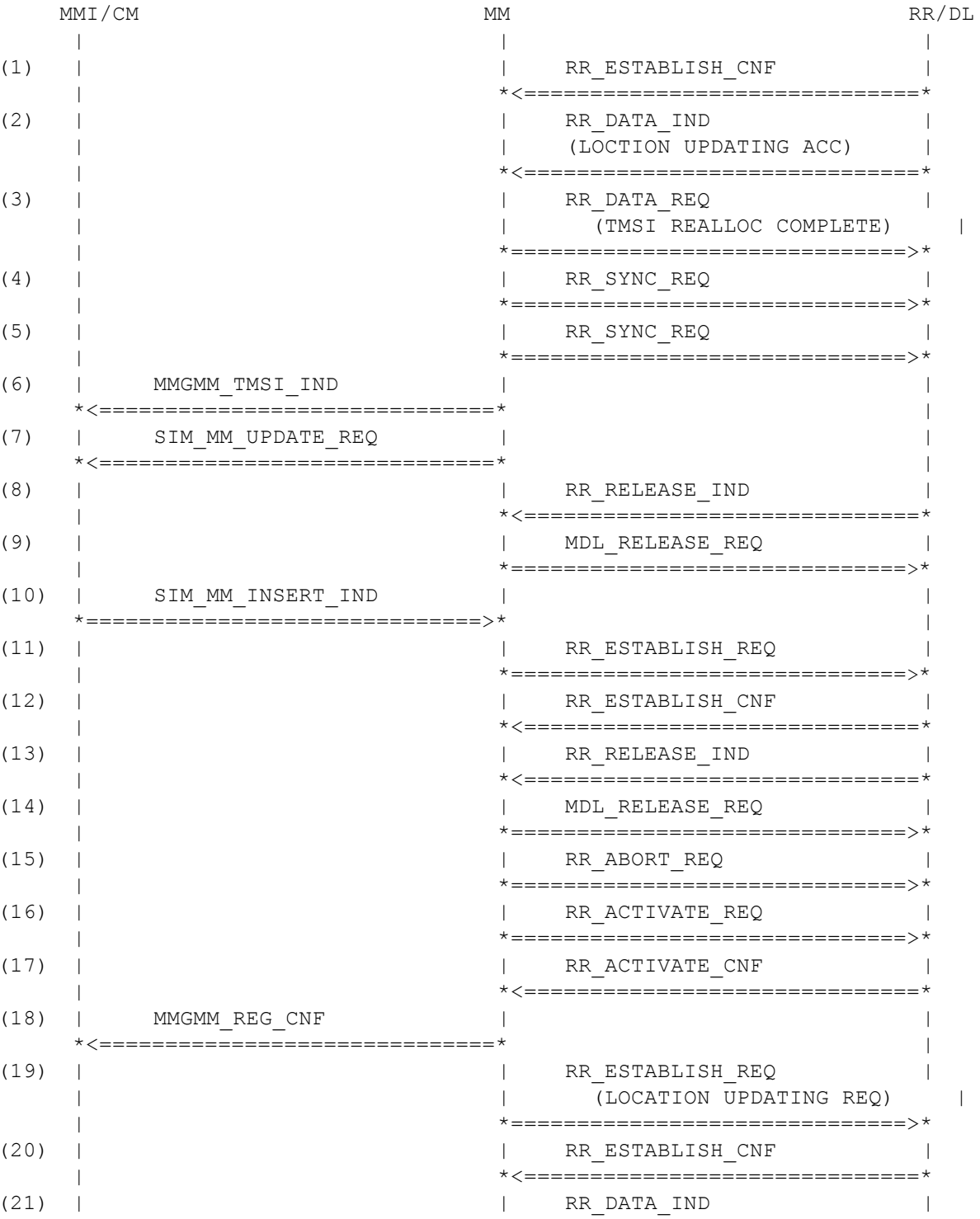
History:	28.02.01	HM	Initial
	10.02.03	LOL	added lac_list

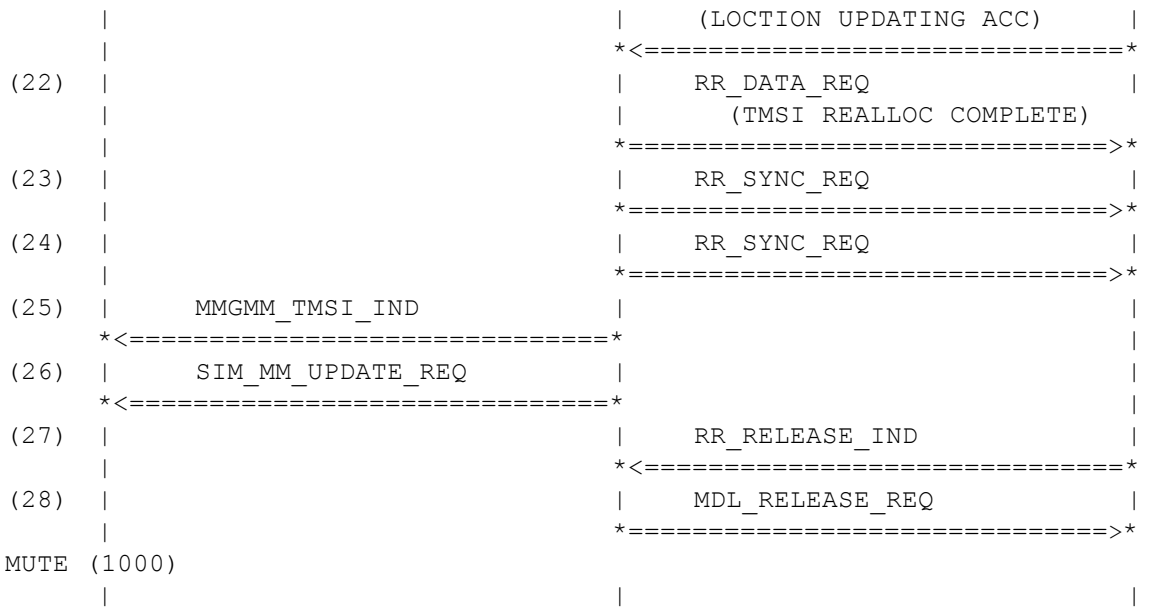
3.26 Behaviour due to SAT activity

3.26.1 MMG0601: SIM insert indication by SAT .- IMSI change, detach/attach

Description: MM receives a SIM_MM_INSERT_IND with IMSI change. This shall cause a MM Restart procedure. Automatic regstration mode version.

Preamble: MMG0403





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_CNF		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED

	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(5) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(6) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(7) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(8) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(9) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(10) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	SIM_IMSI_001010123456789
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(11) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
	sdu	
	{	
	component	MM
	direction	UPLINK

	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_TMSI
	}	
(12) RR_ESTABLISH_CNF		
	param	NOT_USED
(13) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(15) RR_ABORT_REQ		
	abcs	ABCS_SIM_REM
(16) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	PRI_IMSI_001010123456789
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_ECL
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(17) RR_ACTIVATE_CNF		
	op	OP_SIM_MAN_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(18) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(19) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH

	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MSG_IMSI_001010123456789
	}	
(20) RR_ESTABLISH_CNF		
	param	NOT_USED
(21) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(22) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(23) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(24) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED

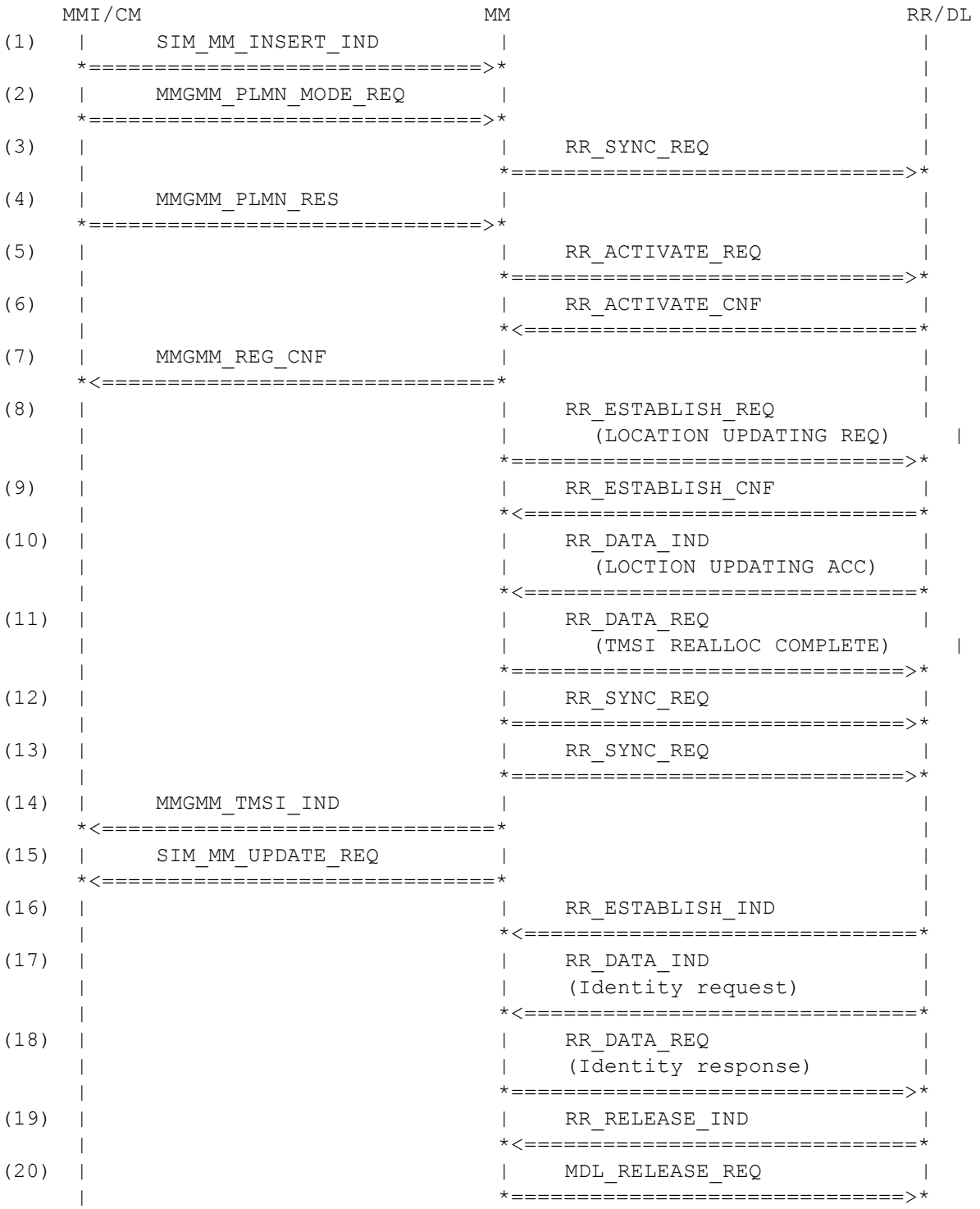
(25) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(26) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(27) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(28) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

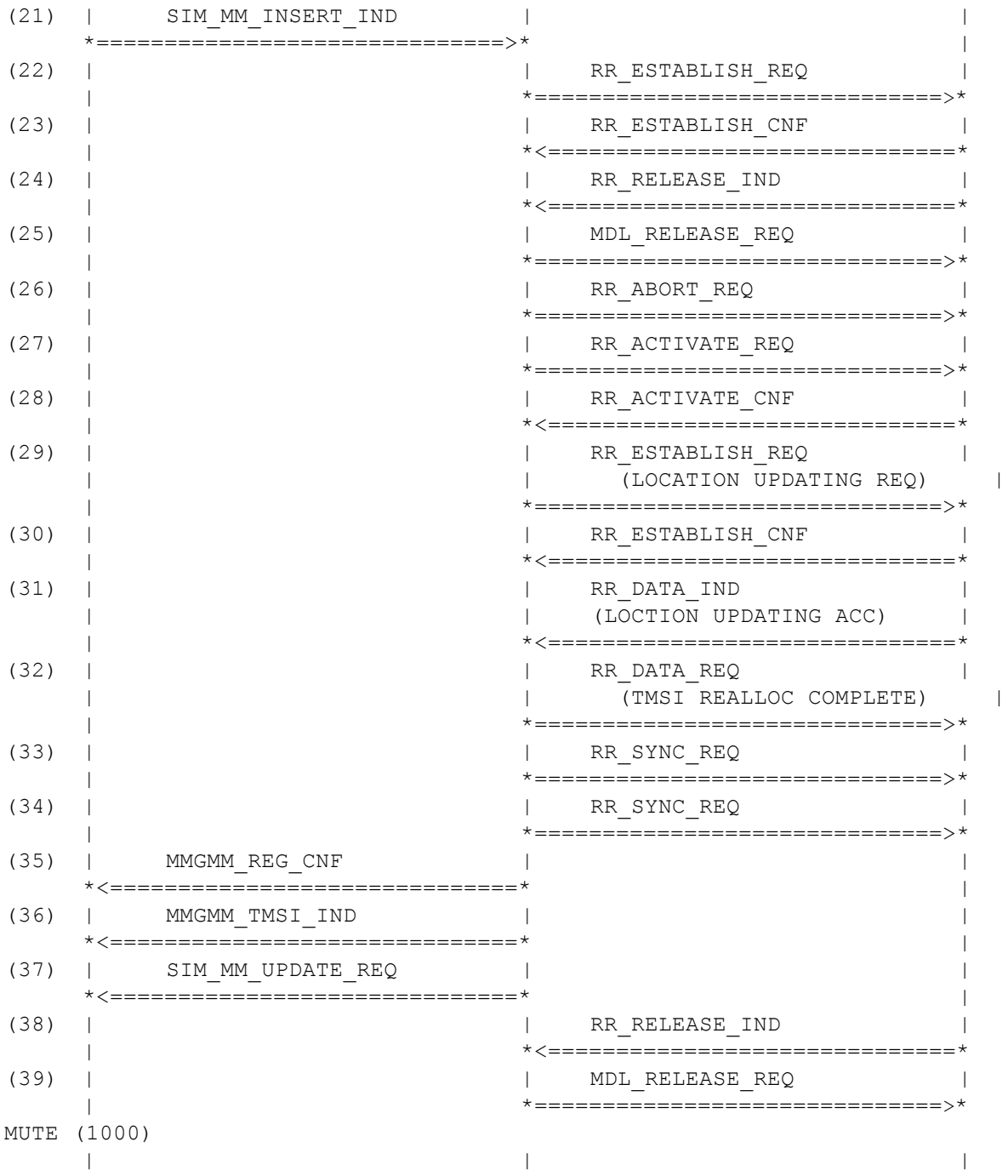
History:			
	10.04.00	HM	Initial
	09.03.01	HM	Revised
	02.11.01	HM	Revised
	16.01.02	HM	Revised
	18.01.02	HM	Revised

3.26.2 MMG0602: SIM insert indication by SAT - IMSI change, detach/attach, manual

Description: MM receives a SIM_MM_INSERT_IND with IMSI change. This shall cause a MM Restart procedure. In this testcase, no detach is required by cell. Manual mode. The mobile is updated by the SIM in another location area that the one the mobile is manual required to register to. A normal location updating on the manually selected PLMN is expected.

Preamble: MMG0022





Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143

		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(3)	RR_SYNC_REQ		
		op	OP_MODE_SIM_NO_SERV_M1
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(4)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(6)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(7)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	

	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(9) RR_ESTABLISH_CNF		
	param	NOT_USED
(10) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(11) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(13) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33

	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(14) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(16) RR_ESTABLISH_IND		
	param	NOT_USED
(17) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_IDENT_REQ
	ti	TI_0
	ident	IDENT_TYPE_IMSI
	}	
(18) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IDENT_RES
	ti	TI_0
	mob_id	MOB_IDENT_IMSI
	}	
(19) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(20) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	SIM_IMSI_001010123456789
	loc_info	LOC_INFO_123_44_0002_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1

	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(22) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_TMSI
	}	
(23) RR_ESTABLISH_CNF		
	param	NOT_USED
(24) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(25) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(26) RR_ABORT_REQ		
	abcs	ABCS_SIM_REM
(27) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33
	op	OP_SIM_MAN_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	PRI_IMSI_001010123456789
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(28) RR_ACTIVATE_CNF		
	op	OP_SIM_MAN_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(29) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	

```
                                {
                                component       MM
                                direction       UPLINK
                                pd              U_LOC_UPD_REQ
                                ti              TI_0
                                loc_upd_type    LOC_UPD_TYPE_NORMAL
                                ciph_key_num    CIPH_KEY_NUM_RES
                                loc_area_ident  LOC_AREA_ID_123_44_0002
                                mob_class_1     MOB_CLASS_1
                                mob_id          MSG_IMSI_001010123456789
                                }
(30) RR_ESTABLISH_CNF
                                param           NOT_USED
(31) RR_DATA_IND
                                d1              NOT_USED
                                d2              NOT_USED
                                sdu
                                {
                                component       MM
                                direction       DOWNLINK
                                pd              D_LOC_UPD_ACCEPT
                                ti              TI_0
                                loc_area_ident  LOC_AREA_ID_123_33_2147
                                mob_id          MOB_IDENT_NEW_TMSI
                                follow_proceed  NOT_USED
                                }
(32) RR_DATA_REQ
                                d1              NOT_USED
                                d2              NOT_USED
                                sdu
                                {
                                component       MM
                                direction       UPLINK
                                pd              U_TMSI_REALLOC_COMP
                                ti              TI_0
                                }
(33) RR_SYNC_REQ
                                op              NOT_USED
                                cksn            NOT_USED
                                kcv             NOT_USED
                                tmsi_struct     MOB_ID_NEW_TMSI
                                plmn            NOT_USED
                                lac             NOT_USED
                                synccs          NOT_USED
                                accc            NOT_USED
                                thplmn          NOT_USED
(34) RR_SYNC_REQ
                                op              NOT_USED
                                cksn            NOT_USED
                                kcv             NOT_USED
                                tmsi_struct     NOT_USED
                                plmn            PLMN_123_33
```

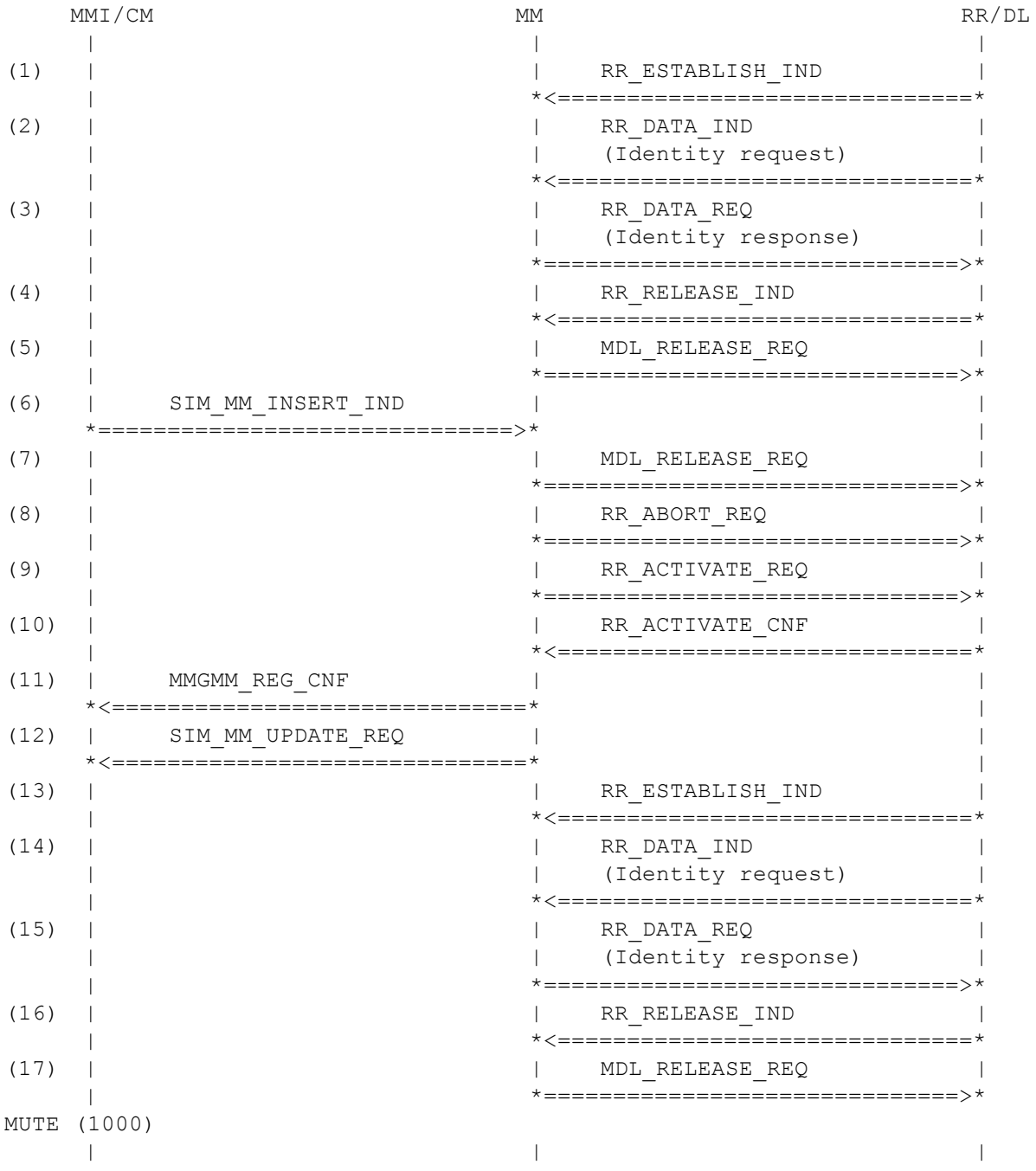
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(35) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(36) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(37) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(38) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(39) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	30.03.00	HM	Initial
	14.02.01	HM	Revised
	02.11.01	HM	Revised
	16.01.02	HM	Revised
	18.01.02	HM	Revised

3.26.3 MMG0603: SIM insert indication by SAT - IMSI change, automatic mode

Description: MM receives a SIM_MM_INSERT_IND with IMSI change. This shall cause a MM Restart procedure. In this testcase, no detach is required by cell and the mobile is in automatic mode. As the same cell is selected after the IMSI ATTACH, there is no need to indicate the full service condition to the MMI as there was never something else than full service indicated. (To simplify the protocol machine, this is done anyway now as it should not do any harm. The same applies for SIM_MM_UPDATE_REQ.)

Preamble: MMG0024



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_IDENT_REQ
		ti	TI_0
		ident	IDENT_TYPE_IMSI
		}	
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IDENT_RES
		ti	TI_0
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	SIM_IMSI_001010123456789
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM

(9) RR_ACTIVATE_REQ

plmn	PLMN_123_33
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	PRI_IMSI_001010123456789
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_ECL
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(10) RR_ACTIVATE_CNF

op	OP_SIM_MAN_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(11) MMGMM_REG_CNF

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
resumption	NOT_USED

(12) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_2147_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(13) RR_ESTABLISH_IND

param	NOT_USED

(14) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_IDENT_REQ
ti	TI_0
ident	IDENT_TYPE_IMSI
}	

(15) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM

direction		UPLINK
pd		U_IDENT_RES
ti		TI_0
mob_id		MSG_IMSI_001010123456789
}		

(16) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(17) MDL_RELEASE_REQ

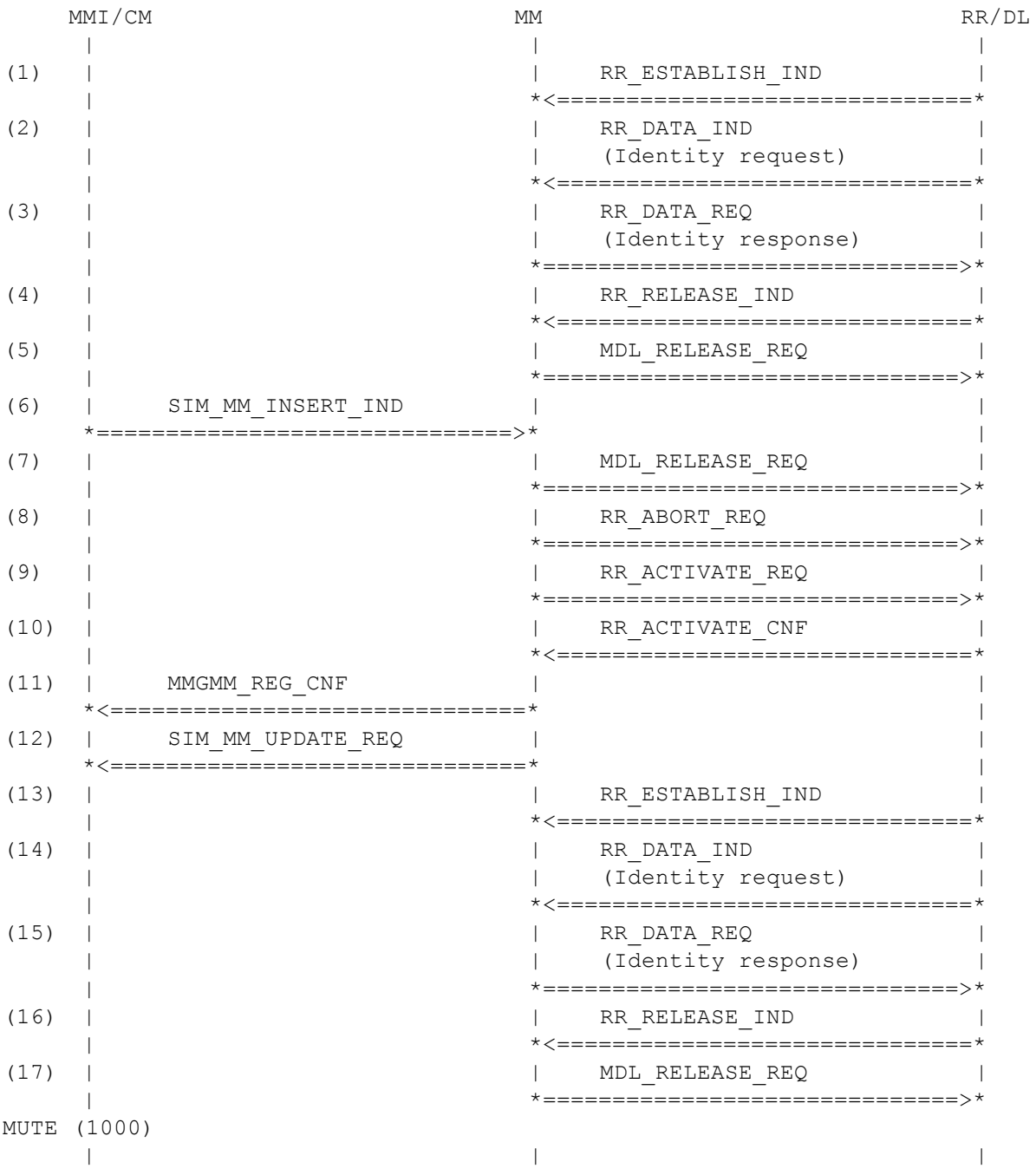
ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

History:			
	14.02.01	HM	Initial
	02.11.01	HM	Revised
	04.02.02	HM	Revised

3.26.4 MMG0604: SIM insert indication by SAT - IMSI change, manual mode

Description: MM receives a SIM_MM_INSERT_IND with IMSI change. This shall cause a MM Restart procedure. In this testcase, no detach/attach is required by cell. As the same cell is selected after the IMSI ATTACH, there is no need to indicate the full service condition to the MMI as there was never something else than full service indicated. (To simplify the protocol machine, this is done anyway now as it should not do any harm. The same applies for SIM_MM_UPDATE_REQ.)

Preamble: MMG0025



Parametrization

	Primitive	Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_IDENT_REQ
		ti	TI_0
		ident	IDENT_TYPE_IMSI
		}	
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IDENT_RES
		ti	TI_0
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	SIM_IMSI_001010123456789
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM

(9) RR_ACTIVATE_REQ

plmn	PLMN_123_33
op	OP_SIM_MAN_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	PRI_IMSI_001010123456789
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(10) RR_ACTIVATE_CNF

op	OP_SIM_MAN_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(11) MMGMM_REG_CNF

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
resumption	NOT_USED

(12) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_2147_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(13) RR_ESTABLISH_IND

param	NOT_USED

(14) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_IDENT_REQ
ti	TI_0
ident	IDENT_TYPE_IMSI
}	

(15) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM

direction	UPLINK
pd	U_IDENT_RES
ti	TI_0
mob_id	MSG_IMSI_001010123456789
}	

(16) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(17) MDL_RELEASE_REQ

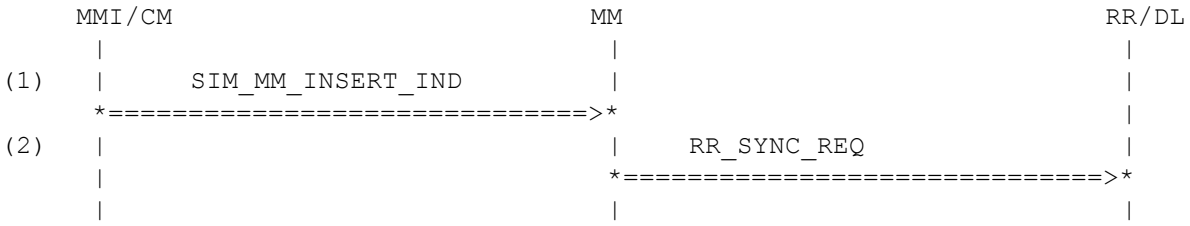
ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

History:			
	30.03.00	HM	Initial
	14.02.01	HM	Revised
	02.11.01	HM	Revised
	04.02.02	HM	Revised

3.26.5 MMG0605: SIM insert indication by SAT - no IMSI change, RR notification

Description: MM receives a SIM_MM_INSERT_IND without IMSI change. This shall not cause a MM Restart procedure, but there were fields changed which cause RR notification.

Preamble: MMG0025



Parametrization

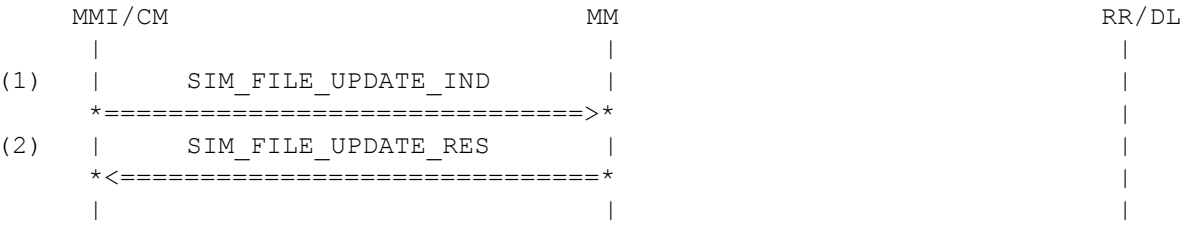
Primitive	Parameter	Value
(26) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_4711
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_FF
(27) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_ACCC
	accc	ACC_4711
	thplmn	NOT_USED

History:			
	04.04.00	HM	Initial
	13.08.02	HM	Revised to really change access control

3.26.6 MMG0606: SIM inserted - File update by SAT

Description: MM receives a SIM_FILE_UPDATE_IND for some not interesting crap. MM does nothing special and confirms the request.

Preamble: MMG0025



Parametrization

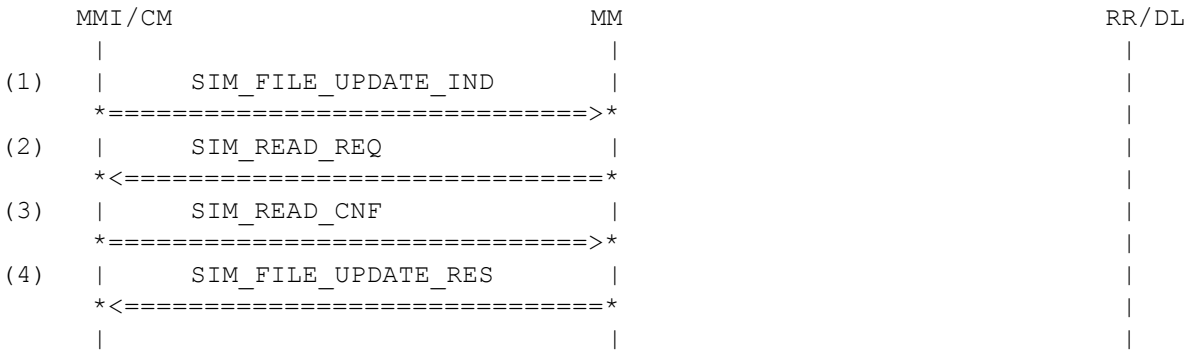
	Primitive	Parameter	Value
(1)	SIM_FILE_UPDATE_IND		
		val_nr	FILE_CHG_1
		file_id	EF_MSISDN
(2)	SIM_FILE_UPDATE_RES		
		source	SRC_MM
		fu_rsc	SIM_FU_SUCCESS

History: 14.02.01 HM Initial

3.26.7 MMG0607: SIM inserted - File update by SAT

Description: MM receives a SIM_FILE_UPDATE_IND for the preferred PLMN list

Preamble: MMG0025



Parametrization

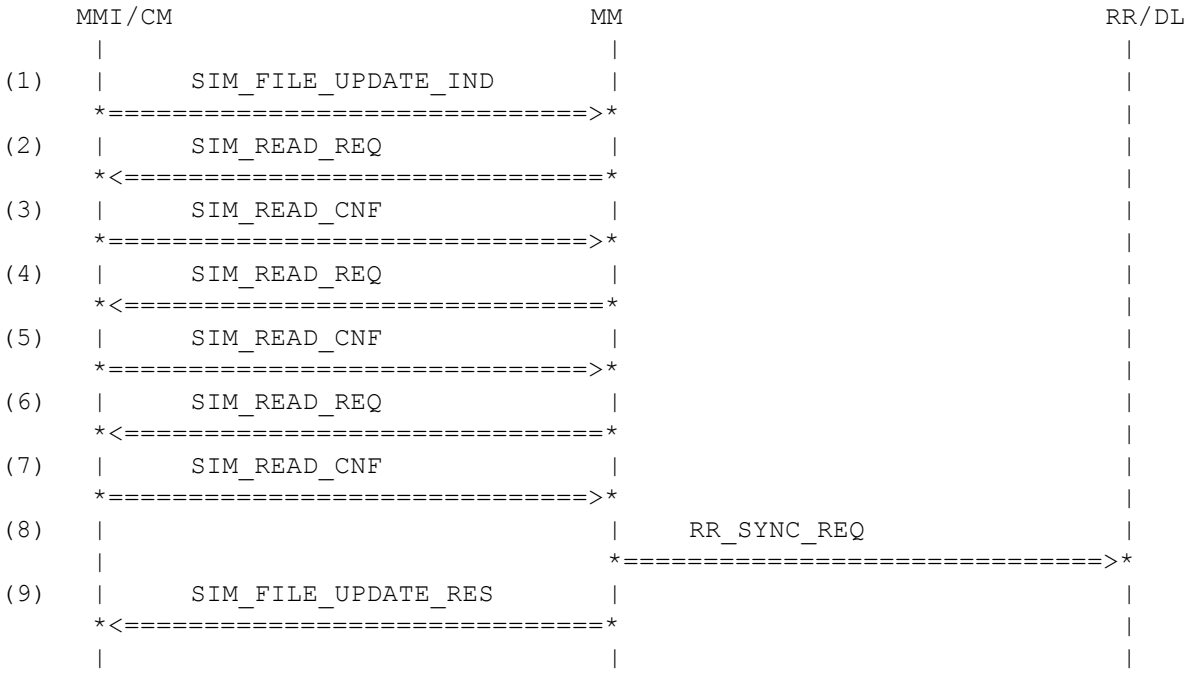
Primitive		Parameter	Value
(1)	SIM_FILE_UPDATE_IND		
		val_nr	FILE_CHG_1
		file_id	EF_PLMN_SEL
(2)	SIM_READ_REQ		
		source	SRC_MM
		offset	OFFSET_0
		datafield	SIM_PLMNSEL
		length	NOT_PRESENT_8BIT
		max_length	MAX_LEN_PREF_PLMN
(3)	SIM_READ_CNF		
		datafield	SIM_PLMNSEL
		cause	SIM_NO_ERROR
		length	PLMN_SEL_LENGTH
		trans_data	PLMN_SEL_NLPTT_PROX
(4)	SIM_FILE_UPDATE_RES		
		source	SRC_MM
		fu_rsc	SIM_FU_SUCCESS

History:			
	30.03.00	HM	Initial
	16.10.00	HM	Modified SIM_FILE_UPDATE_RES

3.26.8 MMG0608: File update by SAT, RR notification

Description: MM receives a SIM_FILE_UPDATE_IND for the HPLMN search period. RR has to be notified about the change

Preamble: MMG0025



Parametrization

Primitive		Parameter	Value
(1)	SIM_FILE_UPDATE_IND		
		val_nr	FILE_CHG_3
		file_id	EF_PLMN_SEL_THPLMN_ACC
(2)	SIM_READ_REQ		
		source	SRC_MM
		offset	OFFSET_0
		datafield	SIM_HPLMN
		length	NOT_PRESENT_8BIT
		max_length	LENGTH_THPLMN
(3)	SIM_READ_CNF		
		datafield	SIM_HPLMN
		cause	SIM_NO_ERROR
		length	LENGTH_THPLMN
		trans_data	SIM_THPLMN_FF
(4)	SIM_READ_REQ		
		source	SRC_MM
		offset	OFFSET_0
		datafield	SIM_PLMNSEL
		length	NOT_PRESENT_8BIT
		max_length	MAX_LEN_PREF_PLMN

(5)	SIM_READ_CNF		
		datafield	SIM_PLMNSEL
		cause	SIM_NO_ERROR
		length	PLMN_SEL_LENGTH
		trans_data	PLMN_SEL_NLPTT_PROX
(6)	SIM_READ_REQ		
		source	SRC_MM
		offset	OFFSET_0
		datafield	SIM_ACC
		length	NOT_PRESENT_8BIT
		max_length	MAX_LENGTH_ACC
(7)	SIM_READ_CNF		
		datafield	SIM_ACC
		cause	SIM_NO_ERROR
		length	LENGTH_ACC
		trans_data	SIM_ACC_4711
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_ACCC
		accc	ACC_4711
		thplmn	NOT_USED
(9)	SIM_FILE_UPDATE_RES		
		source	SRC_MM
		fu_rsc	SIM_FU_SUCCESS

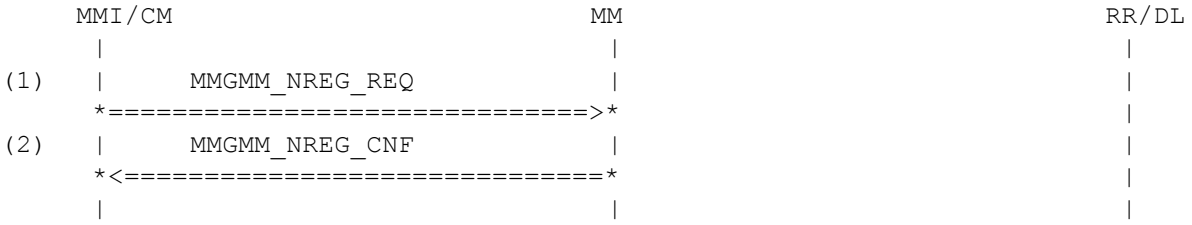
History:	30.03.00	HM	Initial
	16.10.00	HM	Modified SIM_FILE_UPDATE_RES

3.27 Switching service modes back and forth

3.27.1 MMG0620: SIM inserted - Deregistered -> Deregistered

Description: MM receives a SIM-INSERT indication primitive. Deregistering is required by the MMI.

Preamble: MMG0302



Parametrization

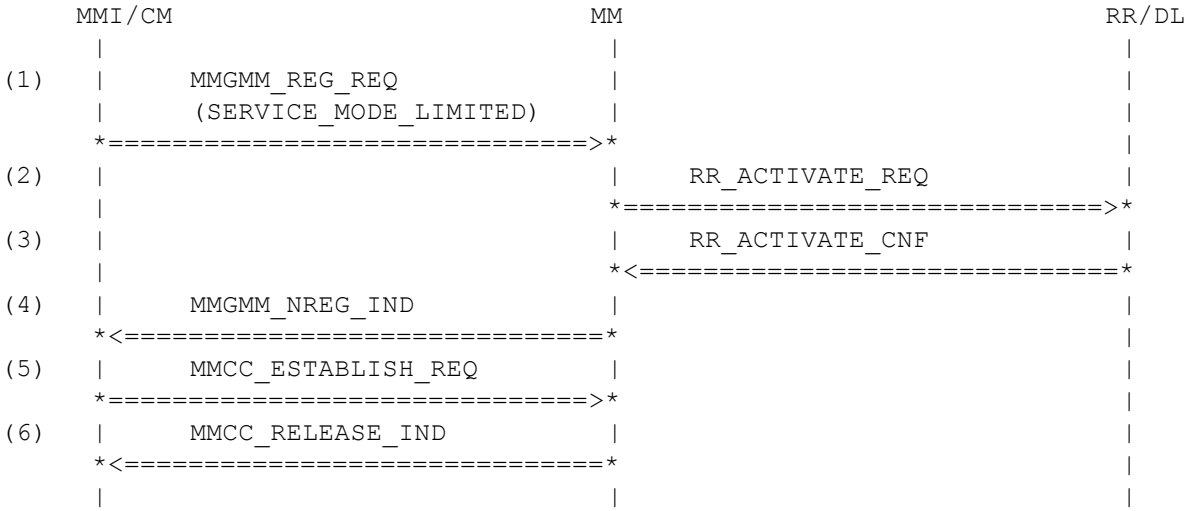
	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SOFT_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_SOFT_OFF

History:			
	25.04.00	HM	Initial
	27.06.01	HM	Revised

3.27.2 MMG0621: SIM inserted - Deregistered -> Limited

Description: A limited service search is required by the MMI. To prove MM is in a state not allowing normal calls, an establish attempt is tried. This will be refused by MM.

Preamble: MMG0620



Parametrization

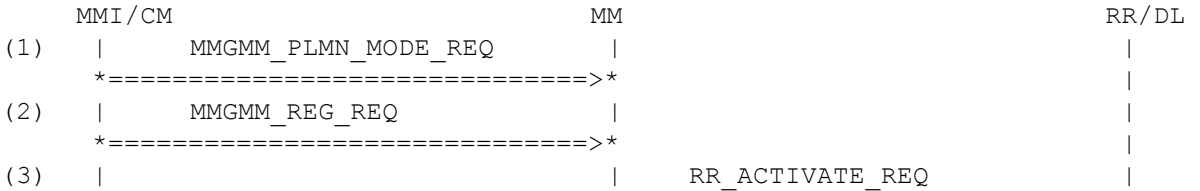
	Primitive	Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_LIMITED
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(5)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(6)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION

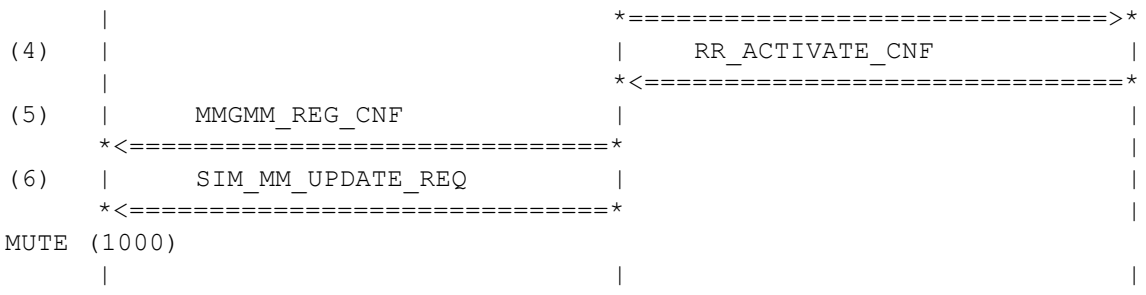
History:			
	25.04.00	HM	Initial

3.27.3 MMG0622: SIM inserted - Deregistered -> Full (automatic mode)

Description: A full service search in automatic mode is required by the MMI.

Preamble: MMG0620





Parametrization

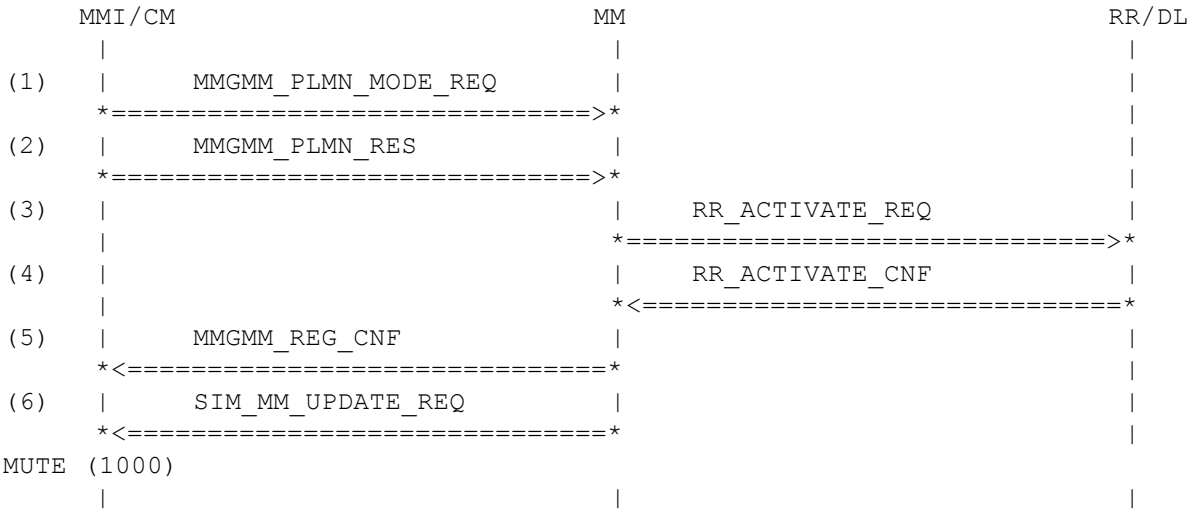
Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_AUTO
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:	20.04.00	HM	Initial
	30.01.02	HM	Revised

3.27.4 MMG0623: SIM inserted - Deregistered -> Full (manual mode)

Description: MM receives a request to manual register in deregitered mode.

Preamble: MMG0620



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_MAN_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147

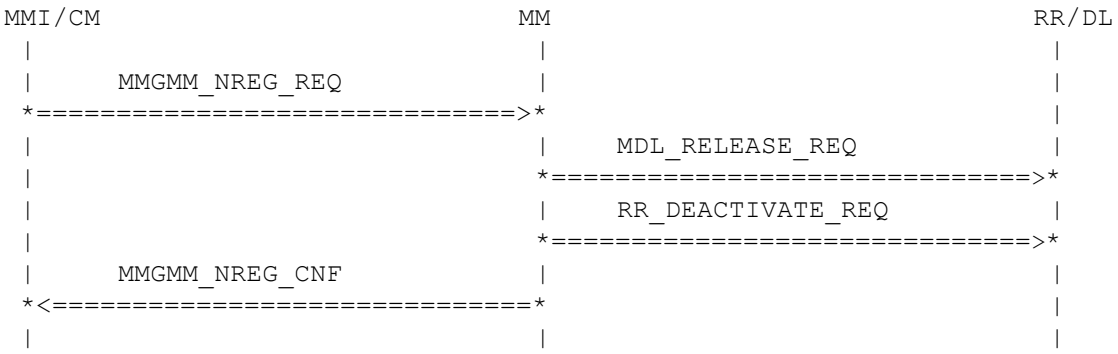
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:	25.04.00	HM	Initial
	30.01.02	HM	Revised

3.27.5 MMG0624: SIM inserted - Limited -> Deregistered

Description: MM receives a request to deregister in limited service state.

Preamble: MMG0621



Parametrization

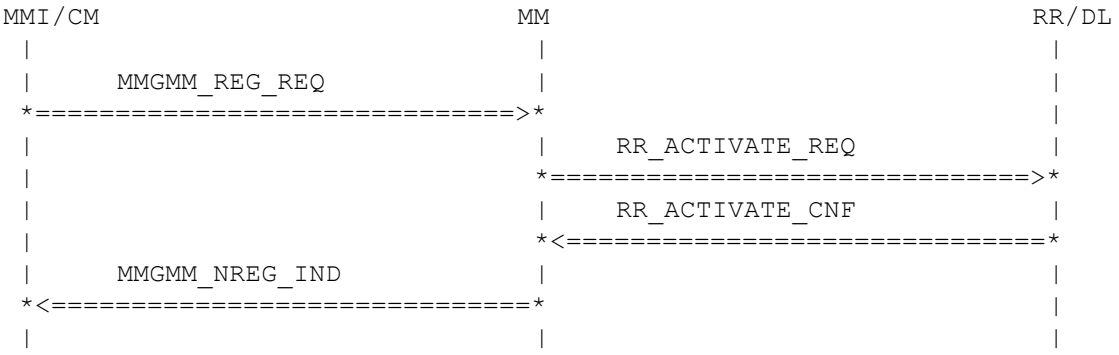
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SOFT_OFF
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_SOFT_OFF

History:	25.04.00	HM	Initial
	27.06.01	HM	Revised

3.27.6 MMG0625: SIM inserted - Limited -> Limited

Description: MM receives a request to register to limited service in limited service state. This is done by MMGMM_REG_REQ with parameter SERVICE_MODE_LIMITED here.

Preamble: MMG0621



Parametrization

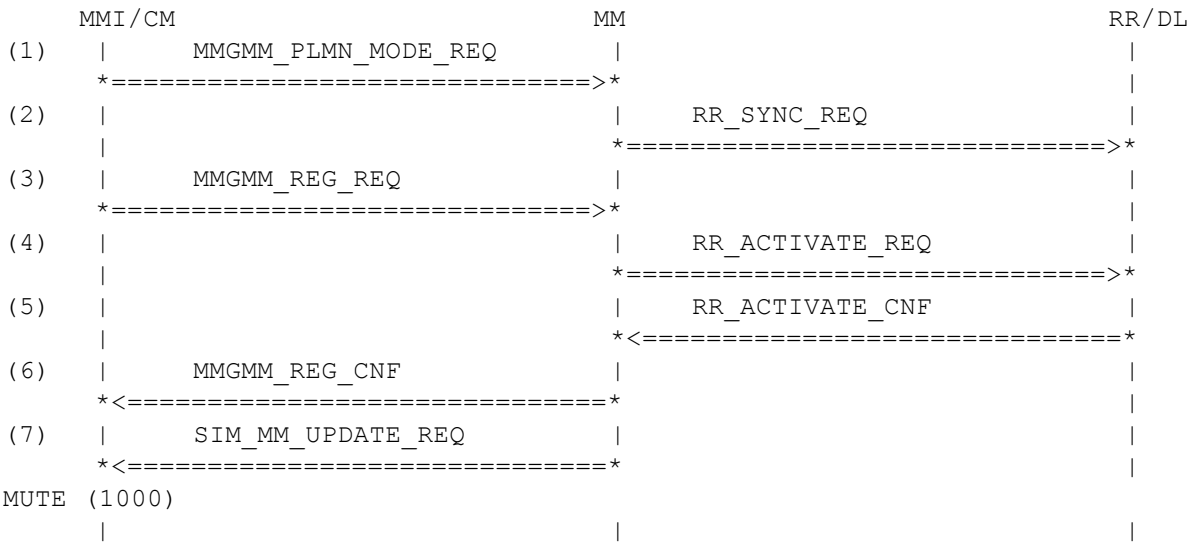
Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_LIMITED
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(6)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History: 27.04.00 HM Initial

3.27.7 MMG0626: SIM inserted - Limited -> Full (automatic mode)

Description: MM receives a request to register to full service in automatic mode. Currently MM is in limited service state.

Preamble: MMG0621



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_AUTO
(2)	RR_SYNC_REQ		
		op	OP_SIM_AUTO_LIMITEDSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143

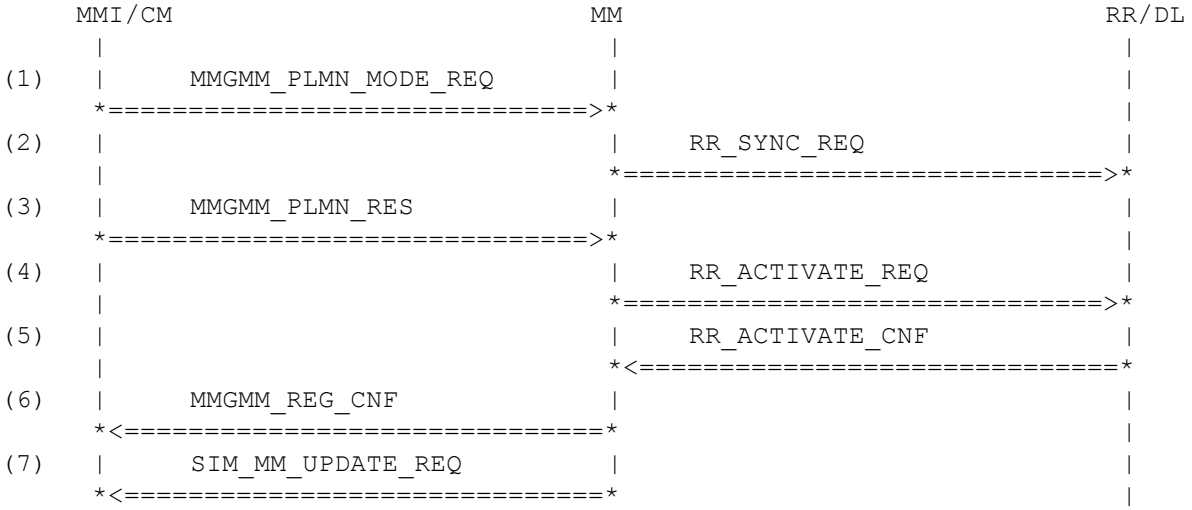
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:	25.04.00	HM	Initial
	31.01.02	HM	Revised

3.27.8 MMG0627: SIM inserted - Limited -> Full (manual mode)

Description: MM receives a request to manual register in limited service state.

Preamble: MMG0621



```
MUTE (1000)
     |                                  |                                  |
```

Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_MODE_SIM_NO_SERV_M1
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_MAN_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED

cksn		CKSN_RES
kc		KC_DELETED_SIM
cell_identity		CELL_ID_1122

History:	25.04.00	HM	Initial
	02.11.01	HM	Revised
	31.01.02	HM	Revised

3.27.9 MMG0628: SIM inserted - Full (automatic mode) -> Deregistered

Description: MM receives a request to deregister in full service state.

Preamble: MMG0622

Parametrization

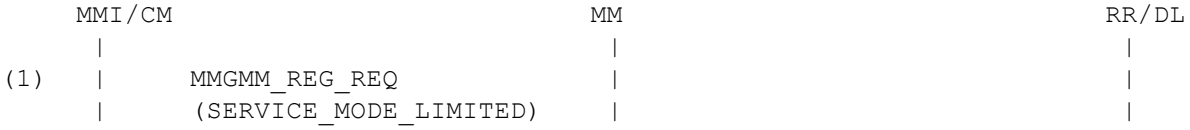
Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_SOFT_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_DEACTIVATE_REQ		
	param	NOT_USED
(4) MMGMM_NREG_CNF		
	detach_cause	CS_SOFT_OFF

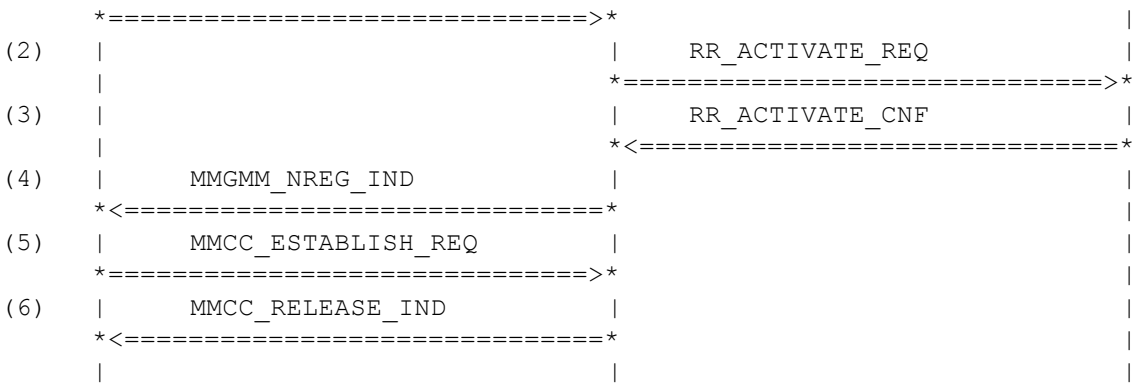
History:	25.04.00	HM	Initial
	27.06.01	HM	Revised

3.27.10 MMG0629: SIM inserted - Full (automatic mode) -> Limited

Description: MM receives a request to register to limited service in full service state. This is done by MMGMM_REG_REQ with parameter SERVICE_MODE_LIMITED here.

Preamble: MMG0622





Parametrization

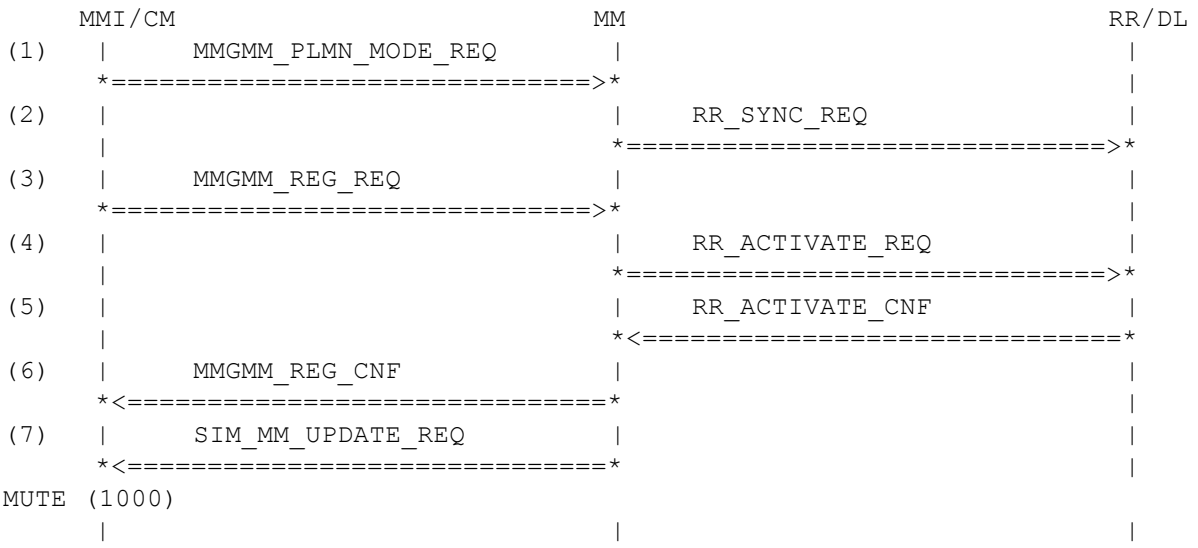
Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_LIMITED
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(5)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(6)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION

History: 27.04.00 HM Initial

3.27.11 MMG0630: SIM inserted - Full (automatic mode) -> Full (automatic mode)

Description: MM receives a request to register to full service in automatic mode. Currently MM already is in full service state (automatic mode).

Preamble: MMG0622



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_AUTO
(2)	RR_SYNC_REQ		
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143

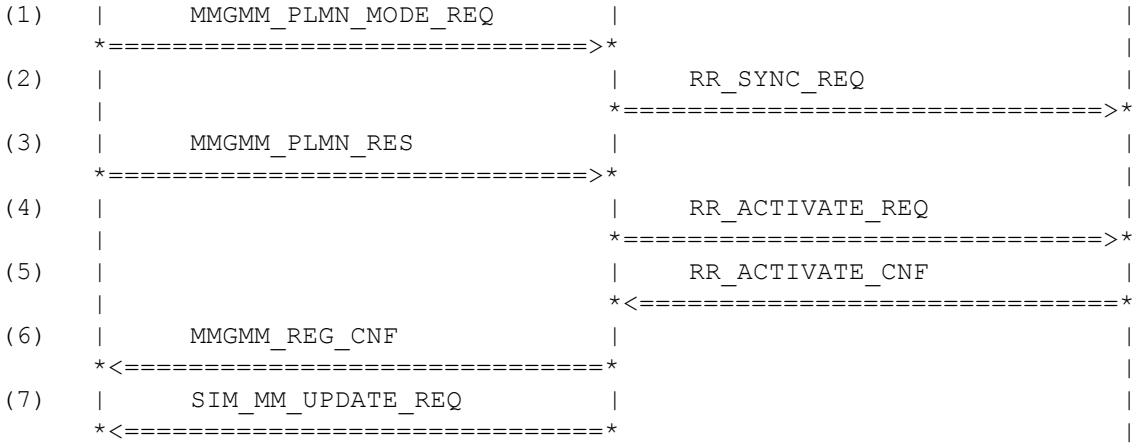
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:	27.04.00	HM	Initial
	02.05.01	HM	Revised
	31.01.02	HM	Revised

3.27.12 MMG0631: SIM inserted - Full (automatic mode) -> Full (manual mode)

Description: MM receives a request to register to full service in manual mode. Currently MM is in full service state (automatic mode).

Preamble: MMG0622



```
MUTE (1000)
     |                                  |                                  |
```

Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_MAN_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED

	cksn	CKSN_RES
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

History:	27.04.00	HM	Initial
	02.11.01	HM	Revised
	31.01.02	HM	Revised

3.27.13 MMG0632: SIM inserted - Full (manual mode) -> Deregistered

Description: MM receives a request to deregister in full service state.

Preamble: MMG0623

Parametrization

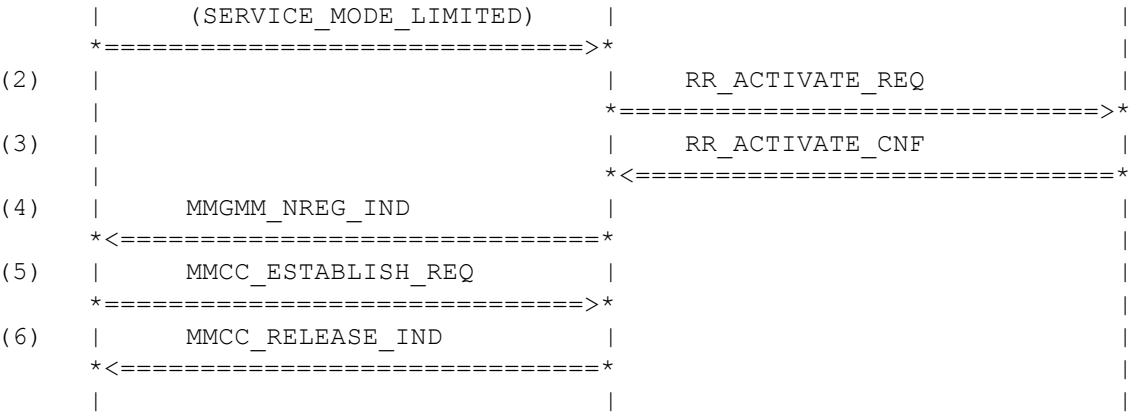
Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_SOFT_OFF
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_DEACTIVATE_REQ		
	param	NOT_USED
(4) MMGMM_NREG_CNF		
	detach_cause	CS_SOFT_OFF

History:	27.04.00	HM	Initial
	27.06.01	HM	Revised

3.27.14 MMG0633: SIM inserted - Full (manual mode) -> Limited

Description: MM receives a request to register to limited service in full service state. This is done by MMGMM_REG_REQ with parameter SERVICE_MODE_LIMITED here.

Preamble: MMG0623



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_LIMITED
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(5)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH

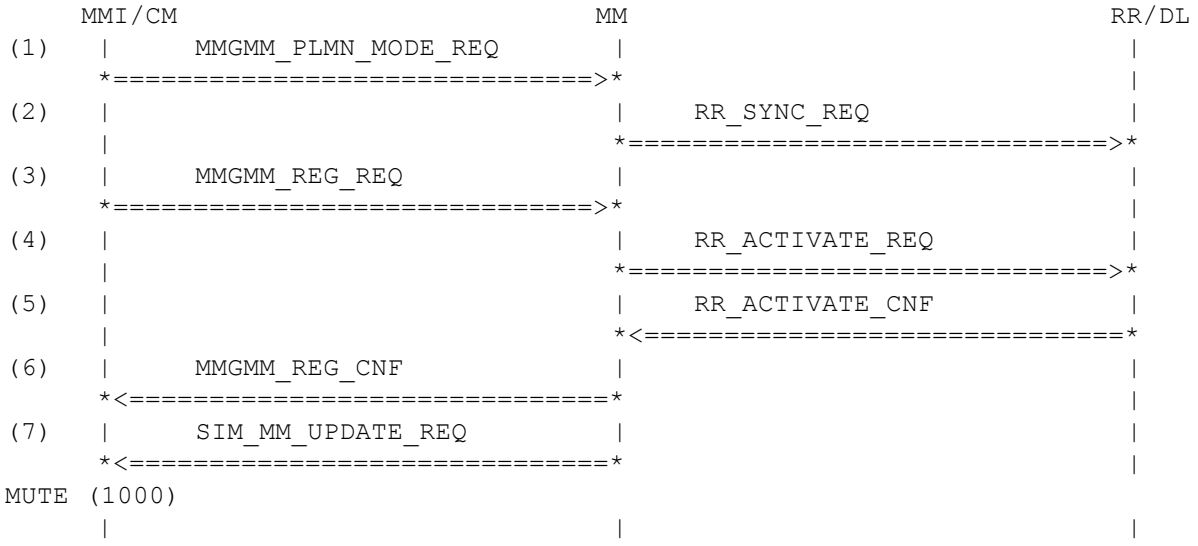
(6)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION

History:	27.04.00	HM	Initial

3.27.15 MMG0634: SIM inserted - Full (manual mode) -> Full (automatic mode)

Description: MM receives a request to register to full service in automatic mode. Currently MM already is in full service state (manual mode).

Preamble: MMG0623



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_AUTO
(2)	RR_SYNC_REQ		
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS

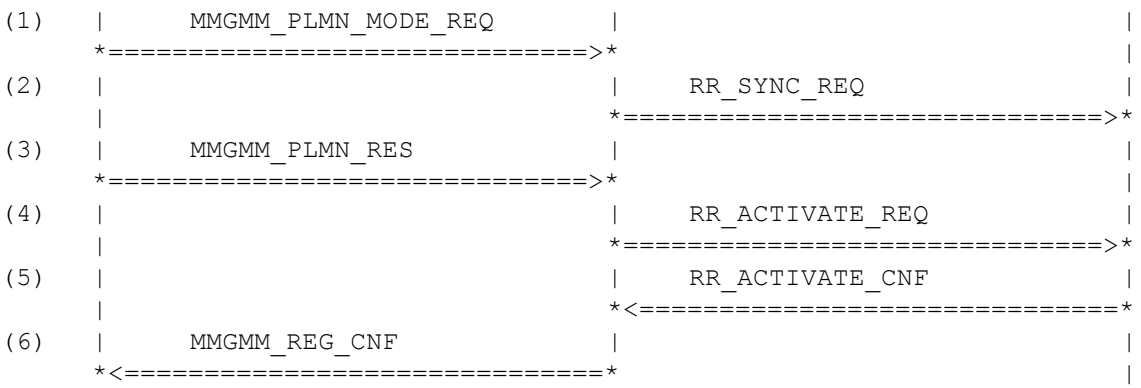
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

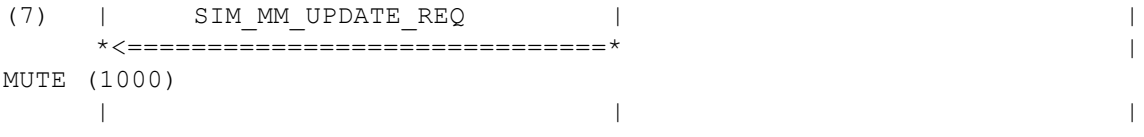
History:	27.04.00	HM	Initial
	02.05.01	HM	Revised
	30.01.02	HM	Revised

3.27.16 MMG0635: SIM inserted - Full (manual mode) -> Full (manual mode)

Description: MM receives a request to register to full service in manual mode. Currently MM is in full service state (manual mode).

Preamble: MMG0623





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_PLMN_RES		
		plmn	PLMN_123_33
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_MAN_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(5)	RR_ACTIVATE_CNF		
		op	OP_SIM_MAN_PLMNSRCH_FS
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(6)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF

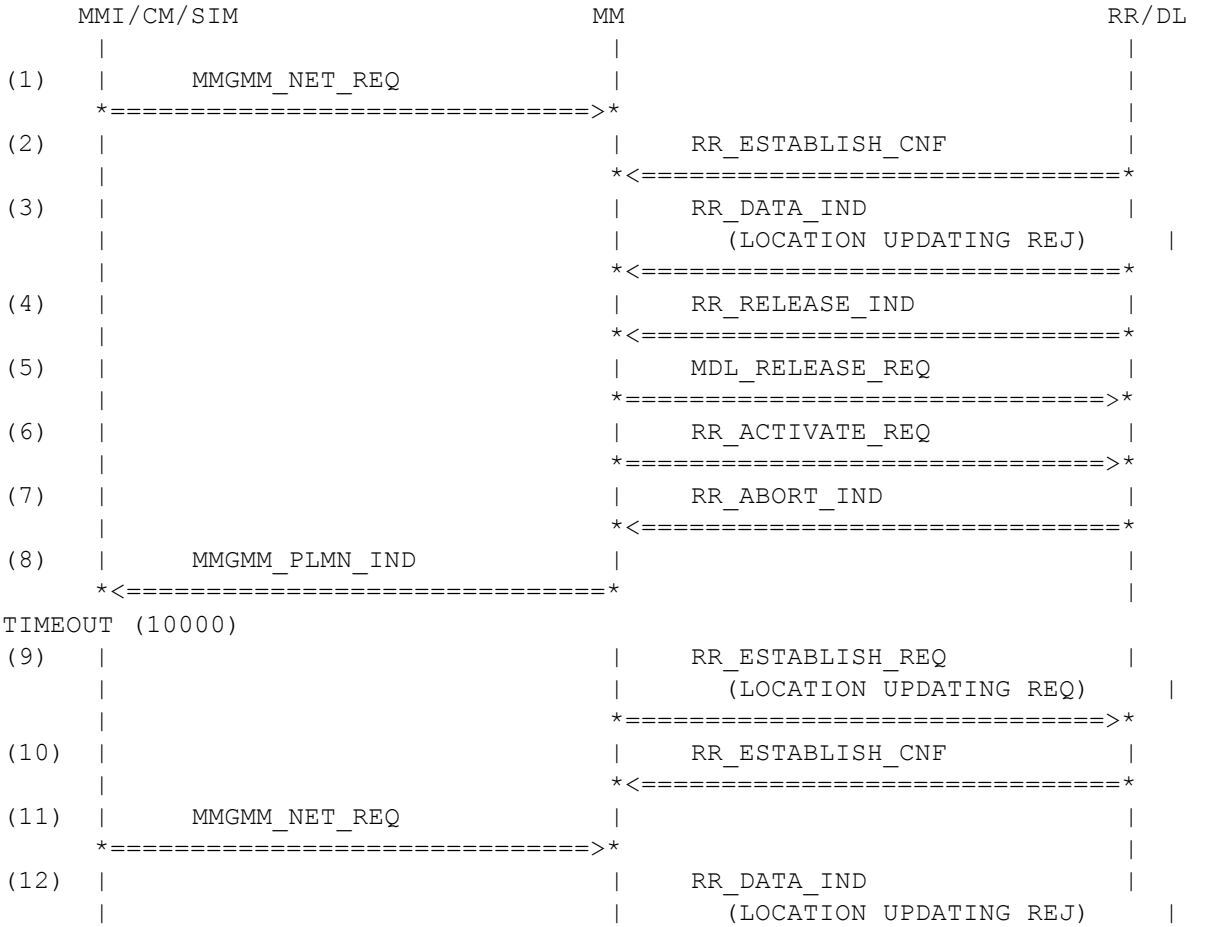
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
History:	27.04.00	HM	Initial
	02.11.01	HM	Revised
	30.01.02	HM	Revised

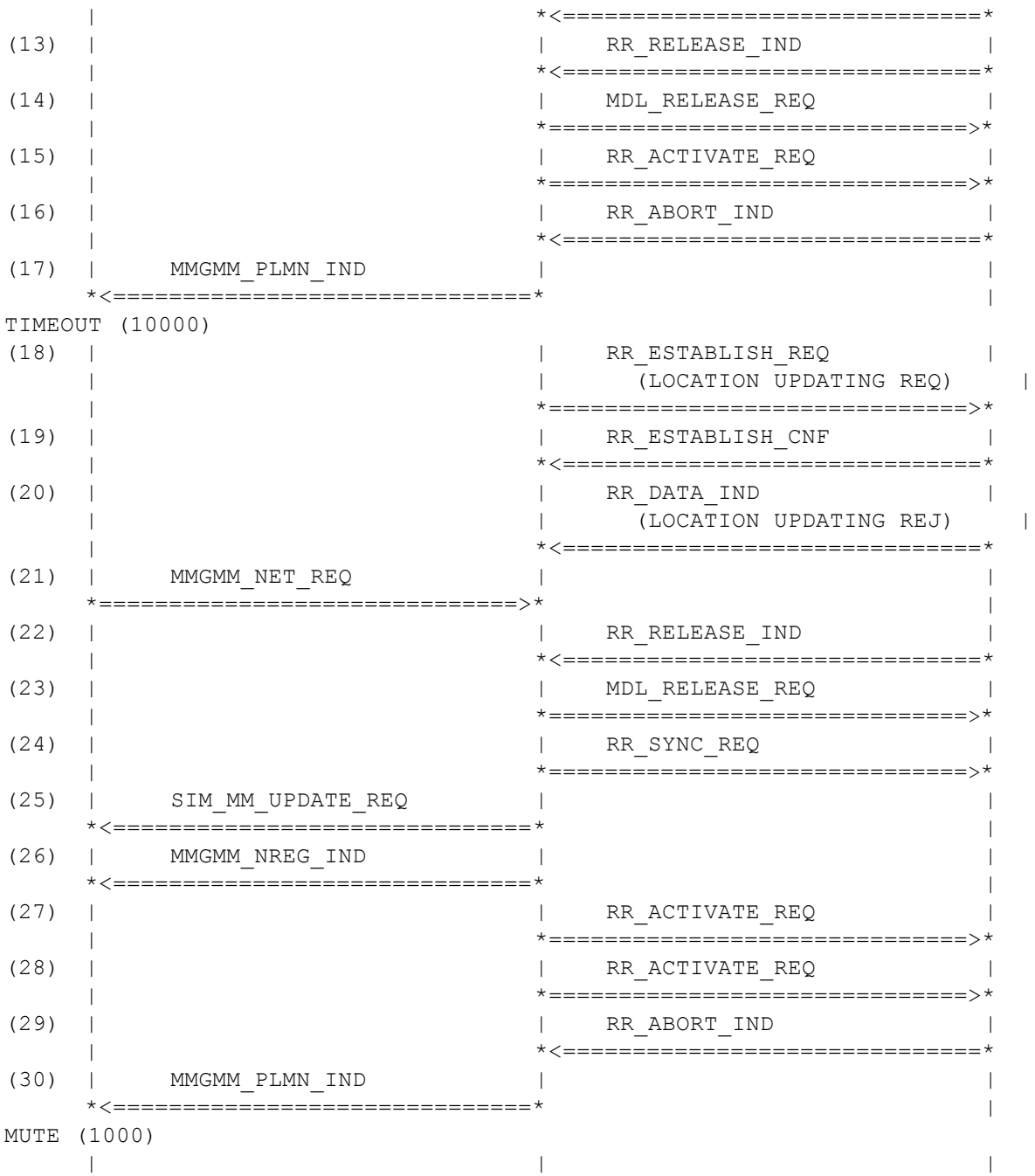
3.28 Network search by MMI test cases

3.28.1 MMG0650: Network search during location updating procedure

Description: The location updating is finished with a location updating reject message and the cause #17 network failure. The update status is UPDATED and the stored LAI is equal to the one received on the BCCH from the current serving cell and the attempt counter is smaller than 4. The MS shall keep the update status to UPDATED, the MM IDLE substate after the RR connection release is NORMAL SERVICE. The MS shall memorize the location updating type used in the location updating procedure. It shall start timer T3211 when the RR connection is released. When timer T3211 expires the location updating procedure is triggered again with the memorized location updating type. After the 4. Attempt the MM IDLE substate ATTEMPTING TO UPDATE is entered.
In this testcase it is tested that a network search by MMI will first not disturb the whole procedure and second that it will no be rejected by MM if MM is not in IDLE state, but stored until MM reenters IDLE state.
Test state MM_WAIT_FOR_RR_CONN_MM (13)
Test state MM_LUP_INITIATED (3),
Test state MM_LUP_REJECTED (10)
It is assumed that during network search the mobile station remains the whole time on a suitable cell of the selected PLMN.
[Questionable whether this runs with the changed RR still in exactly this manner, to be checked.]

Preamble: MMG0404





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NET_REQ		
(2)	RR_ESTABLISH_CNF		
		param	NOT_USED
(3)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED

		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(4)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	NOT_USED
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(7)	RR_ABORT_IND		
		op	OP_SIM_AUTO_NETSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_2_PLMN
		lac_list	LAC_LIST_2
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(8)	MMGMM_PLMN_IND		
		cause	MMCS_SUCCESS
		plmn	PLMN_LIST_2_PLMN_0XFF
		forb_ind	FORB_PLMN_ID
		lac_list	LAC_LIST_2
		rxlevel	RXLEVEL_20_18_A
		gprs_status	NOT_USED
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH

	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(10) RR_ESTABLISH_CNF		
	param	NOT_USED
(11) MMGMM_NET_REQ		
(12) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(13) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(15) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(16) RR_ABORT_IND		
	op	OP_SIM_AUTO_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_2_PLMN
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(17) MMGMM_PLMN_IND		
	cause	MMCS_SUCCESS
	plmn	PLMN_LIST_2_PLMN_0XFF
	forb_ind	FORB_PLMN_ID

	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED
(18) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(19) RR_ESTABLISH_CNF		
	param	NOT_USED
(20) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(21) MMGMM_NET_REQ		
(22) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(23) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(24) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(25) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF

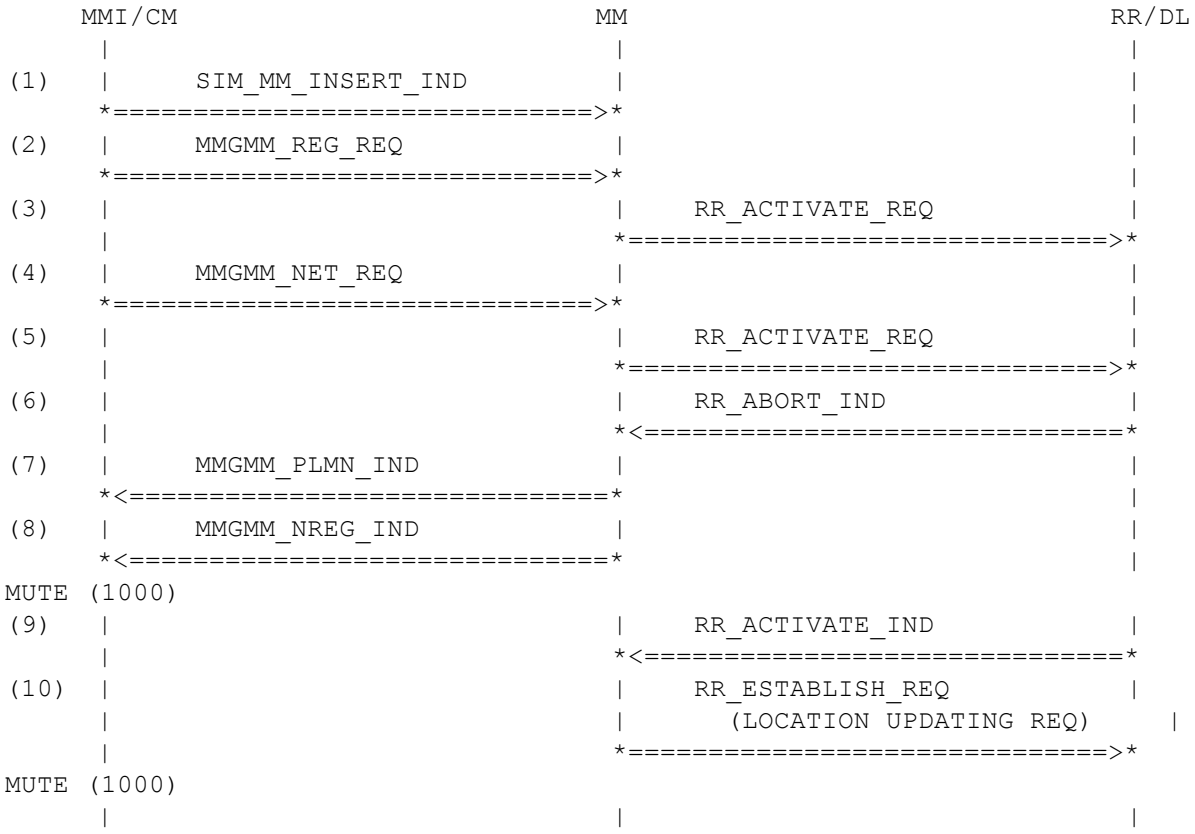
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(26) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_NETWORK_FAILURE
(27) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(28) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(29) RR_ABORT_IND		
	op	OP_SIM_AUTO_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_2_PLMN
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(30) MMGMM_PLMN_IND		
	cause	MMCS_SUCCESS
	plmn	PLMN_LIST_2_PLMN_0XFF
	forb_ind	FORB_PLMN_ID
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED

History:	11.12.01	HM	Initial
	07.02.02	HM	Revised,net search in manual mode
	10.02.03	LOL	added lac_list

3.28.2 MMG0651: Network search interrupts MM_WAIT_FOR_RR_ACTIVE

Description: The user starts a network search by MMI while MM is in state MM_WAIT_FOR_RR_ACTIVE (18). If MM in state MM_WAIT_FOR_RR_ACTIVE (18) receives a MMGMM_NET_REQ primitive, this is not stored until IDLE state is reached, but the state MM_WAIT_FOR_RR_ACTIVE will be left immediately, the service state "no cell available" is remembered and the state MM_IDLE_PLMN_SEARCH is entered. After finish of network search by MMI by the reception of an RR_ABORT_IND primitive, IDLE state is entered with the state "no cell available". If RR is finished with cell selection, either RR_ABORT_IND (negative case) or RR_ACTIVATE_IND will be received. RR will never respond with RR_ACTIVATE_CNF in this situation!

Preamble: MMG0022



Parametrization

Primitive	Parameter	Value
(1) SIM_MM_INSERT_IND		
	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE

		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	MMGMM_NET_REQ		
(5)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	NOT_USED
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(6)	RR_ABORT_IND		
		op	OP_SIM_AUTO_NETSRCH_NS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_2_PLMN
		lac_list	LAC_LIST_2
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(7)	MMGMM_PLMN_IND		
		cause	MMCS_SUCCESS
		plmn	PLMN_LIST_2_PLMN_0XFF
		forb_ind	FORB_PLMN_ID
		lac_list	LAC_LIST_2
		rxlevel	RXLEVEL_20_18_A
		gprs_status	NOT_USED
(8)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING

new_forb_plmn	PLMN_NO_ID	
cause	MMCS_INT_NOT_PRESENT	

(9) RR_ACTIVATE_IND

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO_ATT
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_NO

(10) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_ATTACH
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

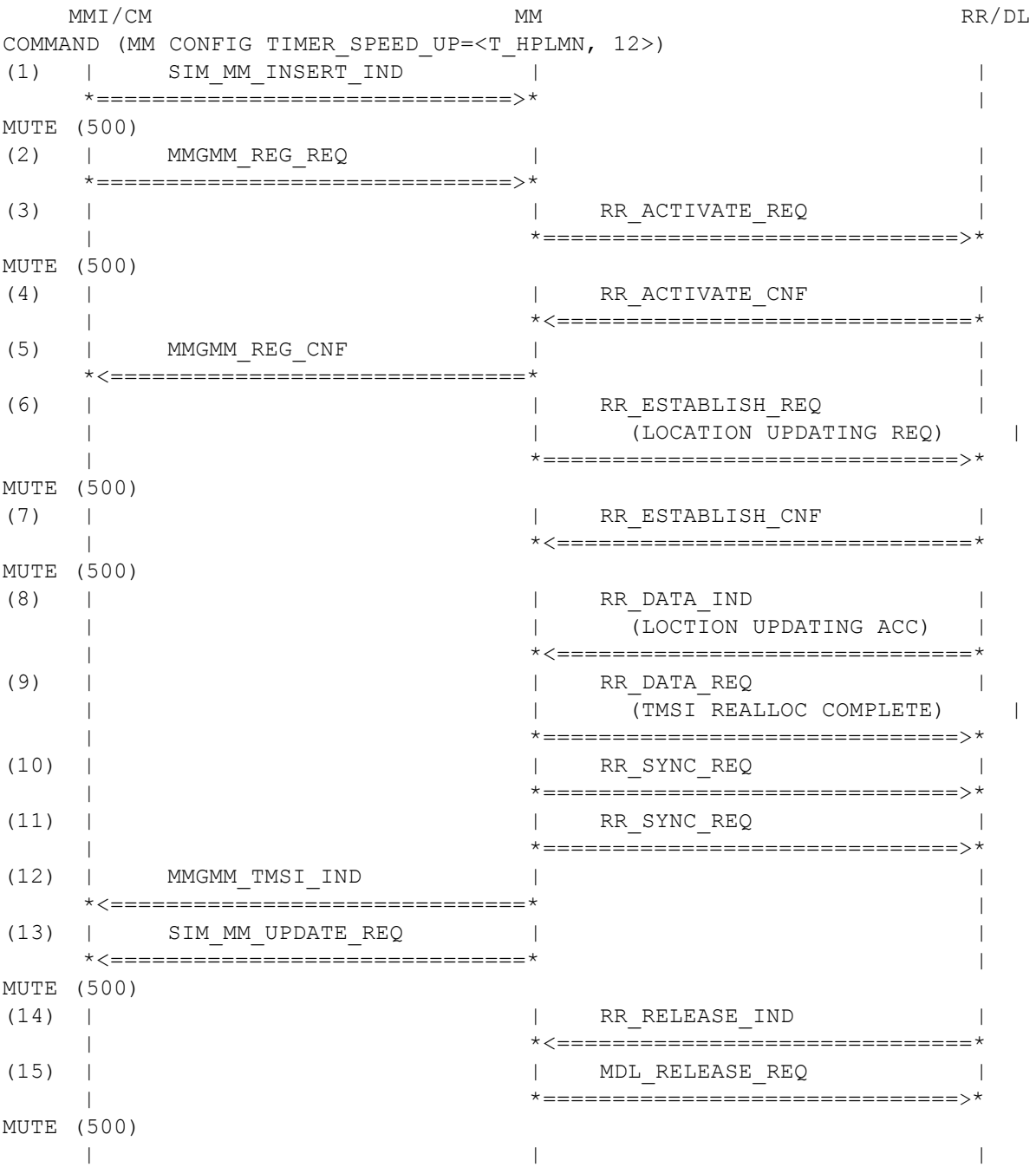
History:	15.12.01	HM	Initial
	10.02.03	LOL	added lac_list

3.28.3 MMG0652: Search for a more preferred PLMN - preamble test

Description: The mobile is registered in automatic mode on a VPLMN. A preferred PLMN list exists in the mobile. The HPLMN timer is running. It is checked that after a while the mobile checks whether other, more preferred PLMNs are available.
<A> Some visited PLMN, not member of preferred list
<B> Home PLMN, no search expected
<C> Visited PLMN, non-prominent place
<D> Visited PLMN, prominent

Preamble: MMG0022

Variants: <A>....<D>



Parametrization

	Primitive	Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
<A>		loc_info	LOC_INFO_123_31_2147_FFFFFFFF
<B>		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>		loc_info	LOC_INFO_123_35_2147_FFFFFFFF
<D>		loc_info	LOC_INFO_123_34_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_34_35_36_37
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
<A>		plmn	PLMN_123_31
<B>		plmn	PLMN_123_33X
<C>		plmn	PLMN_123_35
<D>		plmn	PLMN_123_34
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
<A>		plmn	PLMN_123_31
<B>		plmn	PLMN_123_33
<C>		plmn	PLMN_123_35
<D>		plmn	PLMN_123_34
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
<A>		plmn	PLMN_123_31
<B>		plmn	PLMN_123_33

<C>		plmn	PLMN_123_35
<D>		plmn	PLMN_123_34
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
<A>		loc_area_ident	LOC_AREA_ID_123_31_2147
<B>		loc_area_ident	LOC_AREA_ID_123_33_2147
<C>		loc_area_ident	LOC_AREA_ID_123_35_2147
<D>		loc_area_ident	LOC_AREA_ID_123_34_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(7)	RR_ESTABLISH_CNF		
		param	NOT_USED
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
<A>		loc_area_ident	LOC_AREA_ID_123_31_2147
<B>		loc_area_ident	LOC_AREA_ID_123_33_2147
<C>		loc_area_ident	LOC_AREA_ID_123_35_2147
<D>		loc_area_ident	LOC_AREA_ID_123_34_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(9)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(10)	RR_SYNC_REQ		
		op	NOT_USED

	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
<A>	plmn	PLMN_123_31
<B>	plmn	PLMN_123_33
<C>	plmn	PLMN_123_35
<D>	plmn	PLMN_123_34
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(12) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(13) SIM_MM_UPDATE_REQ		
<A>	loc_info	LOC_INFO_123_31_2147_34125708
<B>	loc_info	LOC_INFO_123_33_2147_34125708
<C>	loc_info	LOC_INFO_123_35_2147_34125708
<D>	loc_info	LOC_INFO_123_34_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	FORB_PLMN_NONE
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	11.08.02	HM	Initial

3.28.4 MMG0653: Registered on HPLMN, no search for PLMNs expected

Description: The mobile is registered in automatic mode on the HPLMN. It is checked that the HPLMN timer is not running and no search for alternate PLMNs is started by the mobile.

Preamble: MMG0652B

Parametrization

Primitive	Parameter	Value

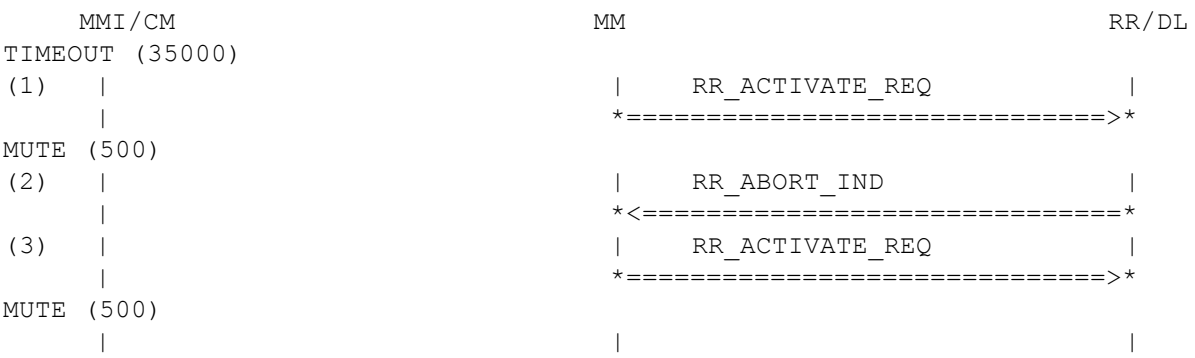
History:	11.08.02	HM	Initial

3.28.5 MMG0654: Search for a more preferred PLMN, better PLMN found

Description: The mobile is registered in automatic mode on a VPLMN. A preferred PLMN list exists in the mobile. The HPLMN timer is running. It is checked that after a while the mobile checks whether other, more preferred PLMNs are available and tries to register on these.
<A> Current VPLMN not member of preferred list
<B> Current VPLMN not in promintent place
<C> HPLMN found

Variants: <A>....<C>

Preamble: <A> MMG0652A
<B> MMG0652C
<C> MMG0652D



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(2) RR_ABORT_IND		
	op	OP_SIM_AUTO_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
<A>	plmn	PLMN_LIST_34_35
<B>	plmn	PLMN_LIST_34_35
<C>	plmn	PLMN_LIST_2_PLMN
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2

(3) RR_ACTIVATE_REQ

<A>	plmn	PLMN_123_34
<B>	plmn	PLMN_123_34
<C>	plmn	PLMN_123_33
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NEW_TMSI
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	11.08.02	HM	Initial
	10.02.03	LOL	added lac_list

3.28.6 MMG0655: Search for a more preferred PLMN, no better PLMN found

Description: The mobile is registered in automatic mode on a VPLMN which is on the most prominent place of the preferred PLMN list. It is checked that the mobile periodically searchs for the HPLMN and that it doesn't change its PLMN if the HPLMN is not among of those PLMNs available.

Preamble: MMG0652D

Parametrization

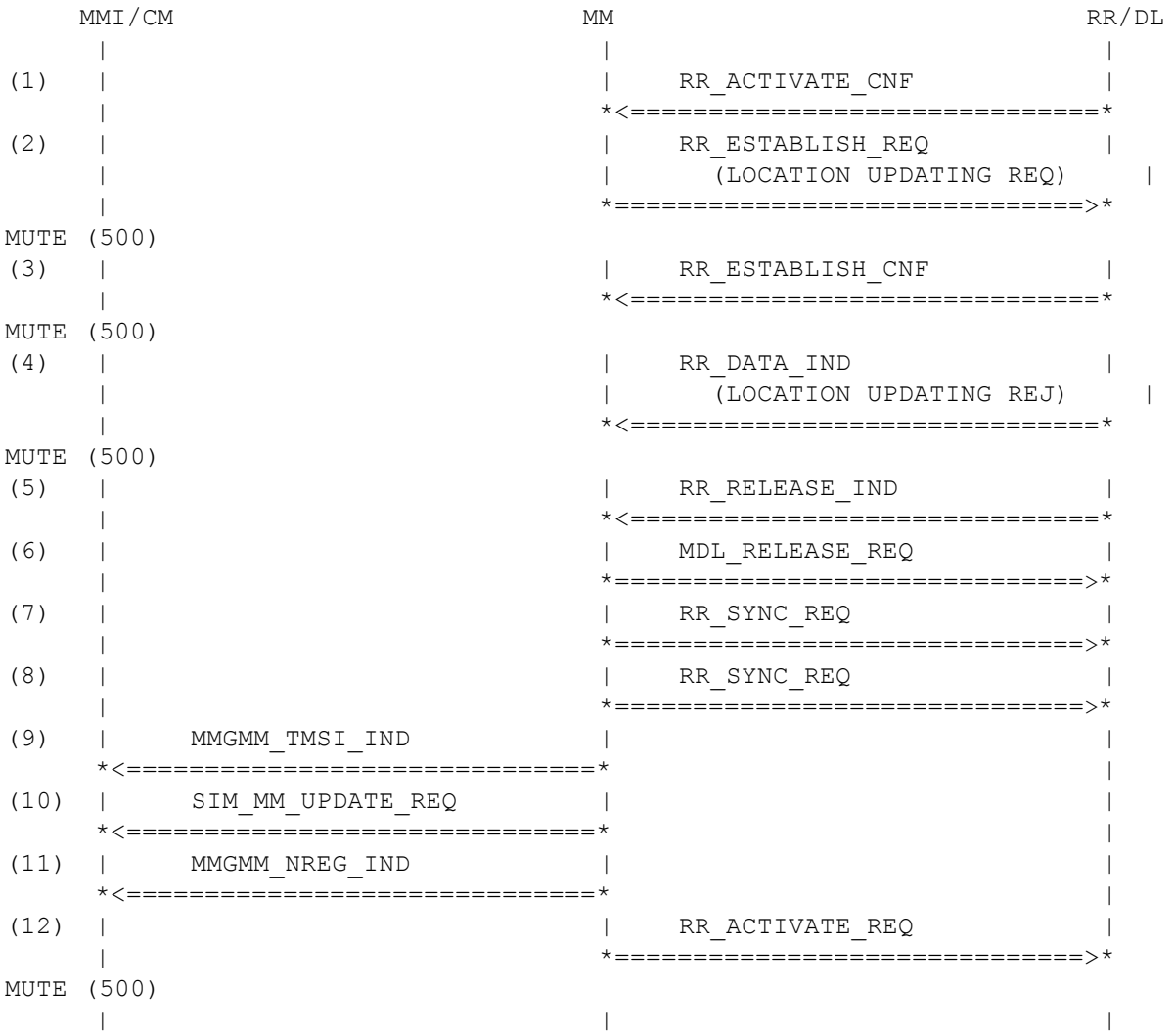
Primitive		Parameter	Value
(1)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(2)	RR_ABORT_IND		
		op	OP_SIM_AUTO_NETSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_34_35
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2

History:			
	11.08.02	HM	Initial
	10.02.03	LOL	added lac_list

3.28.7 MMG0656: Search for a more preferred PLMN, problems

Description: The mobile is registered in automatic mode on a VPLMN which is not on the most prominent place of the preferred PLMN list. A registration attempt is performed on this network. This is non-successful. It is checked that the mobile performs an automatic PLMN selection as MM has an actual alternative PLMN list.

Preamble: MMG0654B



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_34
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO

(2) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_35_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_NEW_TMSI
}	

(3) RR_ESTABLISH_CNF

param	NOT_USED

(4) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_LA_NOT_ALLOWED
}	

(5) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(6) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(7) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_LAI_NOT_ALLOW
accc	NOT_USED
thplmn	NOT_USED

(8) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED

synccs	SYNCCS_TMSI_CKSN_KC_INVAL	
accc	NOT_USED	
thplmn	NOT_USED	

(9) MMGMM_TMSI_IND

tmsi	TMSI_INVALID_ULONG

(10) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_35_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(11) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_LA_NOT_ALLOWED

(12) RR_ACTIVATE_REQ

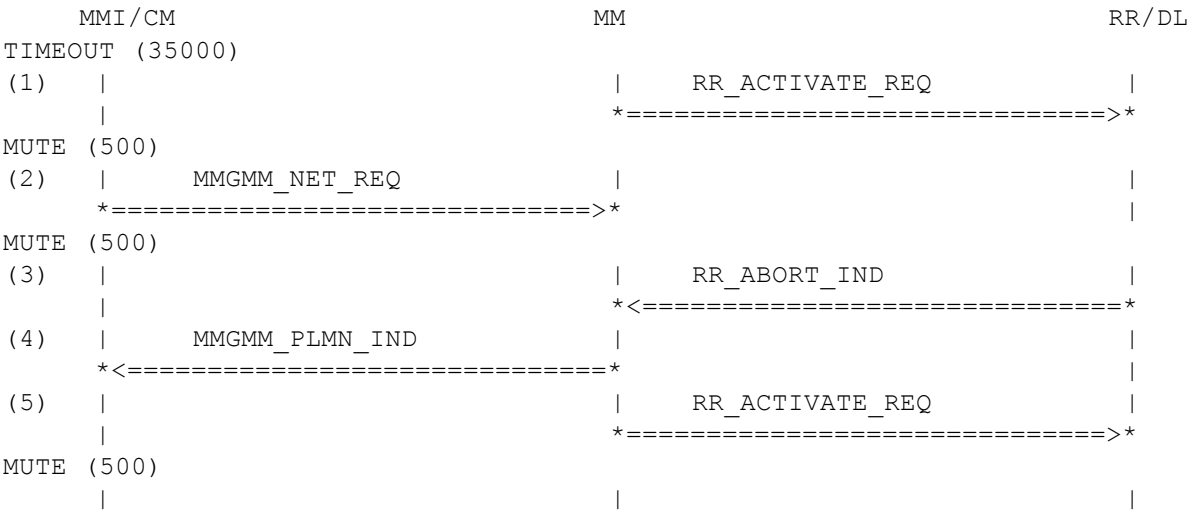
plmn	PLMN_123_35
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

History:	11.08.02	HM	Initial

3.28.8 MMG0657: Search for a more preferred PLMN, MMI search also (I)

Description: The mobile is registered in automatic mode on a VPLMN. A preferred PLMN list exists in the mobile. The HPLMN timer is running. The HPLMN timer expires, a search is started for MM. In this moment the MMI starts also a search. It is checked that the proper operation is not disturbed by the paralled requests.

Preamble: MMG0652A



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(2)	MMGMM_NET_REQ		
(3)	RR_ABORT_IND		
		op	OP_SIM_AUTO_NETSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_34_35
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(4)	MMGMM_PLMN_IND		
		cause	MMCS_SUCCESS

plmn	NOT_USED
forb_ind	NOT_USED
lac_list	NOT_USED
rxlevel	RXLEVEL_20_18_A
gprs_status	NOT_USED

(5) RR_ACTIVATE_REQ

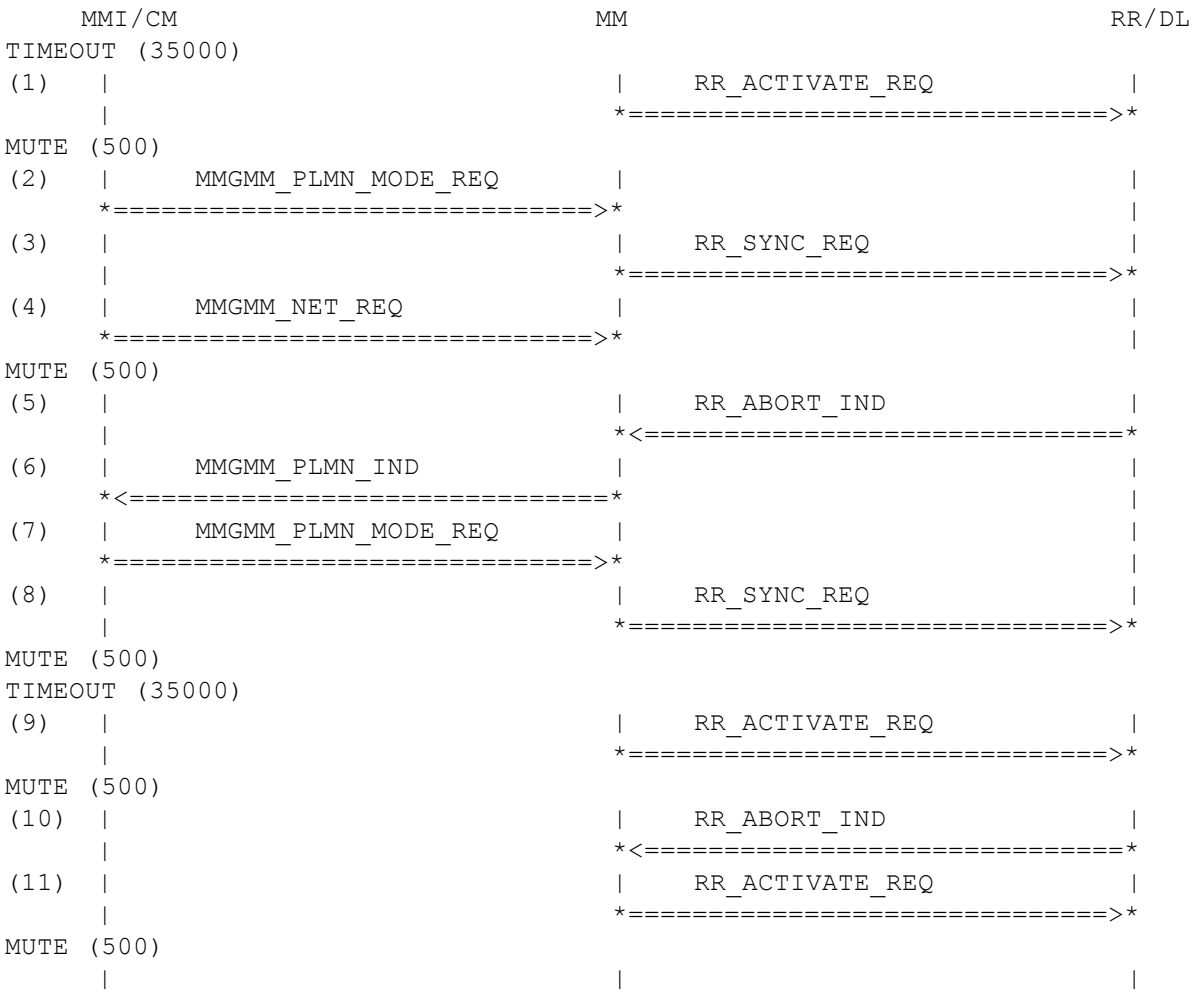
plmn	PLMN_123_34
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NEW_TMSI
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

History:	11.08.02	HM	Initial
	10.02.03	LOL	added lac_list

3.28.9 MMG0658: Search for a more preferred PLMN, MMI search also (II)

Description: The mobile is registered in automatic mode on a VPLMN. A preferred PLMN list exists in the mobile. The HPLMN timer is running. The HPLMN timer expires, a search is started for MM. In this moment the MMI starts also a search. It is checked that the proper operation is not disturbed totally by the paralled requests for the *current* ACI implementation which switches MM into manual network selection mode before a search is done.

Preamble: MMG0652A



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED

		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(2)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(3)	RR_SYNC_REQ		
		op	OP_MODE_SIM_NO_SERV_M1
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(4)	MMGMM_NET_REQ		
(5)	RR_ABORT_IND		
		op	OP_SIM_AUTO_NETSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_34_35
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(6)	MMGMM_PLMN_IND		
		cause	MMCS_SUCCESS
		plmn	NOT_USED
		forb_ind	NOT_USED
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18_A
		gprs_status	NOT_USED
(7)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_AUTO
(8)	RR_SYNC_REQ		
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(9)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_SIM_AUTO_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID

tmsi_struct		MOB_ID_NO_ID
thplmn		NOT_USED
bcch_info		NOT_USED
cell_test		CELL_TEST_DISABLE
gprs_indication		GPRS_NO

(10) RR_ABORT_IND

op	OP_SIM_AUTO_NETSRCH_FS
cause	RRCS_ABORT_CEL_SEL_FAIL
plmn_avail	TWO_PLMN_FOUND
plmn	PLMN_LIST_34_35
lac_list	NOT_USED
rxlevel	RXLEVEL_20_18
power	RF_CLASS_2

(11) RR_ACTIVATE_REQ

plmn	PLMN_123_34
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NEW_TMSI
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

History:	11.08.02	HM	Initial
	10.02.03	LOL	added lac_list

3.28.10 MMG0659: Search for a more preferred PLMN and T3212 - preamble test

Description: The mobile is registered in automatic mode on a VPLMN. A preferred PLMN list exists in the mobile. The HPLMN timer is running. It is checked that after a while the mobile checks whether other, more preferred PLMNs are available as the mobile is not camped on the HPLMN. During search T3212 expires, so if the PLMN is not to be changed a periodic update is performed immediately after the search.

Preamble: MMG0022

```
     MMI/CM                          MM                              RR/DL
COMMAND (MM CONFIG TIMER_SPEED_UP=<T_HPLMN, 12>)
COMMAND (MM CONFIG TIMER_SPEED_UP=<T3212, 10>)
(1)   |     SIM_MM_INSERT_IND        |                                |
      *=============================>*                                |
MUTE (500)
(2)   |     MMGMM_REG_REQ            |                                |
      *=============================>*                                |
(3)   |                               |    RR_ACTIVATE_REQ             |
      |                               *================================>*
MUTE (500)
(4)   |                               |    RR_ACTIVATE_CNF             |
      |                               *<================================*
(5)   |     MMGMM_REG_CNF             |                                |
      *<=============================*                                |
(6)   |                               |    RR_ESTABLISH_REQ            |
      |                               |      (LOCATION UPDATING REQ)     |
      |                               *================================>*
MUTE (500)
(7)   |                               |    RR_ESTABLISH_CNF            |
      |                               *<================================*
MUTE (500)
(8)   |                               |    RR_DATA_IND                 |
      |                               |      (LOCTION UPDATING ACC)    |
      |                               *<================================*
(9)   |                               |    RR_DATA_REQ                 |
      |                               |      (TMSI REALLOC COMPLETE)     |
      |                               *================================>*
(10)  |                               |    RR_SYNC_REQ                 |
      |                               *================================>*
(11)  |                               |    RR_SYNC_REQ                 |
      |                               *================================>*
(12)  |     MMGMM_TMSI_IND            |                                |
      *<=============================*                                |
(13)  |     SIM_MM_UPDATE_REQ         |                                |
      *<=============================*                                |
MUTE (500)
(14)  |                               |    RR_RELEASE_IND              |
      |                               *<================================*
(15)  |                               |    MDL_RELEASE_REQ             |
      |                               *================================>*
MUTE (500)
TIMEOUT (35000)
(16)  |                               |    RR_ACTIVATE_REQ             |
      |                               *================================>*
```

```
MUTE (15000)
     |                              |                              |
```

Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_34_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_34_35_36_37
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_CC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_34
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_34
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_34
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	NOT_USED
(6)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	

	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_34_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(7) RR_ESTABLISH_CNF		
	param	NOT_USED
(8) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_34_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(9) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(10) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_34
	lac	LAC_2147

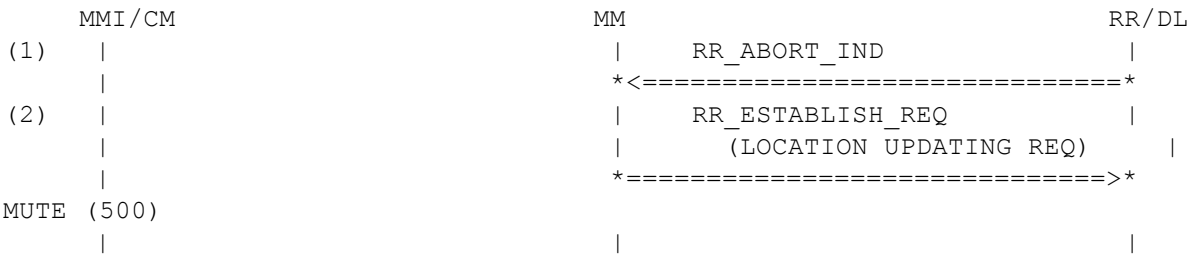
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(12) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_34_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	FORB_PLMN_NONE
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(16) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_SIM_AUTO_NETSRCH_NS
	cksn	CKSN_NO_KEY
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000
	imsi_struct	MOB_ID_NO_ID
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO

History:	16.08.02	HM	Initial

3.28.11 MMG0660: Interworking of T3212 and T_HPLMN, no better PLMN

Description: The mobile is registered in automatic mode on a VPLMN which is on the most prominent place of the preferred PLMN list. It is checked that the mobile periodically searchs for the HPLMN and that it doesn't change its PLMN if the HPLMN is not among of those PLMNs available. During PLMN search T3212 expired. The search was non-successful, so a periodic update has to be done immediately.

Preamble: MMG0659



Parametrization

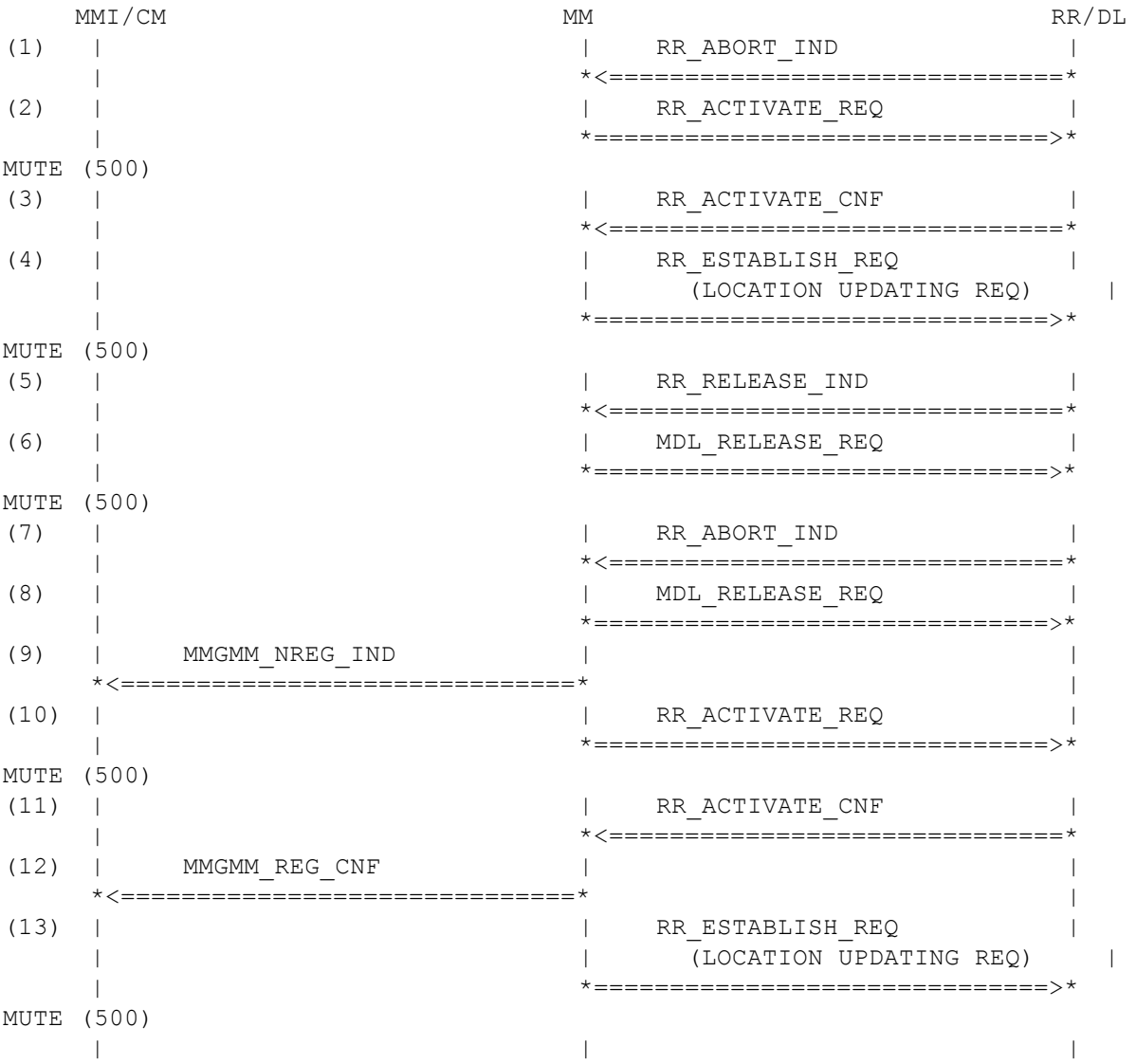
Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_SIM_AUTO_NETSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_34_35
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(2)	RR_ESTABLISH_REQ	estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_34_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	

History:			
	16.08.02	HM	Initial
	10.02.03	LOL	added lac_list

3.28.12 MMG0661: Interworking of T3212 and T_HPLMN, HPLMN found

Description: The mobile is registered in automatic mode on a VPLMN which is on the most prominent place of the preferred PLMN list. It is checked that the mobile periodically searchs for the HPLMN and that it doesn't change its PLMN if the HPLMN is not among of those PLMNs available. During PLMN search T3212 expired. The search was successful, we try to register on the HPLMN (which does not support ATTACH/DETACH), but after random access failure we come back to the old network. The periodic update still has to be done.

Preamble: MMG0659



Parametrization

Primitive	Parameter	Value
(1) RR_ABORT_IND		
	op	OP_SIM_AUTO_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND

		plmn	PLMN_LIST_2_PLMN
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(3)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_NO
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_34_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_LS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_34_35
		lac_list	NOT_USED

	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(8) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(9) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(10) RR_ACTIVATE_REQ		
	plmn	PLMN_123_34
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NEW_TMSI
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_NO
(11) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT_PER
	cid	CELL_ID_1122
	plmn	PLMN_123_34
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_NO
(12) MMGMM_REG_CNF		
	plmn	PLMN_123_34
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	NOT_USED
(13) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_PERIODIC
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_34_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	

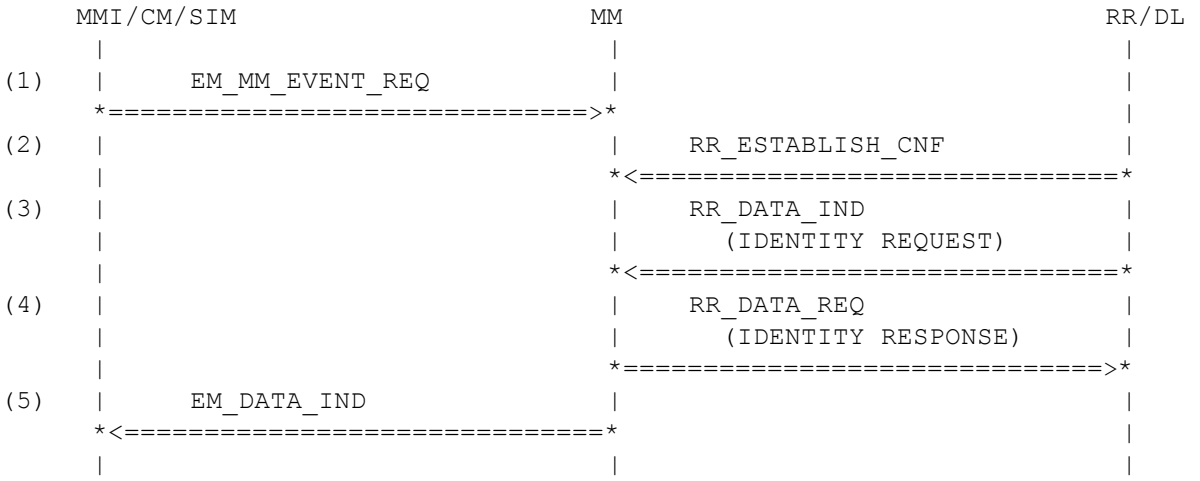
History:	16.08.02	HM	Initial
	10.02.03	LOL	added lac_list

3.29 Engineering mode

3.29.1 MMG0670: EM-Identity Request during Location Updating

Description: Original Testcase MMG0131, lightly modified for EM purposes. Connection is confirmed in the form of a RR-ESTABLISH confirmation primitive, whereupon MM changes to State 3 (Location Updating Initiated). In the course of Location Updating the network requests the identity of the MS. MM responds by issuing an Identity Response message as part of a RR-DATA indication primitive.

Preamble: MMG0101



Parametrization

Primitive	Parameter	Value
(1) EM_MM_EVENT_REQ		
	bitmask_mm	Bitm_1
(2) RR_ESTABLISH_CNF		
	param	NOT_USED
(3) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_IDENT_REQ
	ti	TI_0
	ident	IDENT_TYPE_IMSI
	}	
(4) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	

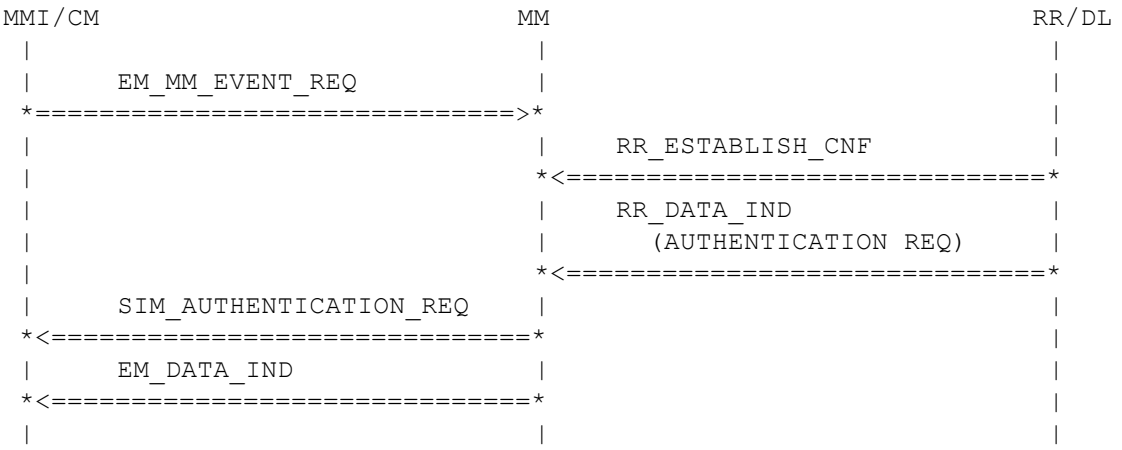
		component	MM
		direction	UPLINK
		pd	U_IDENT_RES
		ti	TI_0
		mob_id	MOB_IDENT_IMSI
		}	
(5)	EM_DATA_IND		
		entity	EM_ENTITY

History:	09.07.97	HK	Initial
	30.01.02	OT	EM adaptations

3.29.2 MMG0671: EM-Authentication Request

Description: Original Testcase MMG0141, lightly modified for EM purposes. The network confirms the request from the mobile station for a RR Connection in the form of a RR-ESTABLISH confirmation primitive. MM changes to State 3 ((Location Updating initiated) and issues an AUTHENTICATION REQ message and a SIM-AUTHENTICATION request primitive, initiating the authentication procedure with SIM.

Preamble: MMG0101



Parametrization

Primitive	Parameter	Value
(1) EM_MM_EVENT_REQ		
	bitmask_mm	Bitm_2
(2) RR_ESTABLISH_CNF		
	param	NOT_USED
(3) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM

	direction	DOWNLINK
	pd	D_AUTH_REQ
	ti	TI_0
	ciph_key_num	CIPH_KEY_NUM_01
	auth_rand	AUTH_RAND_1
	}	

(4) SIM_AUTHENTICATION_REQ

	source	SRC_MM
	rand	RAND_1
	cksn	CKSN_01

(5) EM_DATA_IND

	entity	EM_ENTITY

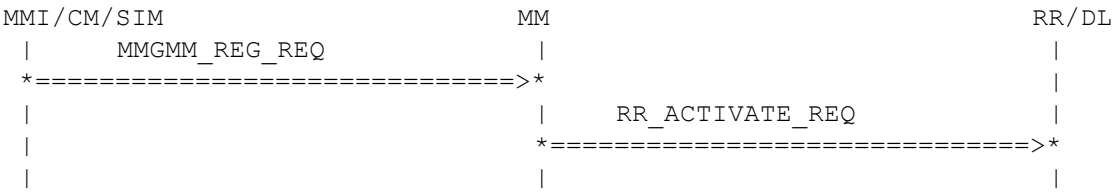
History:	07.07.97	HK	Initial
	31.07.97	DL	Revised
	30.01.02	OT	EM adaptations

3.30 GPRS related registration

3.30.1 MMG1000: Activation of MS as class A, BC, BG, CG mobile

Description: MM receives a request to initiate a cell selection in RR. This is done by the MMGMM_REG_REQ primitive with reg_type set to REG_CELL_SEARCH_ONLY. MM remembers that it is doing a RR activation for GMM. No SIM is inserted in the mobile station.

Preamble: MMG0001



Parametrization

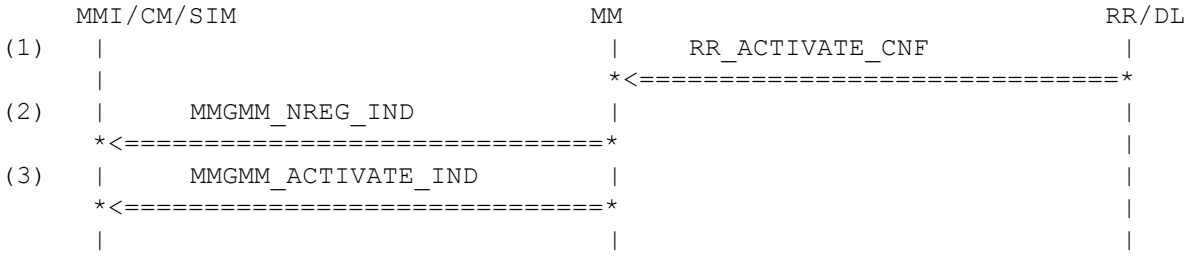
Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_MODE_NO_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	NOT_USED
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES

History: 21.08.00 HM Initial

3.30.2 MMG1001: Positive outcome of MMGMM_REG_REQ, no SIM

Description: MM receives a RR_ACTIVATE_CNF from RR. Limited service is indicated. No SIM is inserted in the mobile station. MM enters main state MM_IDLE_NO_IMSI, registration state REG_LIMITED_SERVICE. If RR_ACTIVATE_CNF indicates limited service only, there will never be tried a location update/imsi_struct attach.
[André: Wenn RR "LIMITED SERVICE" an MM meldet, bedeutet dies, daß RR nichts Besseres für GSM als "LIMITED SERVICE" anzubieten hat. Damit geht MM davon aus, daß das auch für GPRS gilt. Wenn es den schrägen Fall geben sollte, daß GSM keinen "FULL SERVICE" kriegt, GPRS aber vorhanden ist, müssen wir nochmal über den Ablauf dirkutieren. Ist aber kein größeres Problem dann, wir müssen dann nur einen Ablauf spezifizieren und wahrscheinlich ein paar Primitive etwas erweitern.]

Preamble: MMG1000



Parametrization

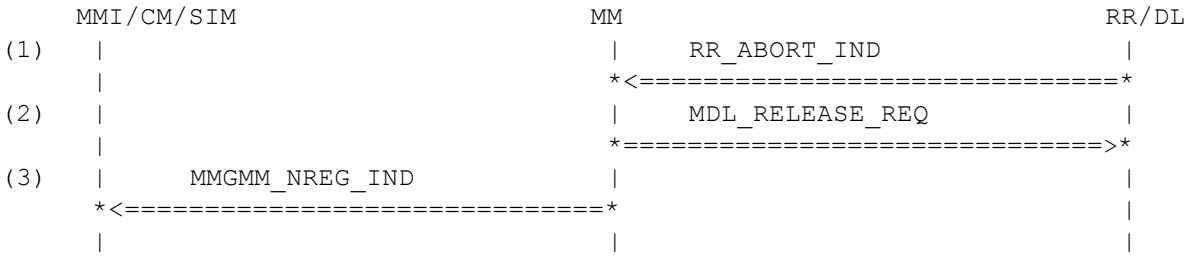
Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_NO_SIM_LIM_SERV
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_44
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
(3)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_44
		lac	LAC_0002
		cid	CELL_ID_1122
		t3212_val	T3212_NO_PRD_UPDAT
		status	MMGMM_LIMITED_SERVICE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

History: 21.08.00 HM Initial

3.30.3 MMG1002: Negative outcome of MMGMM_REG_REQ

Description: MM receives a RR_ABORT_IND from RR. Cell selection failed is indicated. No SIM is inserted in the mobile station. MM enters main state MM_IDLE_NO_CELL_AVAILABLE, registration state REG_NO_SERVICE. GMM is informed by the MMGMM_NREG_IND primitive about the fact that the cell selection failed.

Preamble: MMG1000



Parametrization

Primitive	Parameter	Value

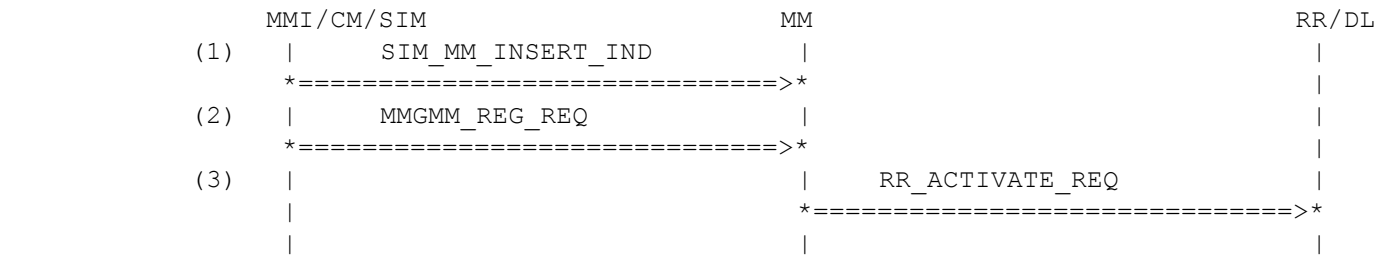
(1)	RR_ABORT_IND		
		op	OP_MODE_NO_SIM_LIM_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED

History:	24.08.00	HM	Initial
	19.03.01	HM	Revised
	10.02.03	LOL	added lac_list

3.30.4 MMG1003: SIM inserted, GMM requests RR activation

Description: MM receives a SIM_MM_INSERT_IND from the SIM entity. A test SIM is inserted in the mobile station. The data delivered by this primitive will be stored in the respective MM data structures. GMM requests a RR activation by MMGMM_REG_REQ. MM enters main state WAIT_FOR_RR_ACTIVE, registration state is not to be changed while RR activation is pending.

Preamble: MMG0001



Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND	op_mode	TEST_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01

(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_MODE_TEST_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES

History:	24.05.00	HM	Initial

3.30.5 MMG1004: Full Service in GSM, no ATTACH needed

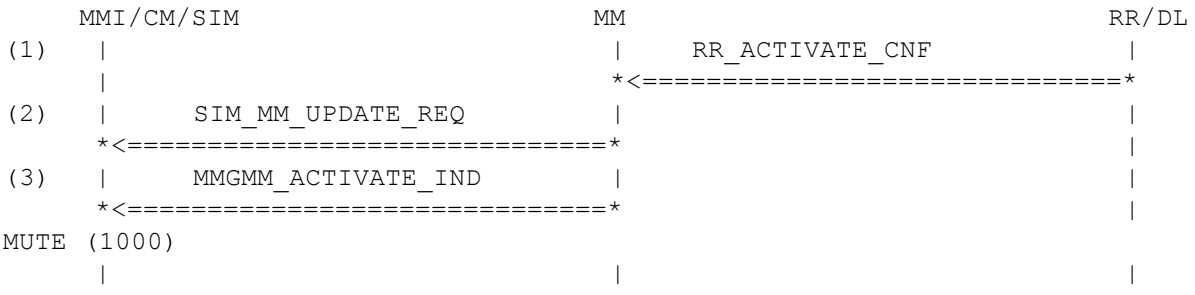
Description: MM receives a RR_ACTIVATE_CNF primitive indicating that RR has selected a cell. MM had to start a cell selection for GMM only. Full service is indicated, no IMSI ATTACH is necessary, MM will inform GMM by MMGMM_REG_CNF followed by a MMGMM-ACTIVATE-IND about these facts.

<A> No IMSI attach, no periodic update

<B> No IMSI attach, periodic update

Variants: <A>....<B>

Preamble: MMG1003



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
<A>	mm_info	MM_INFO
<B>	mm_info	MM_INFO_PER
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_YES

(2)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(3)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
<A>		t3212_val	T3212_NO_PRD_UPDAT
<B>		t3212_val	T3212_6_MIN_MS
		status	MMGMM_FULL_SERVICE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

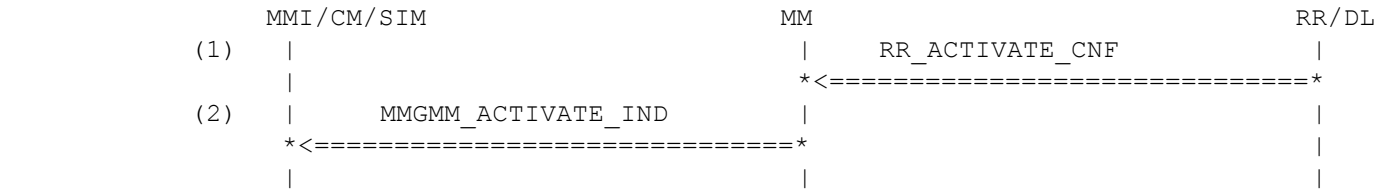
History:	24.08.00	HM	Initial
	03.01.01	HM	Removed MMGMM_REG_CNF
	30.01.02	HM	Revised

3.30.6 MMG1005: IMSI ATTACH LUP needed after cell selection

Description: MM receives a RR_ACTIVATE_CNF primitive indicating that RR has selected a cell. MM had to start a cell selection for GMM only. Full service is indicated, MM will inform GMM by MMGMM-ACTIVATE-IND about this fact. No MMGMM_REG_CNF is sent because a location update (IMSI ATTACH) is still necessary due to the fact that the set ATTACH flag is broadcast in the cell information.
<A> IMSI attach, no periodic update
<B> IMSI attach, periodic update

Variants: <A>....<B>

Preamble: MMG1003



Parametrization

Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
<A>		mm_info	MM_INFO_ATT
<B>		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(2)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33

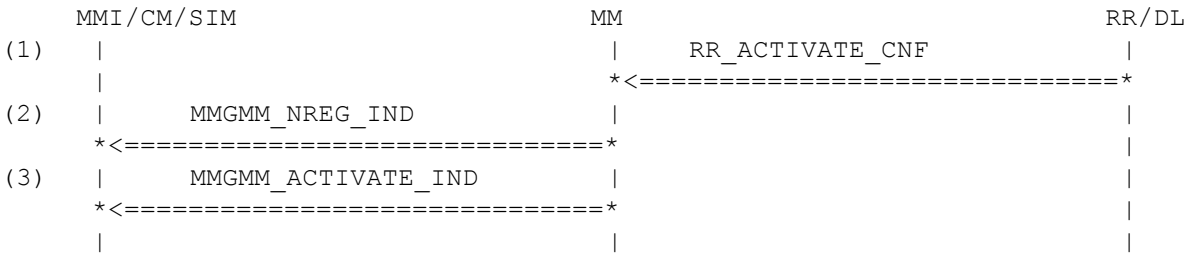
		lac	LAC_2147
		cid	CELL_ID_1122
<A>		t3212_val	T3212_NO_PRD_UPDAT
<B>		t3212_val	T3212_6_MIN_MS
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

History: 24.08.00 HM Initial

3.30.7 MMG1006: Negative outcome of MMGMM_REG_REQ with SIM - limited

Description: MM receives a RR_ACTIVATE_CNF primitive indicating limited service only. MM had to start a cell selection for GMM only. A SIM is inserted. Failure is indicated to GMM by MMGMM_NREG_IND with appropriate parameters.

Preamble: MMG1003



Parametrization

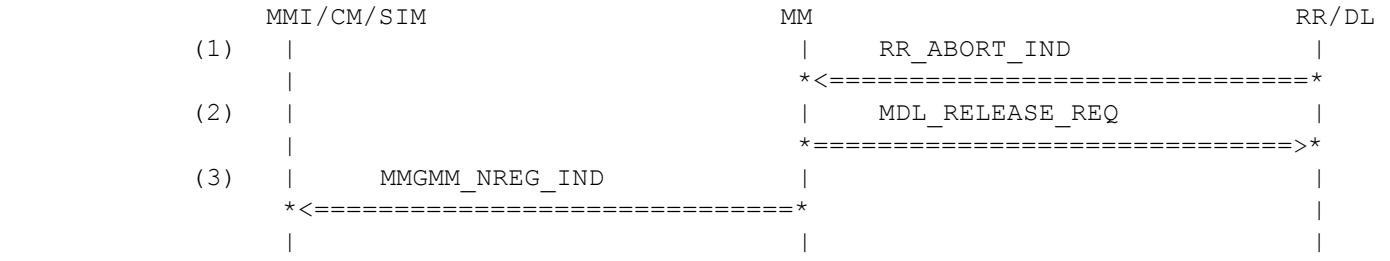
Primitive		Parameter	Value
(1)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM_LIM_SERV
		mm_info	MM_INFO_2
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(2)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT
(3)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		t3212_val	T3212_NO_PRD_UPDAT
		status	MMGMM_LIMITED_SERVICE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

History: 24.08.00 HM Initial

3.30.8 MMG1007: Negative outcome of MMGMM_REG_REQ with SIM - no cell

Description: MM receives a RR_ABORT_IND primitive indicating cell selection by RR has failed. MM had to start a cell selection for GMM only. Failure is indicated to GMM by MMGMM_NREG_IND with appropriate parameters.

Preamble: MMG1003



Parametrization

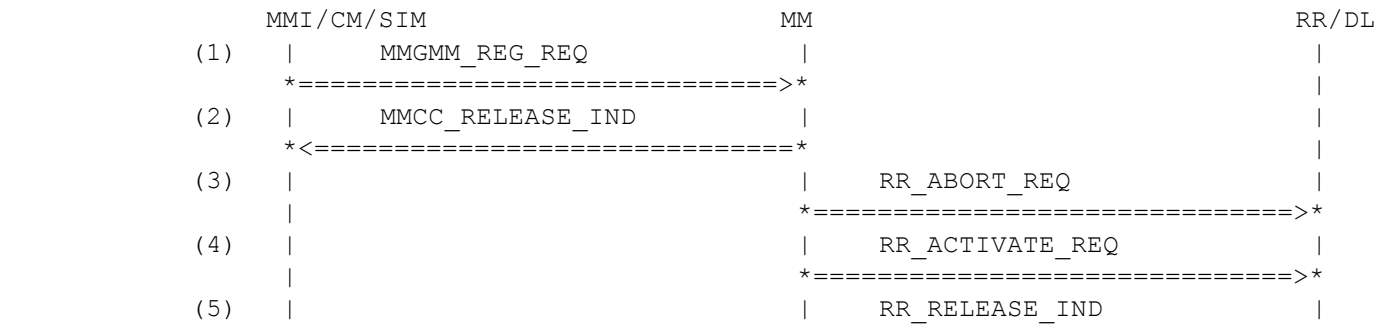
Primitive		Parameter	Value
(1)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM_NO_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_FOUND
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_NREG_IND		
		service	NREG_NO_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_INT_NOT_PRESENT

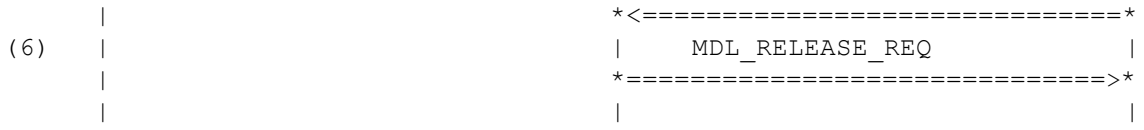
History:			
	24.08.00	HM	Initial
	10.02.03	LOL	added lac_list

3.30.9 MMG1008: SIM inserted, call active, GMM requests RR activation

Description: MM has an active call, state MM_CONN_ACTIVE. In this state it receives the request to activate RR for GPRS. The calls are cleared, then the cell search is started immediately.

Preamble: MMG0047





Parametrization

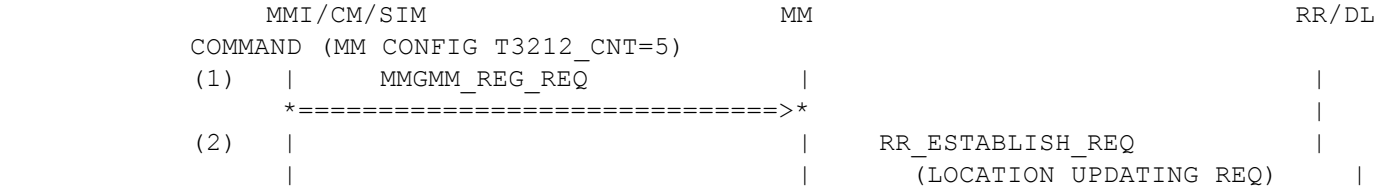
Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_INT_NOT_PRESENT
(3)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES
(5)	RR_RELEASE_IND		
		cause	RRCS_MM_ABORTED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

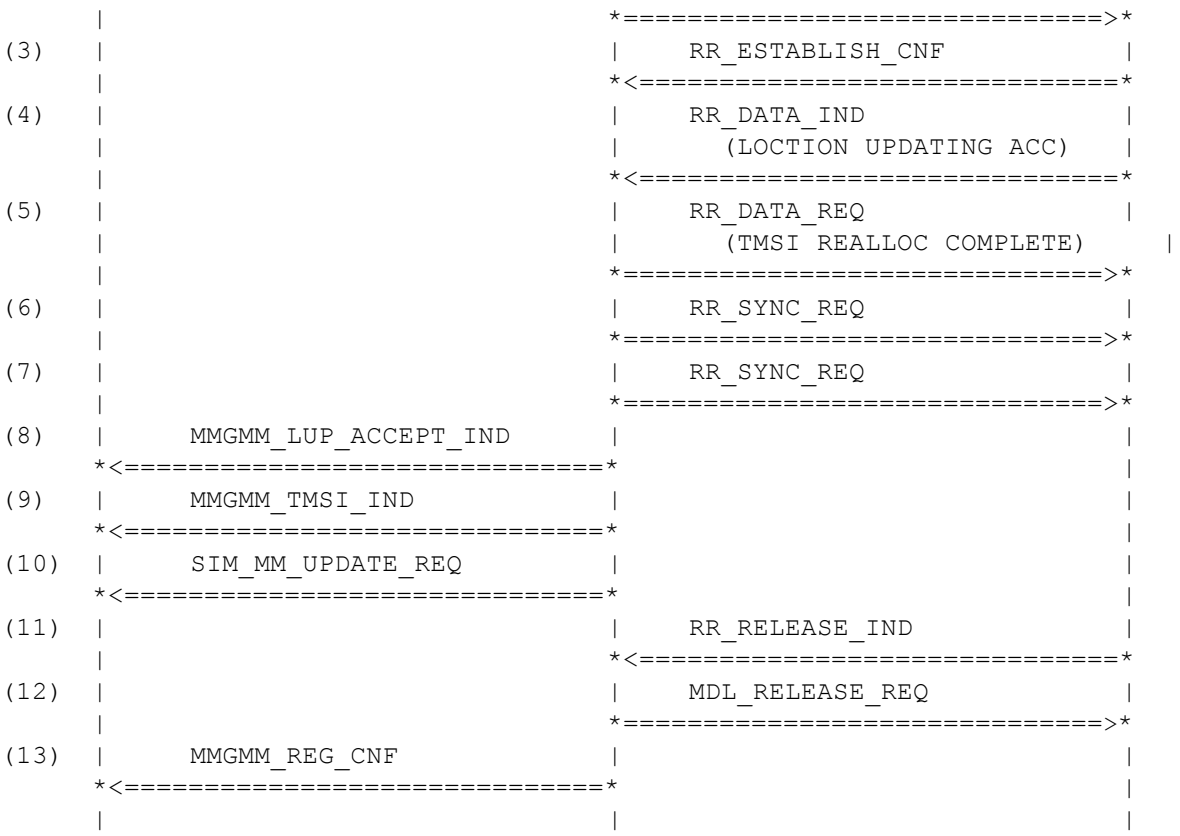
History:			
	29.11.00	HM	Initial
	02.02.01	HM	Revised

3.30.10 MMG1009: GMM requires update on the cell, periodic

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary.

Preamble: MMG1010B





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED

		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(8)	MMGMM_LUP_ACCEPT_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(10)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES

		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(11)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(13)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE

History:	16.01.02	HM	Initial
	18.01.02	HM	Revised

3.30.11 MMG1010: GMM requires update on the cell, MM is updated, no periodic

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED in another state than MM_WAIT_FOR_RR_CONN_LUP, MM performs a remote controlled periodic location update procedure. There is one exception from this rule: If MM has full service, is attached and a location update is required, this only can be a periodic location update. If no periodic location update is announced by the cell, no periodic update will be performed and MM will return immediately with emitting an MMGMM-REG-CNF primitive.

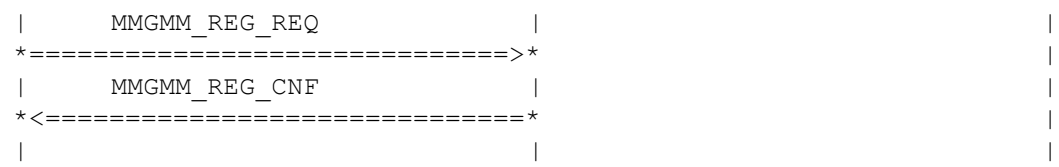
<A> No IMSI attach, no periodic update, not yet tried to IMSI attach by GMM

<B> No IMSI attach, periodic update, not yet tried to IMSI attach by GMM

Variants: <A>....<B>

Preamble: <A> MMG1004A

<B> MMG1004B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE

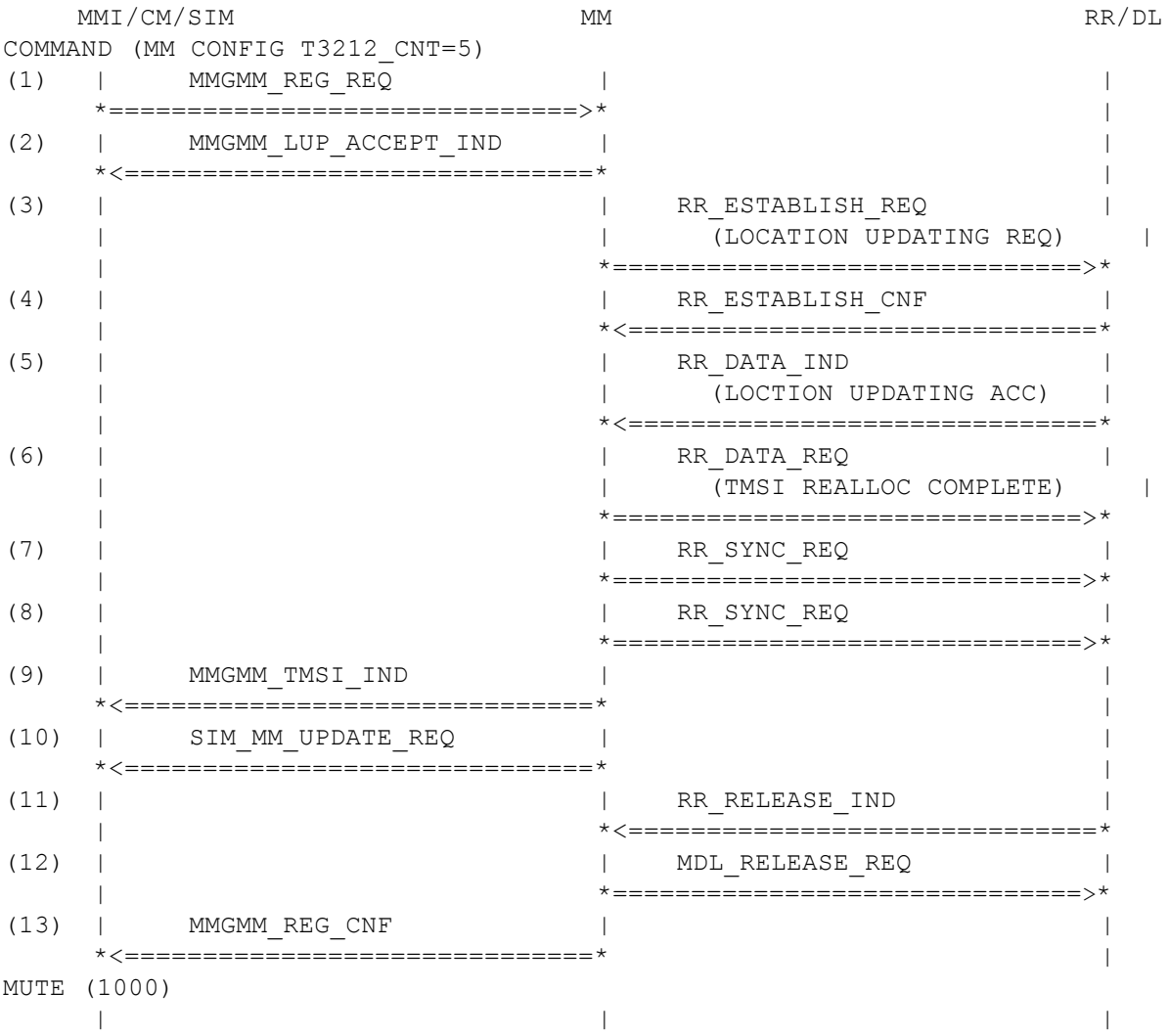
History:	24.08.00	HM	Initial
	03.01.01	HM	Revised

3.30.12 MMG1011: GMM requires update on the cell, attach or periodic

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary.
<A> IMSI attach, no periodic update
<B> IMSI attach, periodic update

Variants: <A>....<B>

Preamble: <A> MMG1005A
<B> MMG1005B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(2) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33

		lac	LAC_2147
		cid	CELL_ID_1122
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_ESTABLISH_CNF		
		param	NOT_USED
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(6)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED

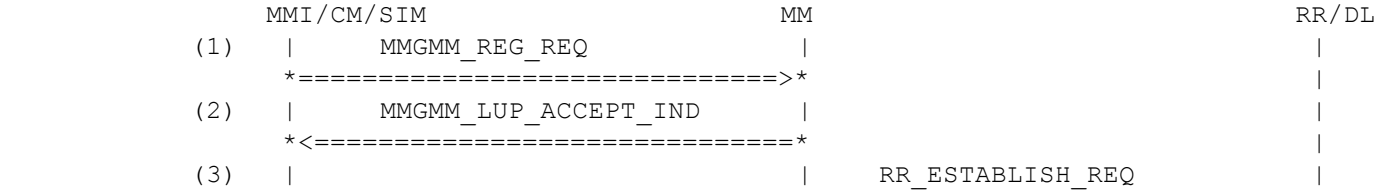
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(10)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(11)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(13)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE

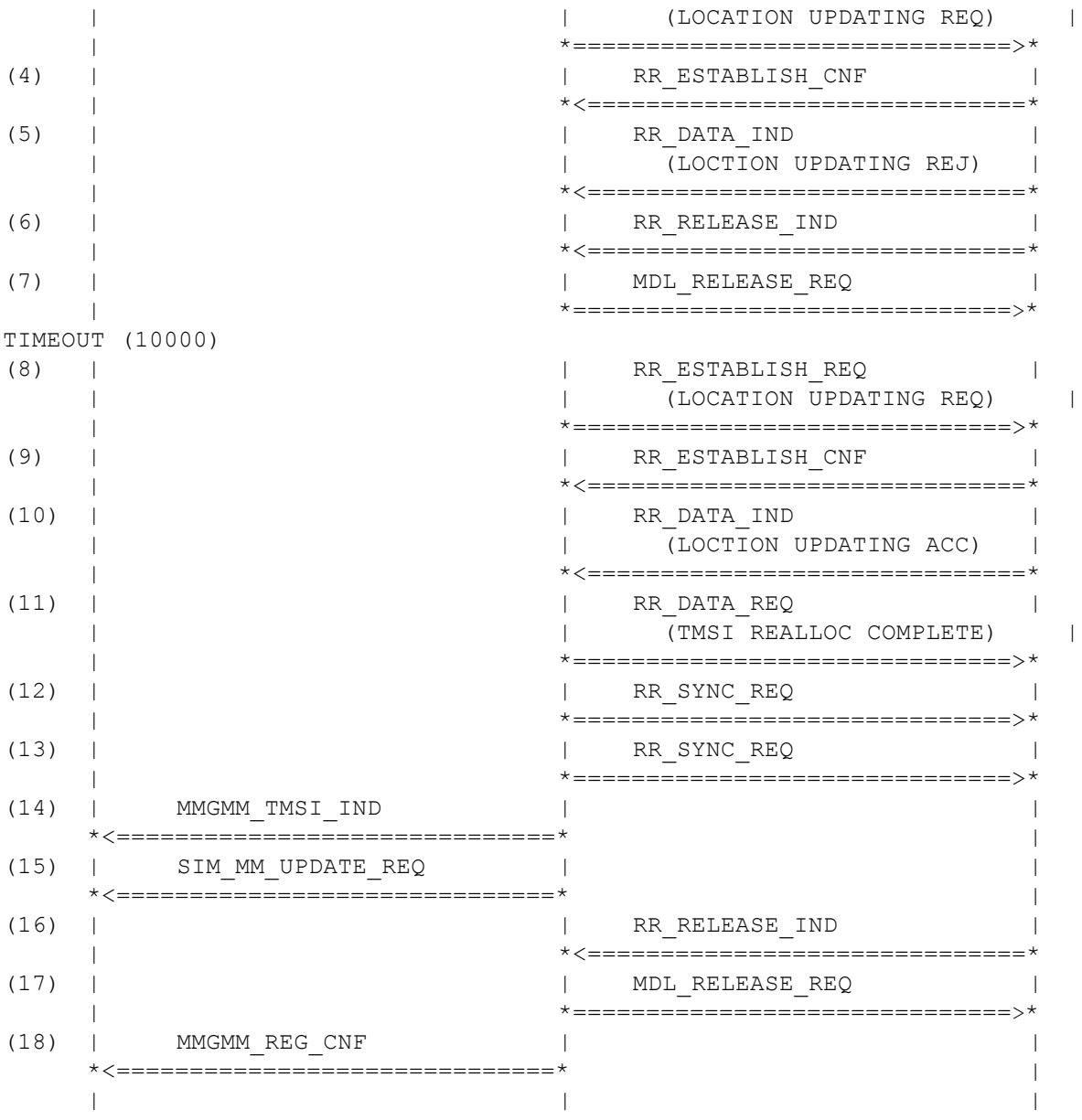
History:	24.08.00	HM	Initial
	04.01.00	HM	Revised
	21.01.01	HM	Last timeout increased
	16.01.02	HM	Revised
	18.01.02	HM	Revised

3.30.13 MMG1012: Update on the cell required, attach, non-imm. success

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary.
In this testcase the GSM location updating attempt will not be successfull immediately, but will be successfull in the second attempt.

Preamble: MMG1005B





Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	MMGMM_LUP_ACCEPT_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	

		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_ESTABLISH_CNF		
		param	NOT_USED
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED

	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(11) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(13) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(14) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(16) RR_RELEASE_IND		
	cause	RRCS_NORM

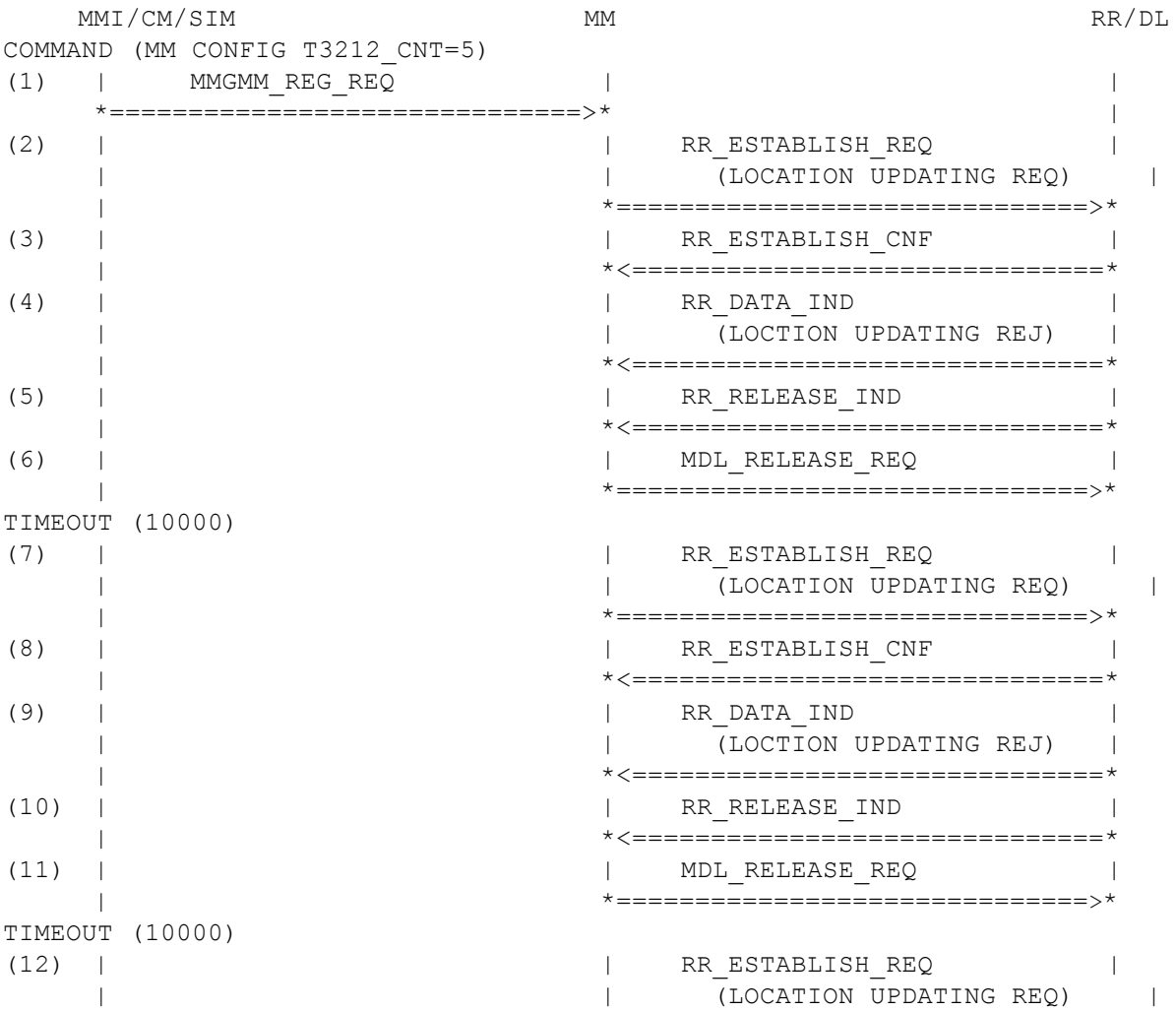
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(17) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(18) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	MMGMM_RESUMPTION_FAILURE

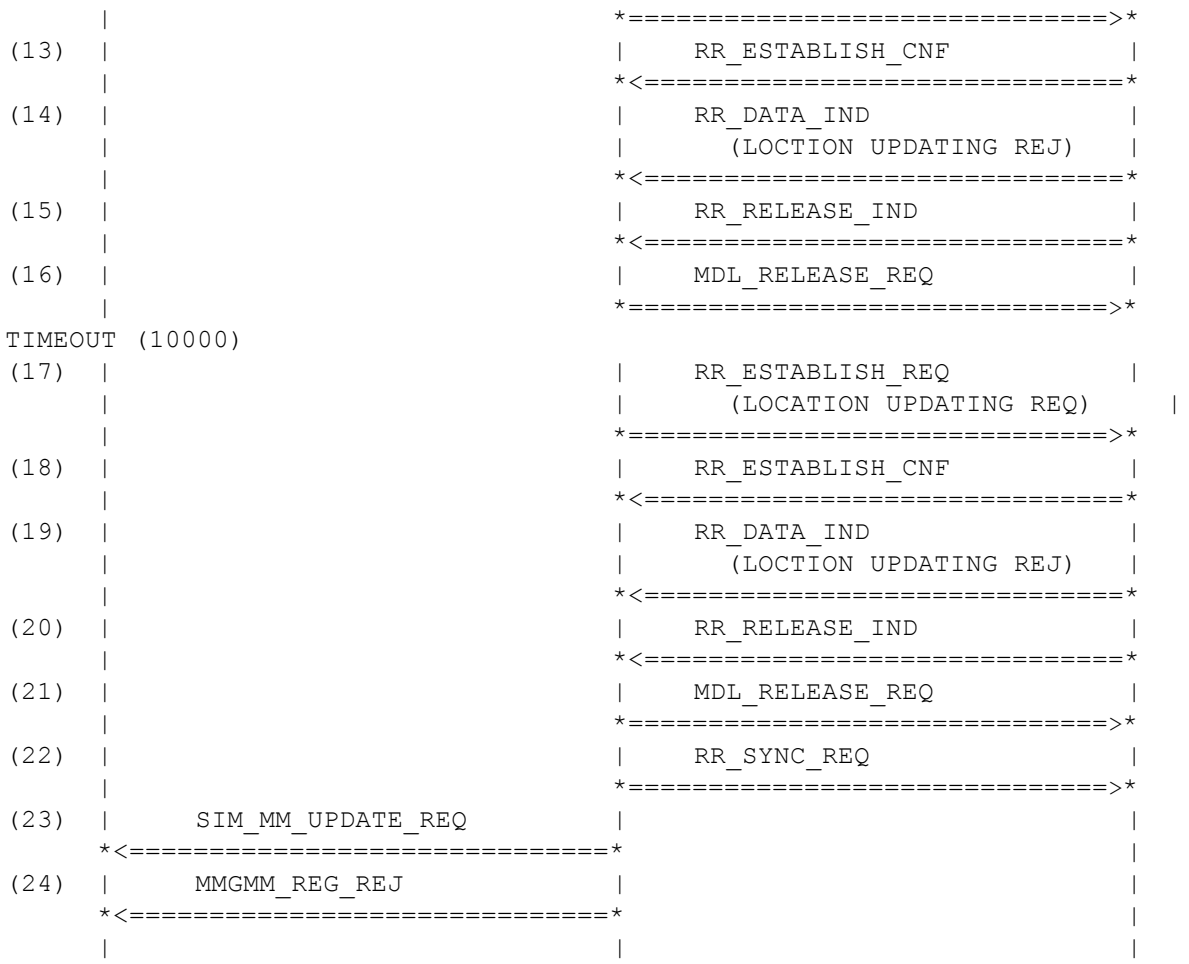
History:	24.08.00	HM	Initial
	04.01.01	HM	Revised
	17.01.02	HM	Revised

3.30.14 MMG1013: Unsuccessfull remote controlled periodic location update

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary.
In this testcase the GSM location updating attempt will not be successfull after four attempts.

Preamble: MMG1010B





Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	

(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(10)	RR_RELEASE_IND		
		cause	RRCS_NORM

	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(12) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_PERIODIC
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(13) RR_ESTABLISH_CNF		
	param	NOT_USED
(14) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(15) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(16) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(17) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_PERIODIC
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147

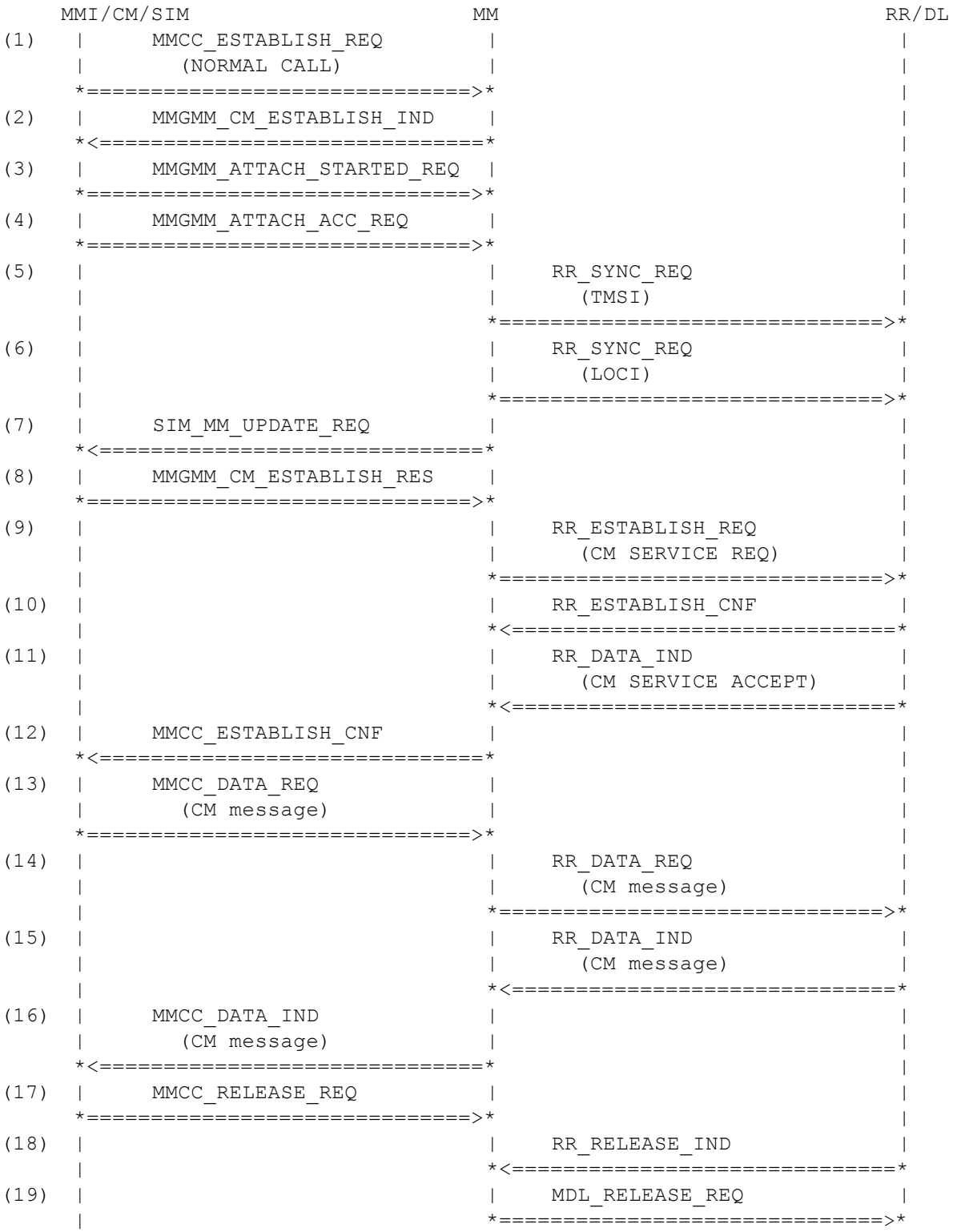
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(18) RR_ESTABLISH_CNF		
	param	NOT_USED
(19) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(20) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(21) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(22) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(23) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(24) MMGMM_REG_REJ		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_NETWORK_FAILURE
	resumption	MMGMM_RESUMPTION_FAILURE

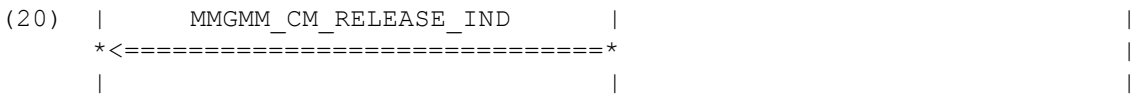
History:			
	23.11.00	HM	Initial
	02.11.01	HM	Revised

3.30.15 MMG1014: CM service request in IDLE ATTEMPT TO UPDATE, I

Description: In this testcase it is tested that, if a call attempt is made in state IDLE ATTEMPT TO UPDATE, a registration attempt has to be performed. This all has to be negotiated with GMM.
In this testcase the location updating procedure for MM will be performed as successfull combined attach in network mode I.

Preamble: MMG1013





Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMGMM_CM_ESTABLISH_IND		
(3)	MMGMM_ATTACH_STARTED_REQ		
(4)	MMGMM_ATTACH_ACC_REQ		
		plmn	PLMN_123_33
		lac	LAC_2147
		v_tmsi	MMGMM_TMSI_USED
		tmsi	TMSI_34125708_ULONG
(5)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(6)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(7)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(8)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	

	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_TMSI
	}	
(10) RR_ESTABLISH_CNF		
	param	NOT_USED
(11) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(12) MMCC_ESTABLISH_CNF		
	ti	TI_2
(13) MMCC_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(14) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(15) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE_RESPONSE
(16) MMCC_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE_RESPONSE
(17) MMCC_RELEASE_REQ		
	ti	TI_2
(18) RR_RELEASE_IND	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_ACK
(19) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

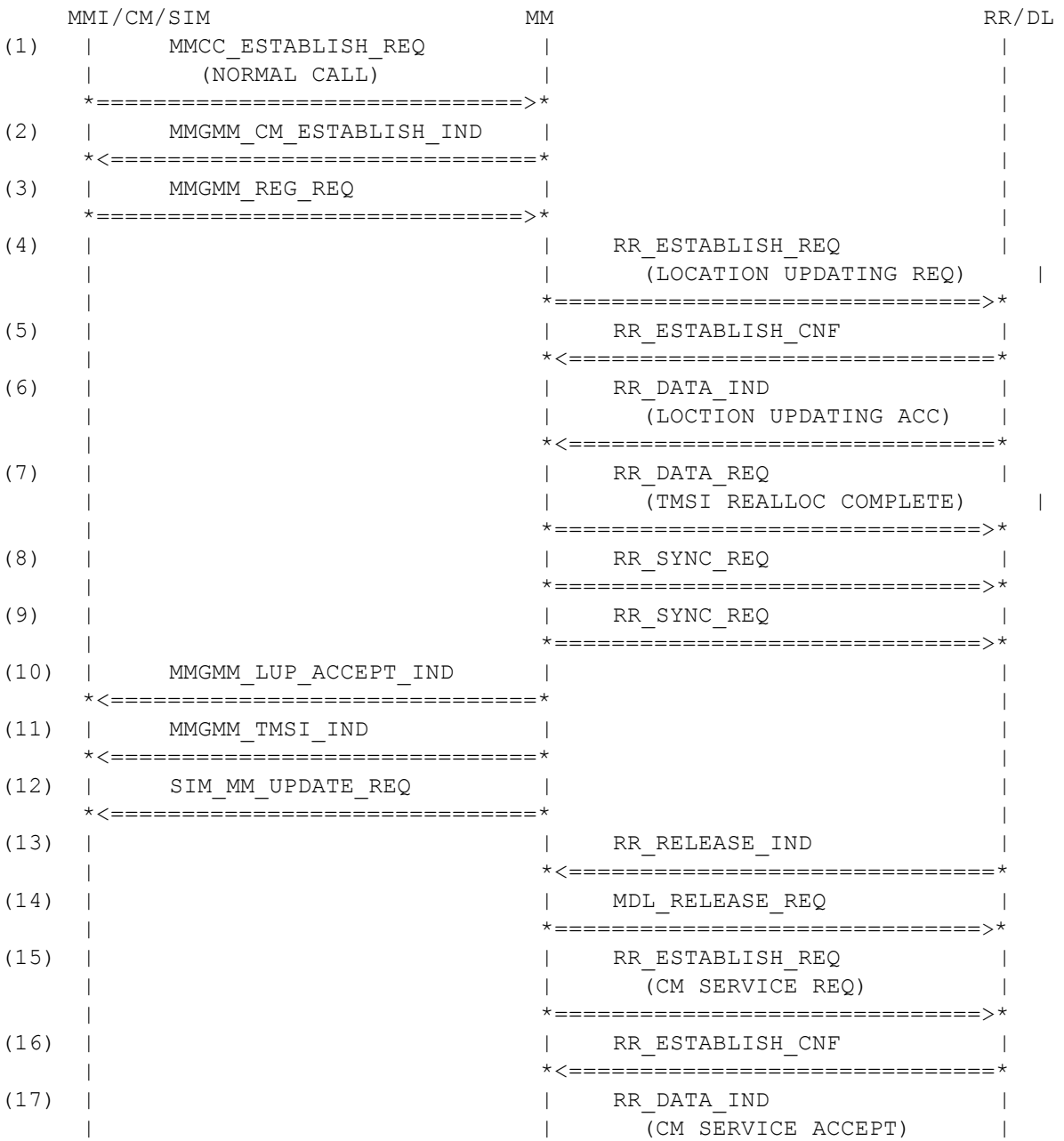
(20) MMGMM_CM_RELEASE_IND

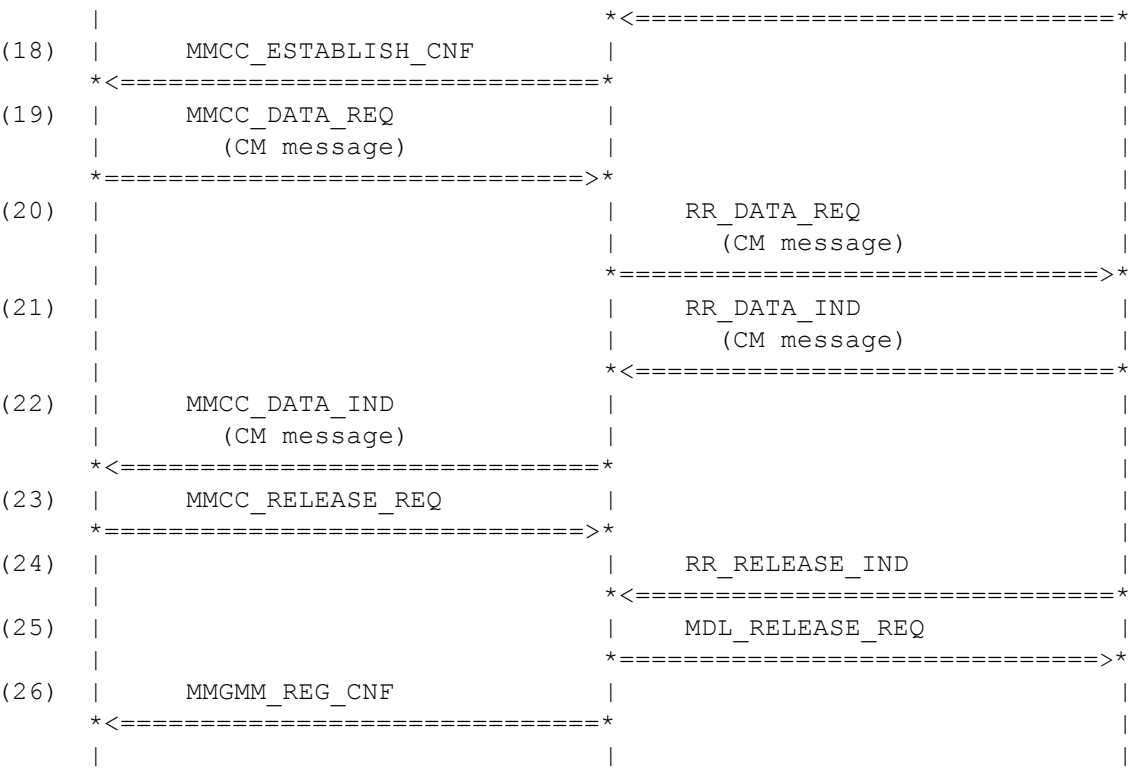
		resumption	MMGMM_RESUMPTION_OK
History:	29.11.00	HM	Initial
	09.02.01	HM	Revised

3.30.16 MMG1015: CM service request in IDLE ATTEMPT TO UPDATE, II

Description: In this testcase it is tested that, if a call attempt is made in state IDLE ATTEMPT TO UPDATE, a registration attempt has to be performed. This all has to be negotiated with GMM.
In this testcase the location updating procedure for MM will be performed as successfull non-combined attach in either network mode II or III. The location updating procedure will be done with follow on request by MM.

Preamble: MMG1013





Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMGMM_CM_ESTABLISH_IND		
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED

(6) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_ACCEPT
ti	TI_0
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_id	MOB_IDENT_NEW_TMSI
follow_proceed	NOT_USED
}	

(7) RR_DATA_REQ

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	UPLINK
pd	U_TMSI_REALLOC_COMP
ti	TI_0
}	

(8) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	MOB_ID_NEW_TMSI
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(9) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	PLMN_123_33
lac	LAC_2147
synccs	SYNCCS_LAI_ALLOW
accc	NOT_USED
thplmn	NOT_USED

(10) MMGMM_LUP_ACCEPT_IND

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122

(11) MMGMM_TMSI_IND

tmsi	TMSI_34125708_ULONG

(12) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_2147_34125708

	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(13) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(14) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(15) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_TMSI
	}	
(16) RR_ESTABLISH_CNF		
	param	NOT_USED
(17) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(18) MMCC_ESTABLISH_CNF		
	ti	TI_2
(19) MMCC_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(20) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(21) RR_DATA_IND		
	d1	NOT_USED

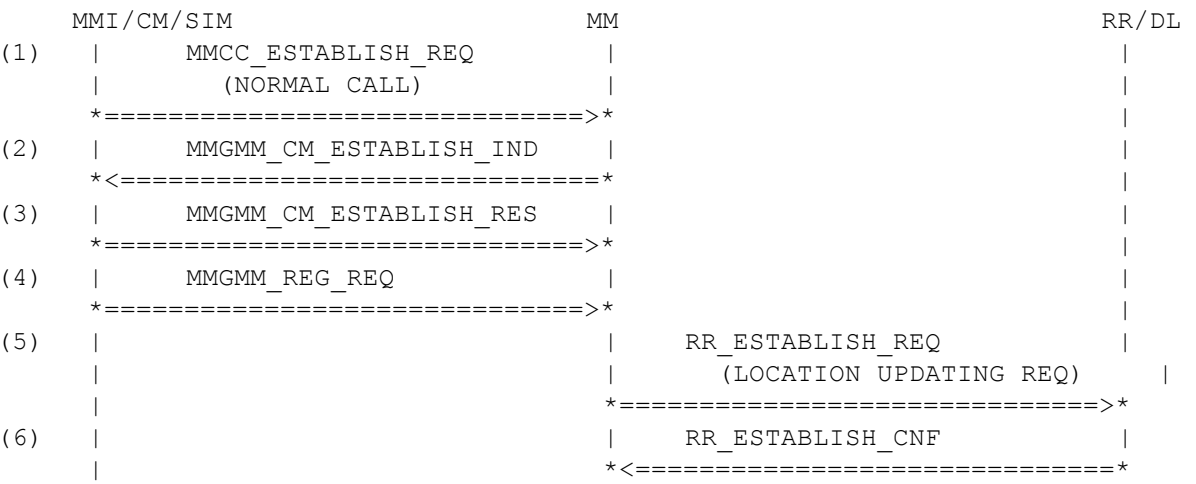
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(22)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(23)	MMCC_RELEASE_REQ		
		ti	TI_2
(24)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(25)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(26)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_OK

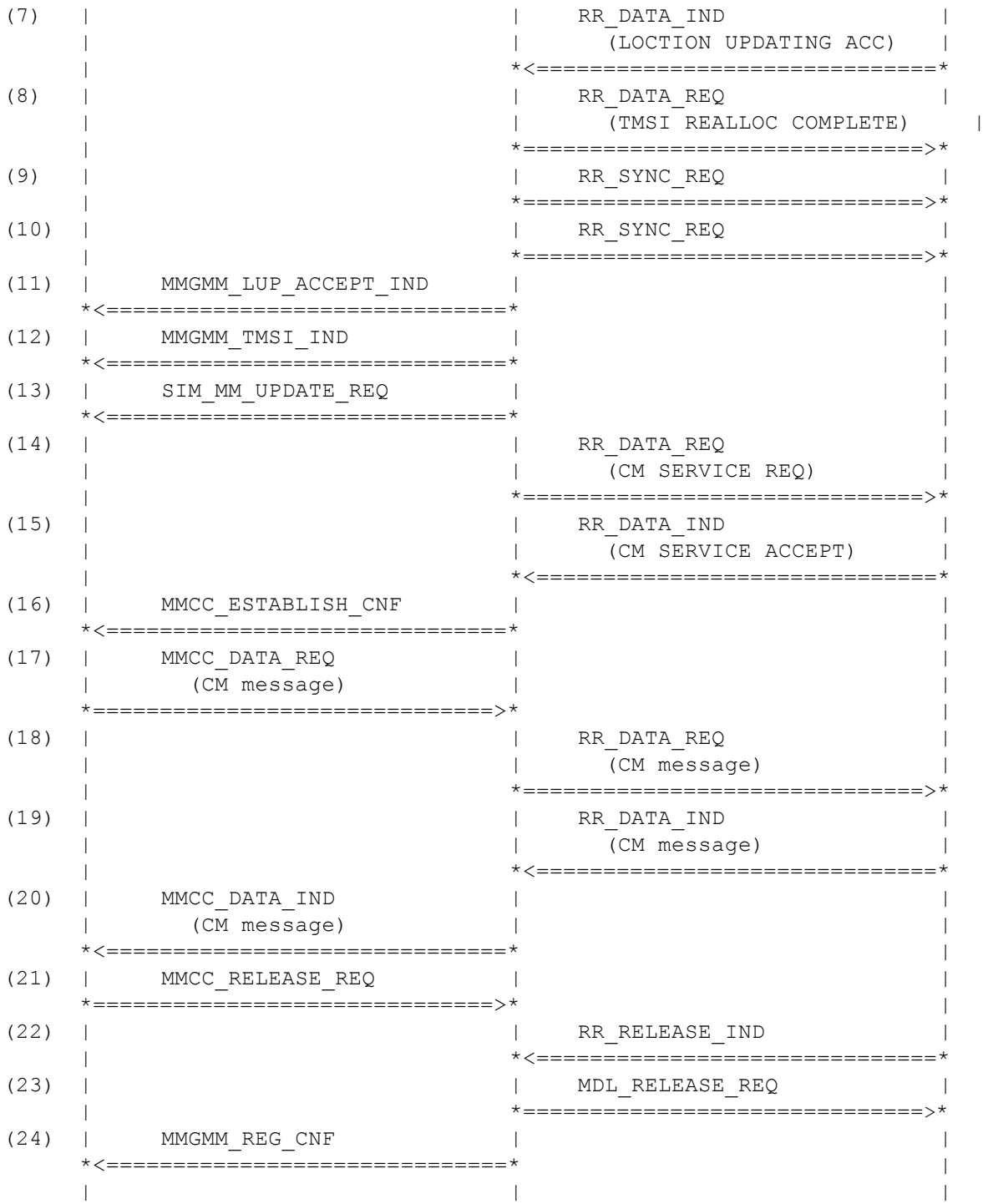
History:	29.11.00	HM	Initial
	18.01.02	HM	Revised
	27.09.02	HM	RC update => all CM services OK

3.30.17 MMG1016: Call attempt causing LUP with follow on proceed

Description: If a call attempt is made in MM_IDLE_ATTEMPT_TO_UPDATE state, the mobile has to start a location updating procedure. This has to be negociated with GMM. In this testcase the location updating procedure for MM will be performed as successfull non-combined attach in either network mode II or III. The location updating procedure will be done with follow on request by MM, as the MMGMM_CM_ESTABLISH_RES will be sent by GMM before the MMGMM_REG_REQ. The MMGMM_REG_CNF will be sent earlier as usual if GPRS is present at the place where MMGMM_LUP_ACCEPT_IND normally would be sent, the reason is that the location updating procedure ends here before the channel release and GPRS will not request the physical channels due until MMGMM_CM_RELEASE_IND was received.

Preamble: MMG1013





Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMGMM_CM_ESTABLISH_IND		

(3)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_FEFF
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(6)	RR_ESTABLISH_CNF		
		param	NOT_USED
(7)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	IE_FOLLOW_PROCEED
		}	
(8)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(9)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED

	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(10) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(11) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
(12) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_TMSI
	}	
(15) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	

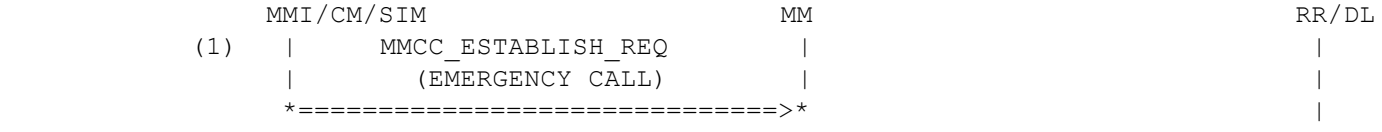
(16)	MMCC_ESTABLISH_CNF		
		ti	TI_2
(17)	MMCC_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(18)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(19)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(20)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(21)	MMCC_RELEASE_REQ		
		ti	TI_2
(22)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(23)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(24)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_OK

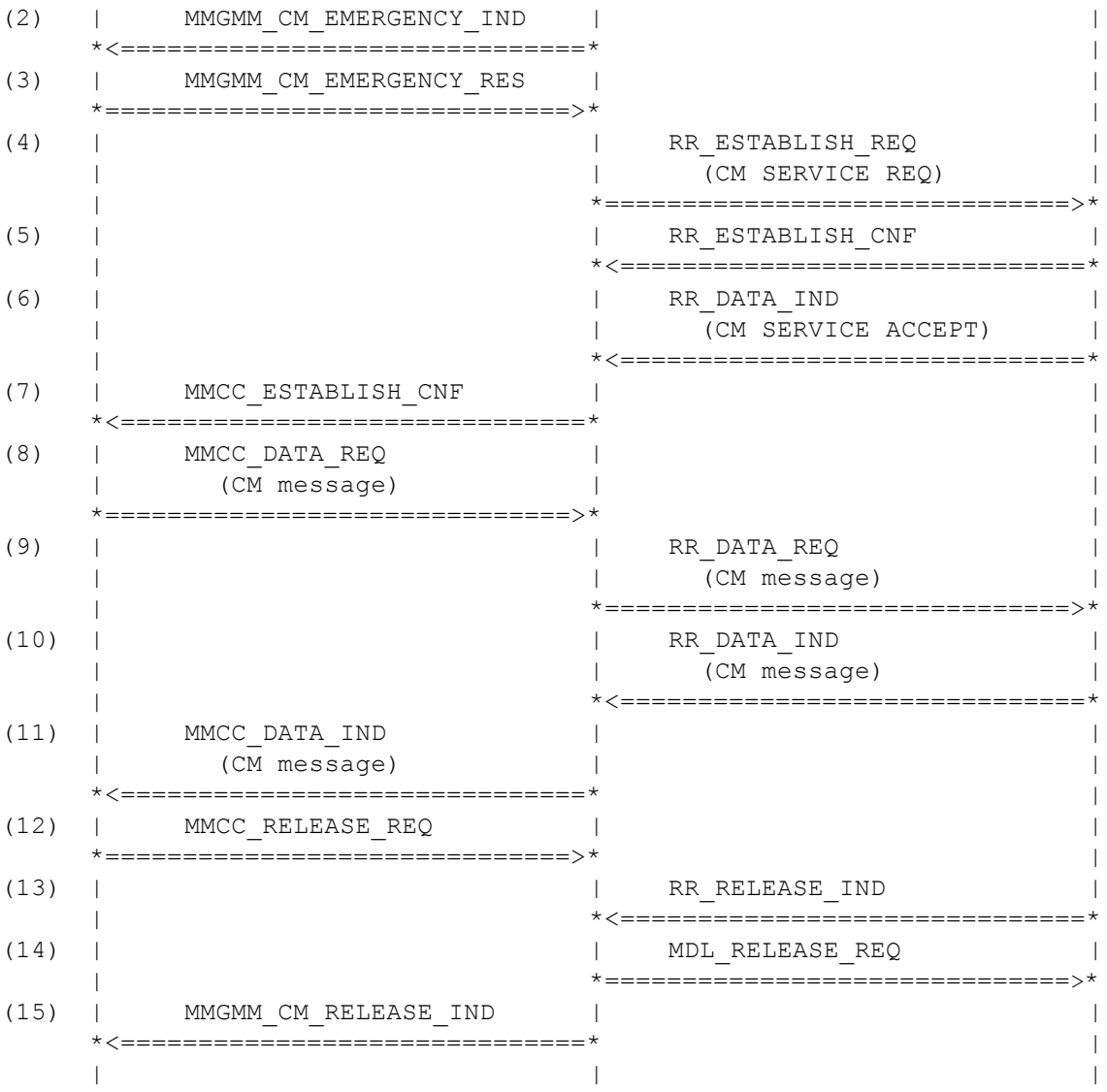
History:	29.11.00	HM	Initial
	27.03.01	HM	Revised
	18.04.01	HM	Revised after test session with ANS
	18.01.02	HM	Revised
	27.09.02	HM	RC update => all CM services OK

3.30.18 MMG1017: Emergency call with GPRS, ATTEMPT TO UPDATE

Description: In this testcase it is tested wheter emergency calls are possibe in state MM_IDLE_ATTEMPT_TO_UPDATE.
Note: The establishment of CM connections is indicated and responsed by different primitives, depending whether it is an emergency or normal call attempt, but the release of the last MM connection is always indicated by the primitive MMGMM_CM_RELEASE_IND.

Preamble: MMG1013





Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_EMERGE
(2)	MMGMM_CM_EMERGENCY_IND		
(3)	MMGMM_CM_EMERGENCY_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_EMRG_CAL
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0

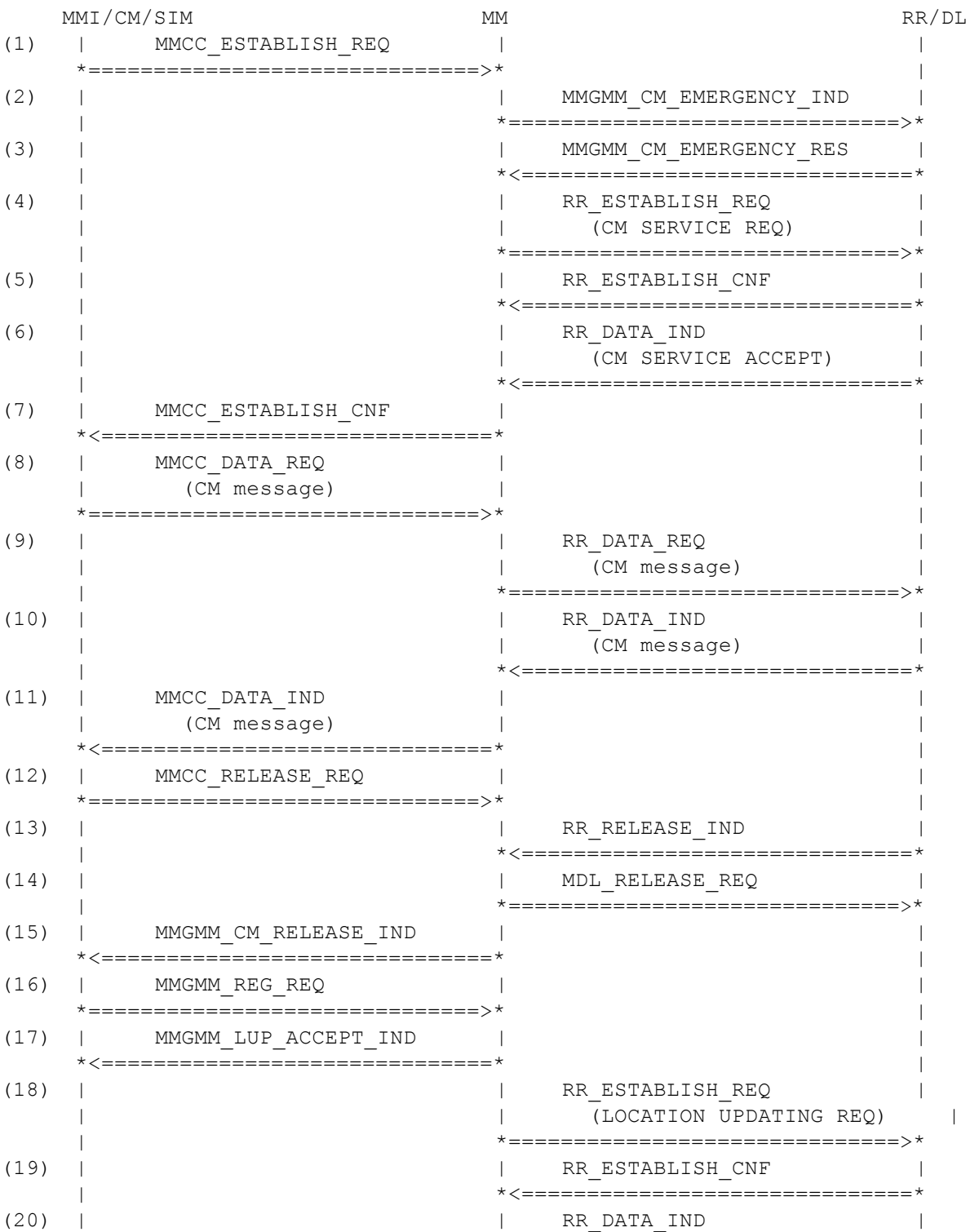
		cm_serv_type	ST_EMERGENCY
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(7)	MMCC_ESTABLISH_CNF		
		ti	TI_2
(8)	MMCC_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(9)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(10)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(11)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(12)	MMCC_RELEASE_REQ		
		ti	TI_2
(13)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(14)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(15)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_OK

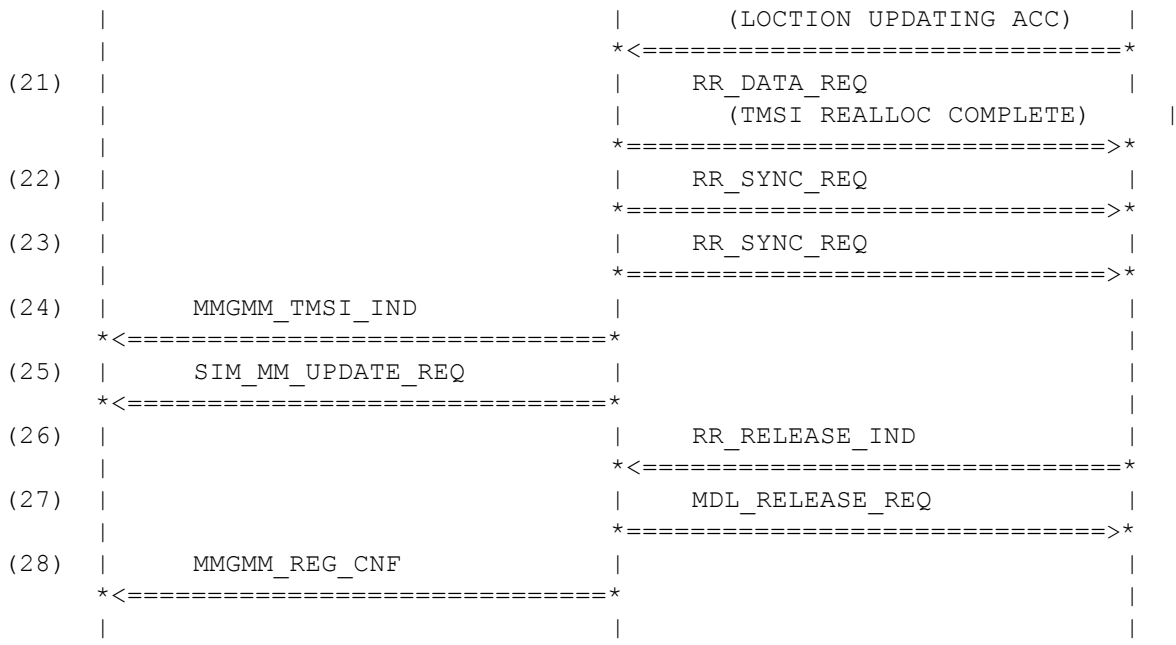
History:	29.11.00	HM	Initial
	27.03.01	HM	Revised

3.30.19 MMG1018: Emergency setup required while waiting for GMM update

Description: MM receives the request to establish an emergency call while it is waiting for GMM that it can perform its own IMSI attach update. The emergency call is performed, after that, the IMSI attach will be done.

Preamble: MMG1005A





Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_EMERGE
(2)	MMGMM_CM_EMERGENCY_IND		
(3)	MMGMM_CM_EMERGENCY_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_EMRG_CAL
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_EMERGENCY
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM

	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(7) MMCC_ESTABLISH_CNF		
	ti	TI_2
(8) MMCC_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(9) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE
(10) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE_RESPONSE
(11) MMCC_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	CC_MESSAGE_RESPONSE
(12) MMCC_RELEASE_REQ		
	ti	TI_2
(13) RR_RELEASE_IND	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_ACK
(14) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(15) MMGMM_CM_RELEASE_IND		
	resumption	MMGMM_RESUMPTION_OK
(16) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(17) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
(18) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0

	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(19) RR_ESTABLISH_CNF		
	param	NOT_USED
(20) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(21) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(22) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(23) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED

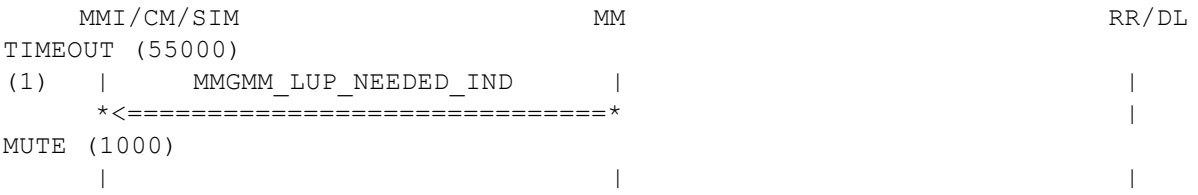
(24)	MMGMM_TMSI_IND		
		tmsi	TMSI_34125708_ULONG
(25)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(26)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(27)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(28)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE

History:	13.12.00	HM	Initial
	16.01.02	HM	Revised
	18.01.02	HM	Revised

3.30.20 MMG1019: Expiry of T3212 in ATTEMPTING TO UPDATE state

Description: In this testcase it is tested that T3212 expiry is indicated to GMM in state MM_IDLE_ATTEMPT_TO_UPDATE and no own establish attempt for an update is performed.

Preamble: MMG1013



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_T3212

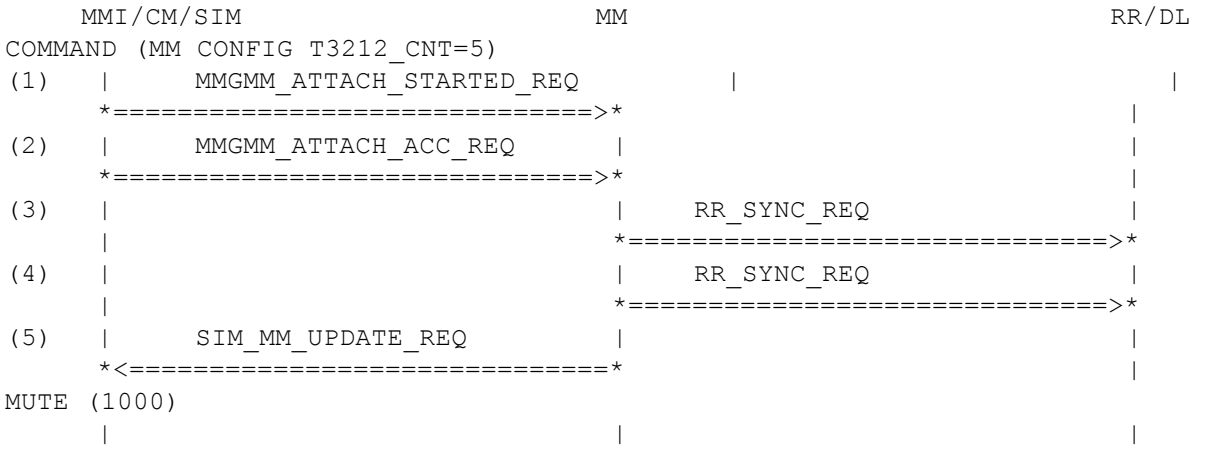
History:	29.11.00	HM	Initial
	27.03.01	HM	Revised

3.30.21 MMG1020: Successfull combined attach

Description: After cell selection, MM receives a MMGMM_ATTACH_STARTED_REQ which indicates that GMM has started the combined attach procedure, network mode I. The combined attach procedure ends for MM with a positive outcome, this means, a

MMGMM_ATTACH_ACCEPT_REQ primitive is received. RR and SIM are informed about the new parameters. The registration is not confirmed to GMM as GMM should already know the full service condition.

Preamble: MMG1005B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_ATTACH_STARTED_REQ		
(2) MMGMM_ATTACH_ACC_REQ		
	plmn	PLMN_123_33
	lac	LAC_2147
	v_tmsi	MMGMM_TMSI_USED
	tmsi	TMSI_34125708_ULONG
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(4) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1

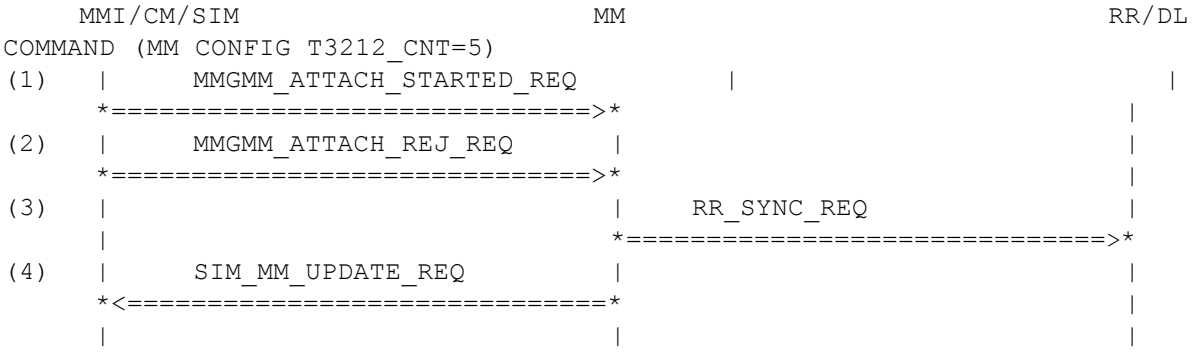
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

History: 09.02.01 HM Initial

3.30.22 MMG1021: Unsuccessful combined attach

Description: After cell selection, MM receives a MMGMM_ATTACH_STARTED_REQ which indicates that GMM has started the combined attach procedure, network mode I. The combined attach procedure ends for MM with a negative outcome, this means, a MMGMM_ATTACH_REJ_REQ primitive is received. The error cause is not fatal, thus not invalidating the SIM as such.

Preamble: MMG1005B



Parametrization

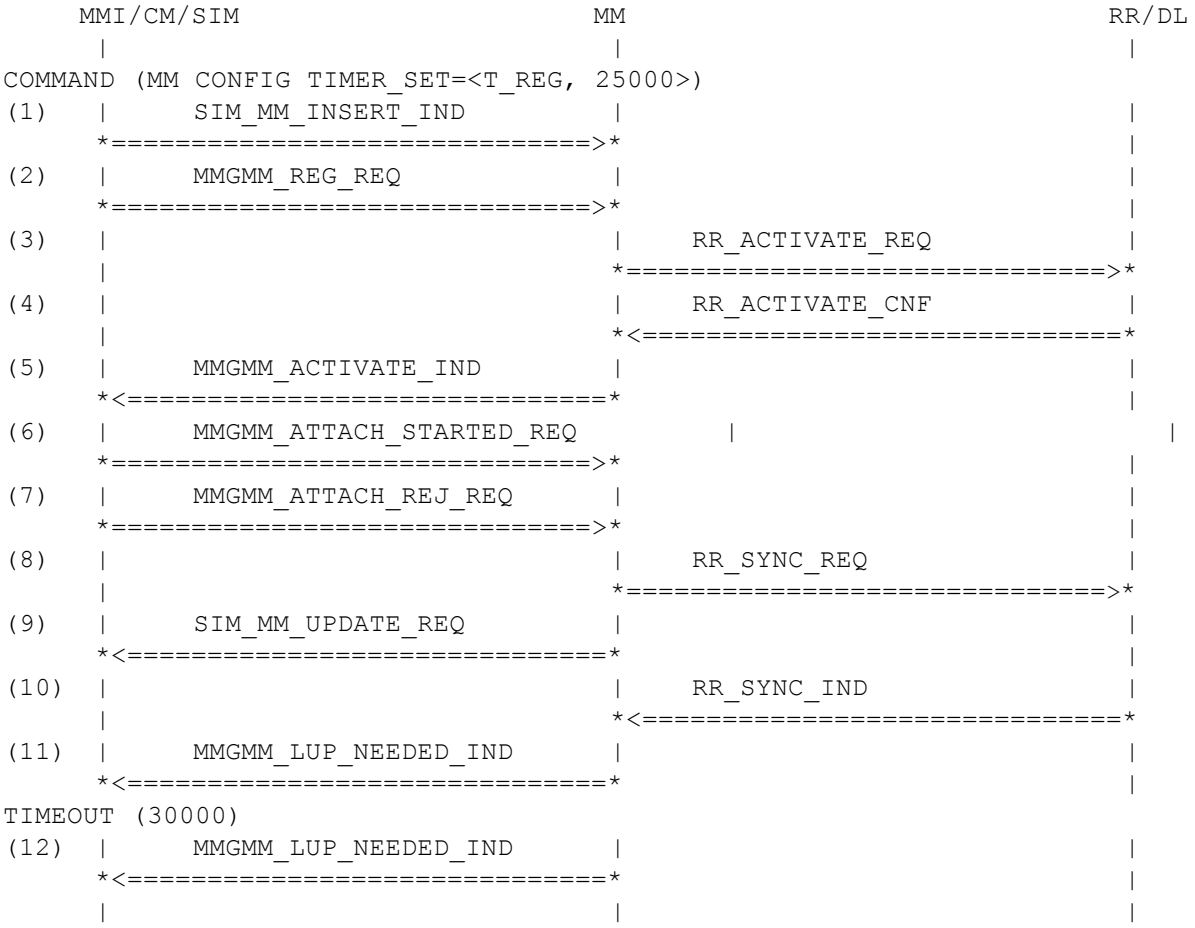
Primitive	Parameter	Value
(1) MMGMM_ATTACH_STARTED_REQ		
(2) MMGMM_ATTACH_REJ_REQ		
	cause	GMMCS_NET_FAIL
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(4) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

History: 09.02.01 HM Initial

3.30.23 MMG1022: Unsuccessful combined attach, fieldstrength jump, T_REG

Description: After combined attach attempt MM entered MM_IDLE_ATTEMPT_TO_UPDATE state. A normal SIM and no test SIM is inserted. A fieldstrength jump is announced by RR to indicate that the conditions have become better now. MM signals this to GMM as faked cell selection to trigger a new location updating attempt. After that, the registration timer times out. This also is indicated to GMM.

Preamble: MMG0001



Parametrization

Primitive	Parameter	Value
(14) SIM_MM_INSERT_IND	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_2147_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01

(15) MMGMM_REG_REQ

service_mode	SERVICE_MODE_FULL
reg_type	REG_CELL_SEARCH_ONLY
mobile_class	MMGMM_CLASS_BC

(16) RR_ACTIVATE_REQ

plmn	PLMN_123_33X
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_ECL
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_YES

(17) RR_ACTIVATE_CNF

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO_ATT_PER
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_YES

(18) MMGMM_ACTIVATE_IND

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
t3212_val	T3212_6_MIN_MS
status	MMGMM_WAIT_FOR_UPDATE
gprs_indicator	MMGMM_GPRS_SUPP_YES

(19) MMGMM_ATTACH_STARTED_REQ

(20) MMGMM_ATTACH_REJ_REQ

cause	GMMCS_NET_FAIL

(21) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(22) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY

		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(23)	RR_SYNC_IND		
		ciph	CIPH_NOT_PRES
		mm_info	NOT_USED
		bcch_info	NOT_USED
		synccs	SYNCCS_LUP_RETRY
		chm	CHM_NOT_PRESENT
(24)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_RXLEV_JUMP
(25)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_REG_TIMER

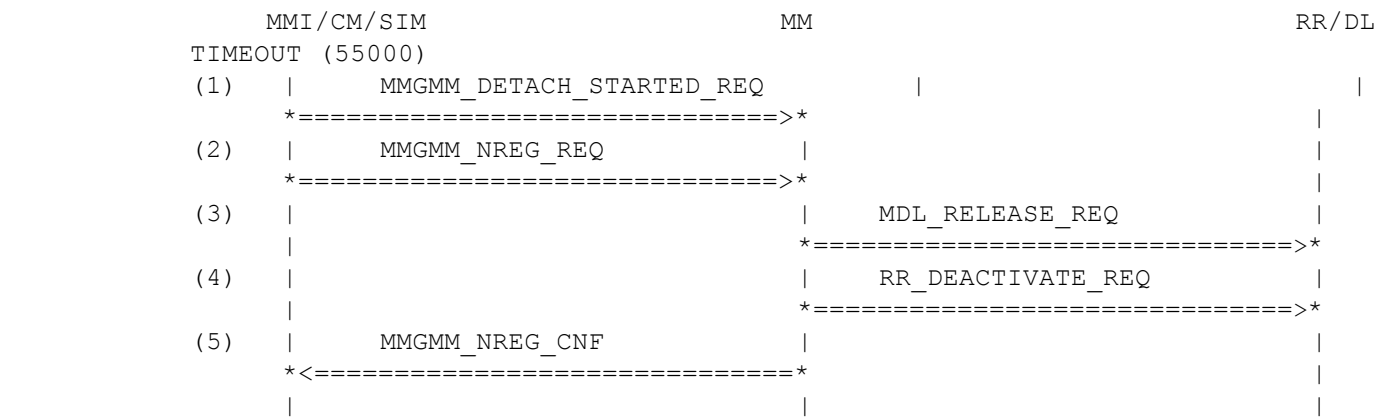
History:	09.02.01	HM	Initial
	09.03.01	HM	Revised

3.30.24 MMG1023: T3212 not causing updating

Description: MM is either combined attached by GMM in network mode I or MM received a MMGMM_ATTACH_REJ_REQ. The testcase waits for a periodic location updating which is not expected to happen.
After that, MM is detached by GMM procedures.
<A> After successful combined attach procedure
<B> After unsuccessful combined attach procedure
[Under revision, doesn't pass currently. Maybe we change the protocol that MM needs not to keep track about the network mode anymore, in this case the testcase has to be reworked.]

Variants: <A>....<B>

Preamble: <A> MMG1020
<B> MMG1021



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_DETACH_STARTED_REQ		
(2)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF

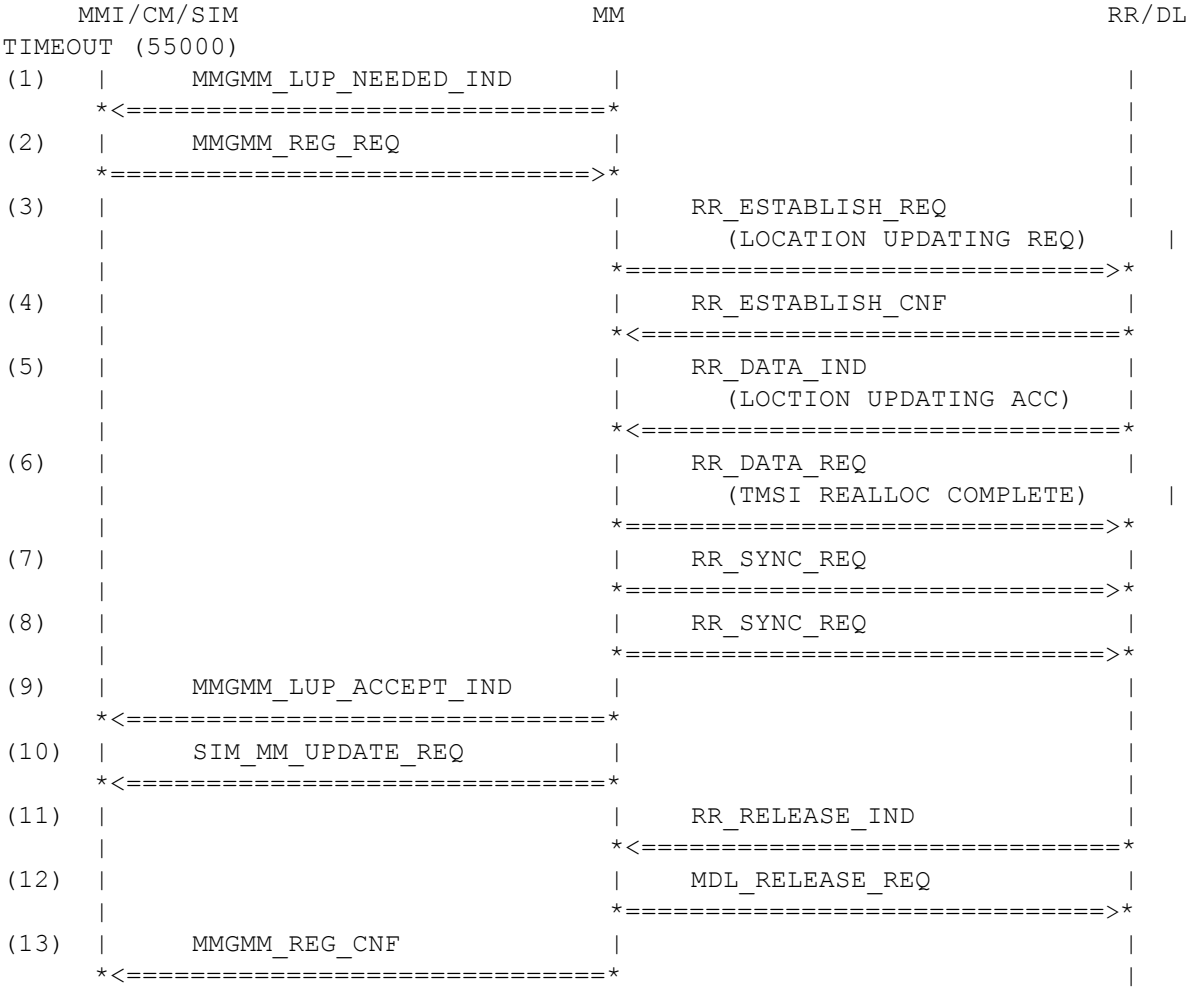
		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(3)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(4)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(5)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

History: 09.02.01 HM Initial

3.30.25 MMG1024: T3212 running after MM's own location updating procedure

Description: MM is idle updated/attempting to update after performing its own location registration procedures. As periodic updating is announced by the cell, T3212 is running. After expiry the need for a MM location updating procedure is announced to GMM. GMM triggers MM to start the location updating procedure.
After successful own location updating procedure

Preamble: MMG1009



```
TIMEOUT (15000)
     |                                  |                                  |
```

Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_T3212
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_ESTABLISH_CNF		
		param	NOT_USED
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(6)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP

		ti	TI_0
		}	
(7)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_USED
		accc	NOT_USED
		thplmn	NOT_USED
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	PLMN_123_33
		lac	LAC_2147
		synccs	SYNCCS_LAI_ALLOW
		accc	NOT_USED
		thplmn	NOT_USED
(9)	MMGMM_LUP_ACCEPT_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
(10)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(11)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(12)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(13)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE

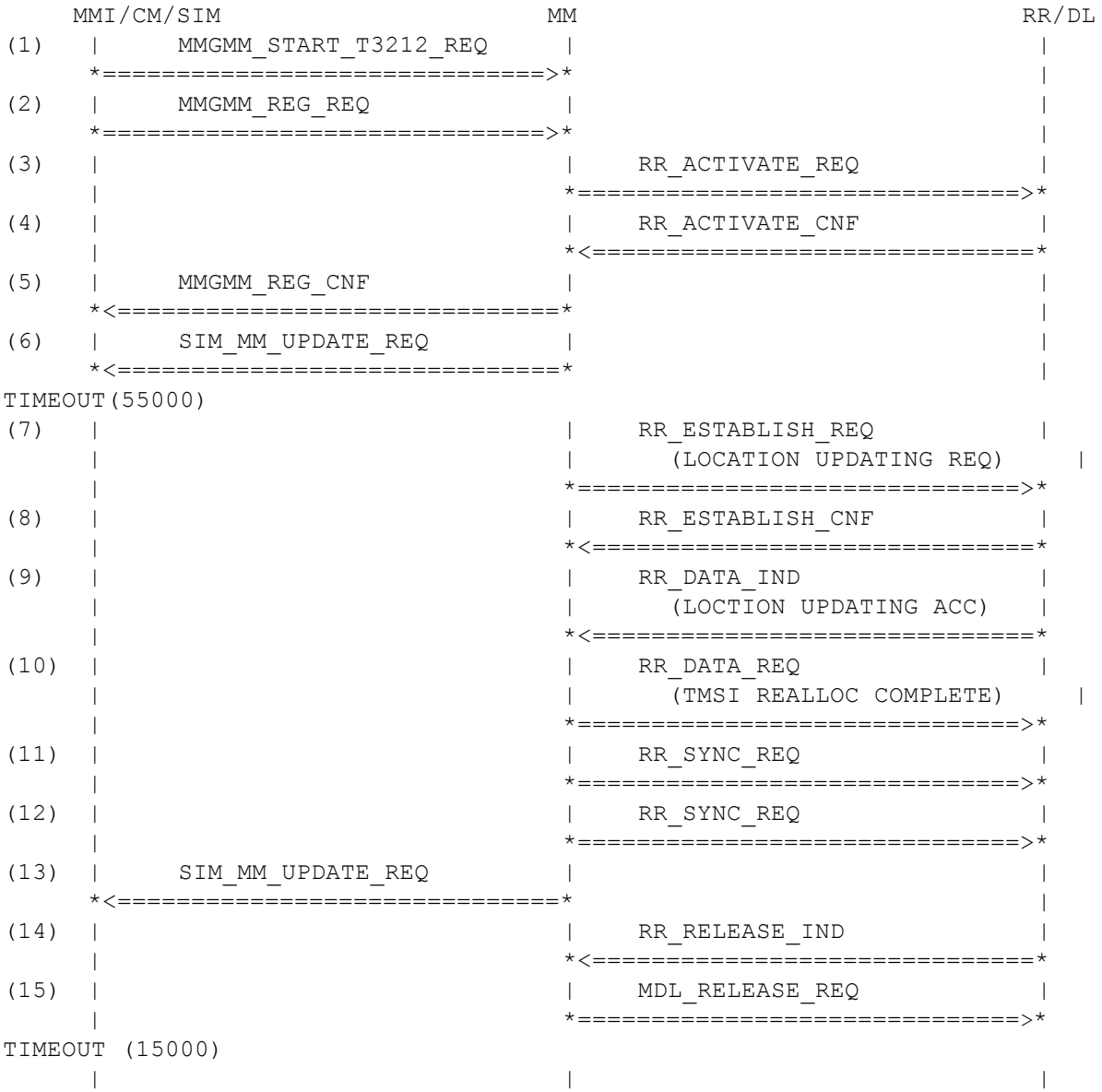
History:	09.02.01	HM	Initial

3.30.26 MMG1025: T3212 started after MMGMM_START_T3212_REQ I

Description: GMM detachs the mobile station for GPRS services only in network mode I. (About that, MM must not be notified by GMM by using MMGMM_DETACH_STARTED_REQ as the detach is

for GPRS only.) After that, MM has to start its own periodic updating timer T3212. MM is brought to exclusive CS operation by GMM after GMM has finished its own GPRS detach.

Preamble: MMG1020



Parametrization

Primitive	Parameter	Value
(1) MMGMM_START_T3212_REQ		
(2) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_GPRS_INACTIVE
	mobile_class	MMGMM_CLASS_BC

(3) RR_ACTIVATE_REQ

plmn	PLMN_123_33X
op	OP_MODE_TEST_SIM_NO_SERV
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NEW_TMSI
thplmn	NOT_USED
bcch_info	BCCH_INFO_NONE
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_NO

(4) RR_ACTIVATE_CNF

op	OP_MODE_TEST_SIM
mm_info	MM_INFO_ATT_PER
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_YES

(5) MMGMM_REG_CNF

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
resumption	MMGMM_RESUMPTION_FAILURE

(6) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_2147_34125708
bcch_inf	BCCH_INF_1
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(7) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_PERIODIC
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_2147
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_NEW_TMSI
}	

(8) RR_ESTABLISH_CNF

param	NOT_USED

(9) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED

	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(10) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(15) MDL_RELEASE_REQ

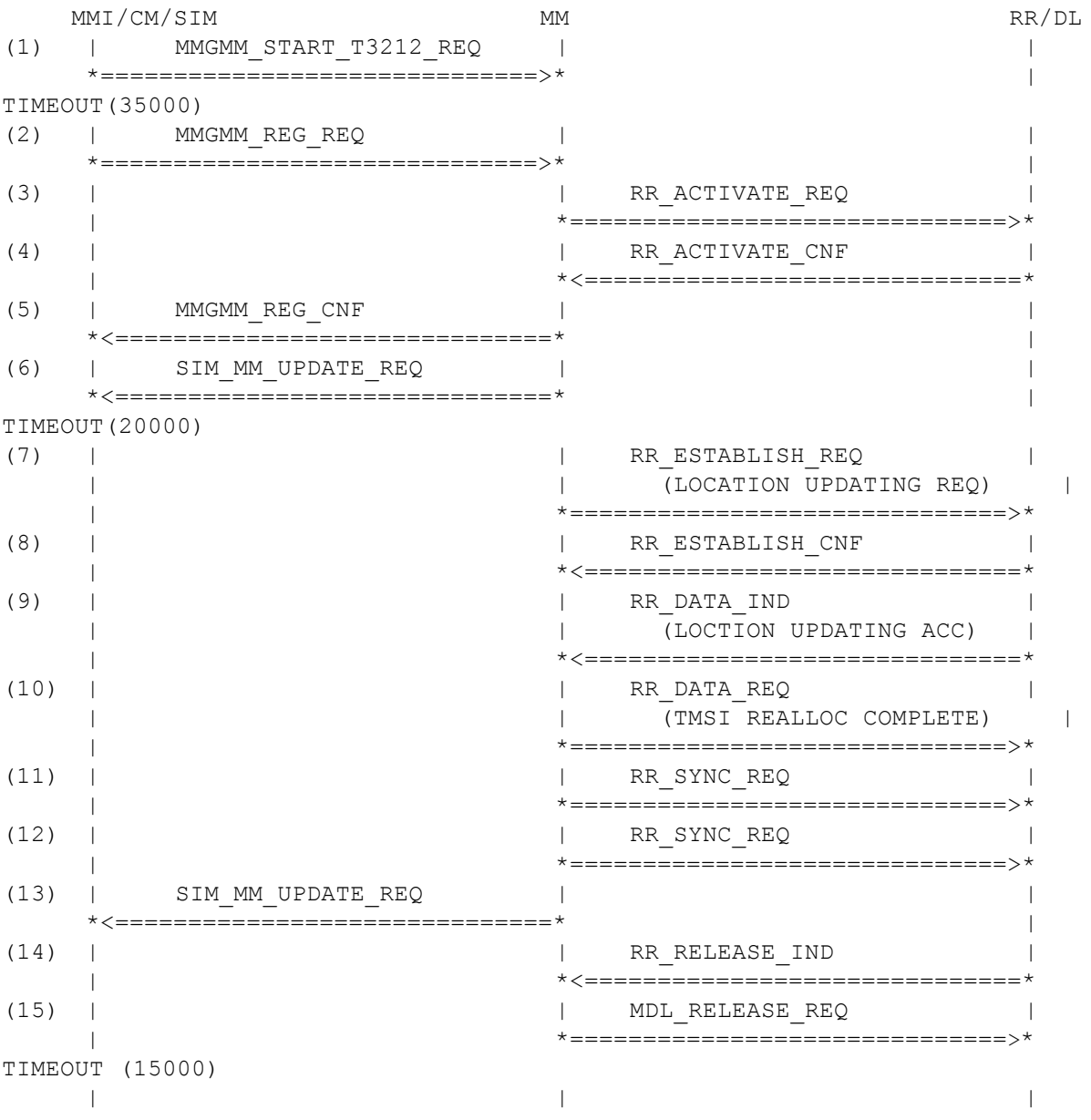
ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

History:	09.02.01	HM	Initial
	09.03.01	HM	Revised
	04.02.02	HM	Revised

3.30.27 MMG1026: T3212 started after MMGMM_START_T3212_REQ II

Description: GMM detachs the mobile station for GPRS services only in network mode I. (About that, MM must not be notified by GMM by using MMGMM_DETACH_STARTED_REQ as the detach is for GPRS only.) After that, MM has to start its own periodic updating timer T3212. MM is brought to exclusive CS operation by GMM after GMM has finished its own GPRS detach.

Preamble: MMG1020



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_START_T3212_REQ		
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_BC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_MODE_TEST_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO
(4)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1

	mob_id	MOB_IDENT_NEW_TMSI
	}	
(8) RR_ESTABLISH_CNF		
	param	NOT_USED
(9) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(10) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED

	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History:	09.02.01	HM	Initial
	09.03.01	HM	Revised
	04.02.02	HM	Revised

3.30.28 MMG1027: Unsuccessful combined attach

Description: After cell selection, MM receives a MMGMM_ATTACH_STARTED_REQ which indicates that GMM has started the combined attach procedure, network mode I. The combined attach procedure ends for GMM with a negative outcome, this means, a MMGMM_ATTACH_REJ_REQ primitive is received. The error cause is #7 (GPRS not allowed), thus it is not interesting for the GSM side. If the mobile is not of class CG, this maybe followed by a registration attempt for GSM only services. It is tested that a MMGMM_ATTACH_REJ_REQ with cause #7 doesn't cause any visible action in MM.

Preamble: MMG1005B

Parametrization

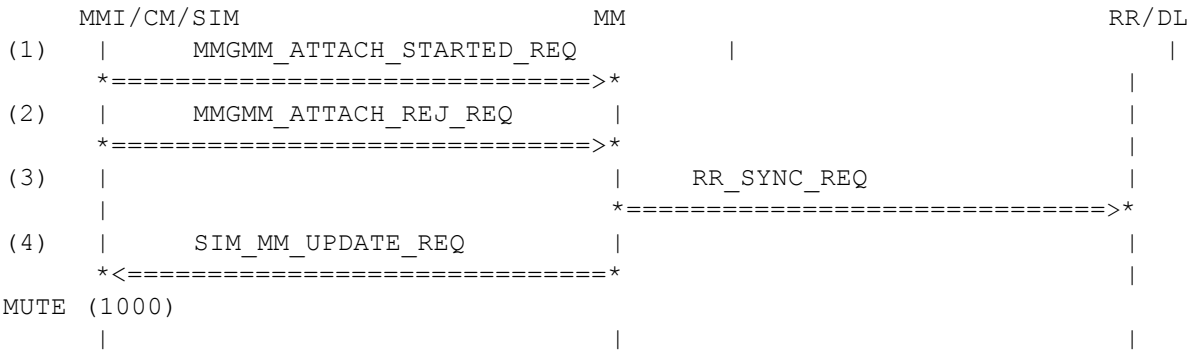
Primitive	Parameter	Value
(1) MMGMM_ATTACH_STARTED_REQ		
(2) MMGMM_ATTACH_REJ_REQ		
	cause	GMMCS_GPRS_NOT_ALLOWED

History:	02.08.01	HM	Initial

3.30.29 MMG1028: Unsuccessful combined attach, IMSI unknown in HLR

Description: After cell selection, MM receives a MMGMM_ATTACH_STARTED_REQ which indicates that GMM has started the combined attach procedure, network mode I. The combined attach procedure ends for GMM with a negative outcome, this means, a MMGMM_ATTACH_REJ_REQ primitive is received. The error cause is #2 (IMSI unknown in HLR), the TMSI, ciphering key, ciphering sequence key shall be deleted and the SIM be considered for GSM services as invalid until switch off or the SIM is removed. The SIM remains valid for GPRS services, so MM has to handle the last requirement with care! RR must not be swiched to "limited service" here!

Preamble: MMG1005B



Parametrization

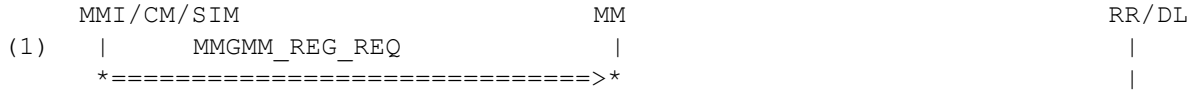
Primitive	Parameter	Value
(1) MMGMM_ATTACH_STARTED_REQ		
(2) MMGMM_ATTACH_REJ_REQ		
	cause	GMMCS_IMSI_UNKNOWN
(3) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(4) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_PLMN_NOT_ALLOW
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

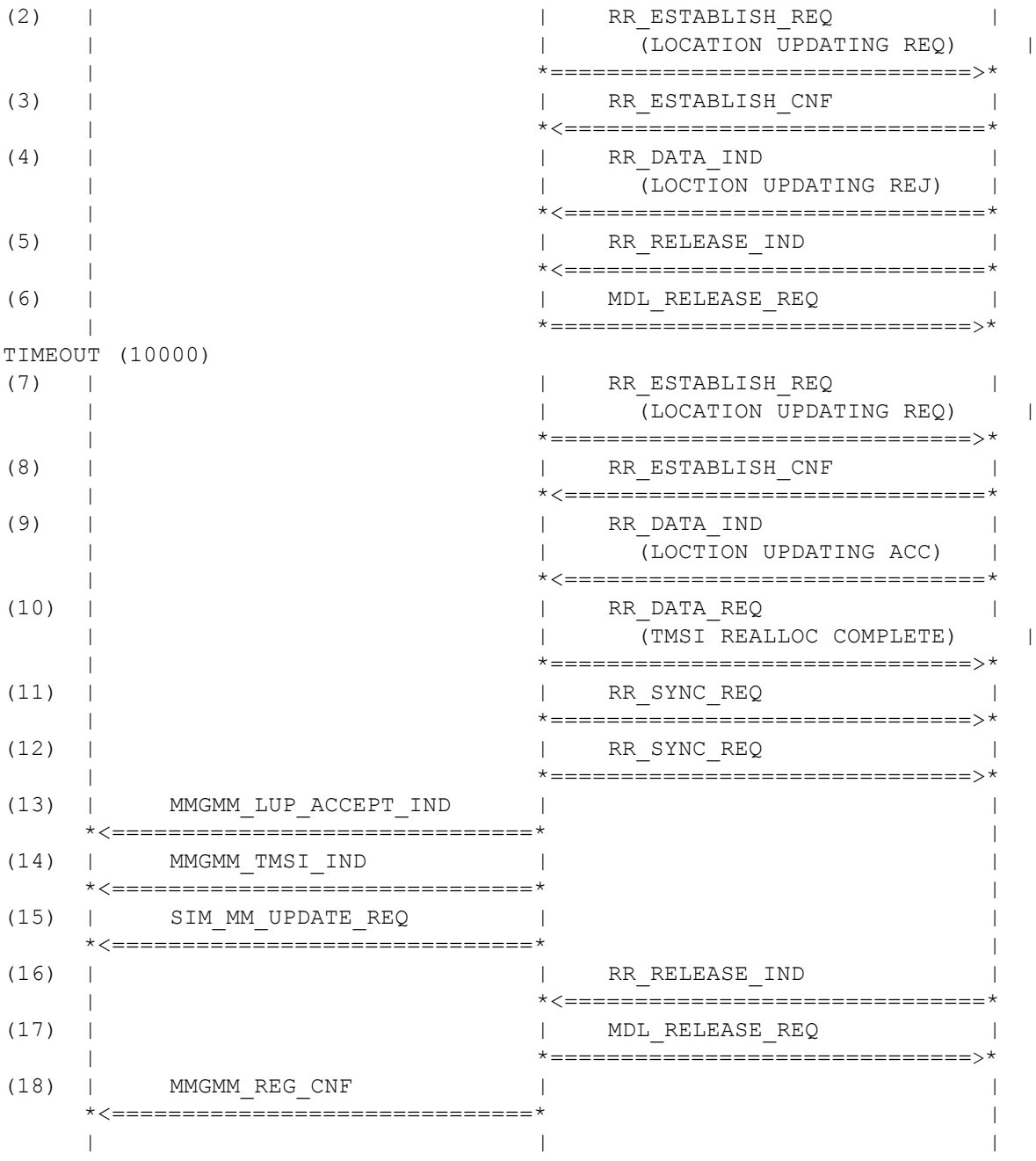
History: 06.08.01 HM Initial

3.30.30 MMG1029: Update on the cell required, periodic, non-imm. success

Description: If receiving an MMGMM_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary. In this testcase the GSM location updating attempt will not be successfull immediately, but will be successfull in the second attempt.
No IMSI attach (but already tried by GMM), periodic update

Preamble: MMG1010B





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM

		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	

	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(10) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(13) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
(14) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(15) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122

(16) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(17) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(18) MMGMM_REG_CNF

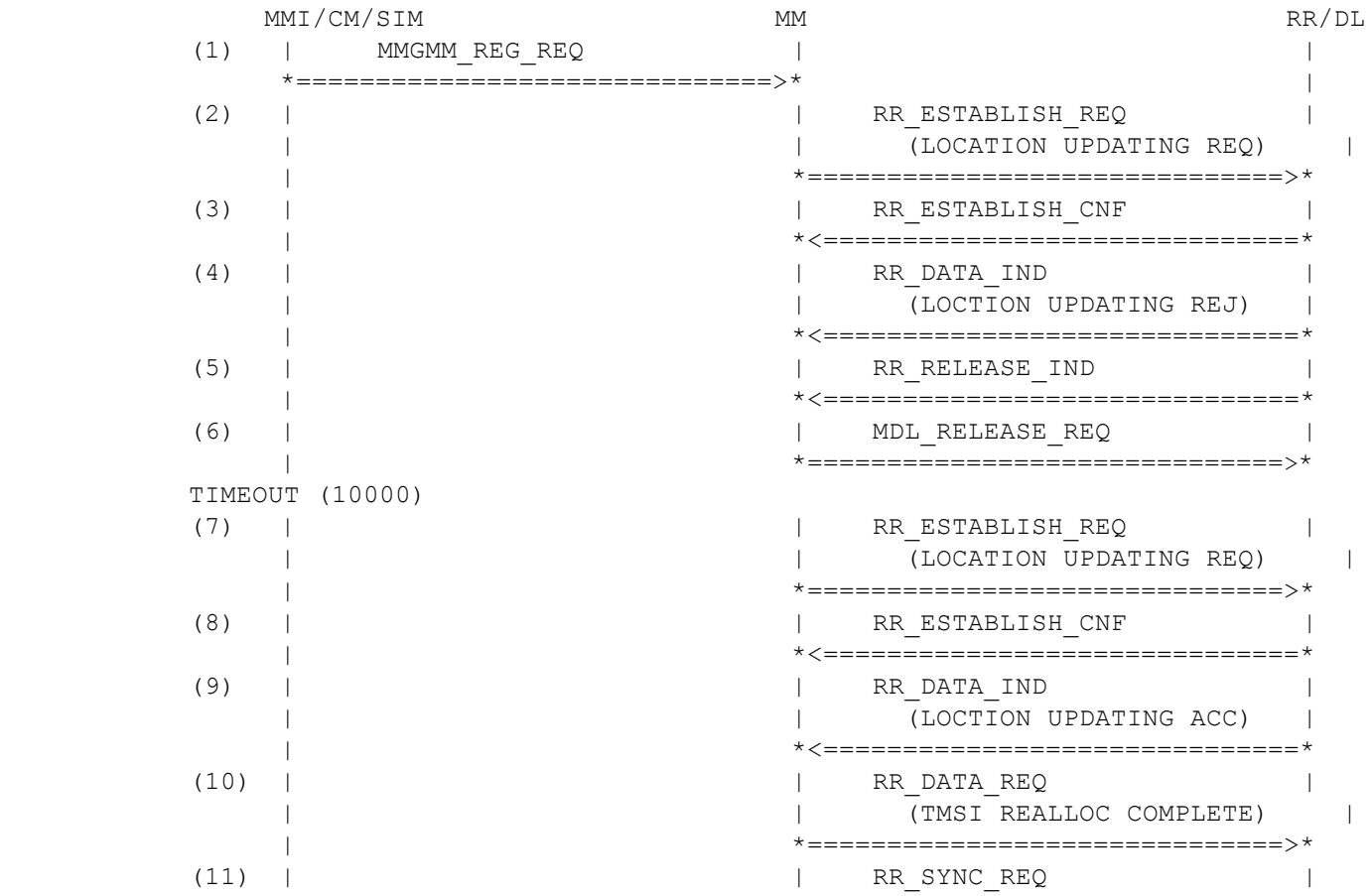
plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
resumption	MMGMM_RESUMPTION_FAILURE

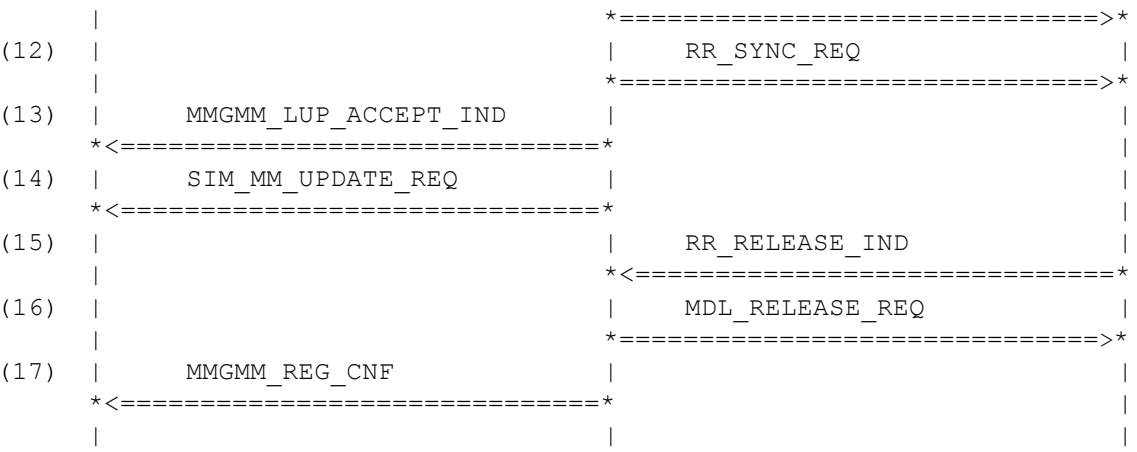
History:	24.08.00	HM	Initial
	04.01.01	HM	Revised
	16.01.02	HM	Revised

3.30.31 MMG1030: Update on the cell required, periodic, non-imm. success

Description: If receiving an MMGMM_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary. In this testcase the GSM location updating attempt will not be successfull immediately, but will be successfull in the second attempt.
IMSI attach, periodic update

Preamble: MMG1011B





Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	
(5)	RR_RELEASE_IND		
		cause	RRCS_NORM

		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_PERIODIC
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_ACCEPT
		ti	TI_0
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_id	MOB_IDENT_NEW_TMSI
		follow_proceed	NOT_USED
		}	
(10)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_TMSI_REALLOC_COMP
		ti	TI_0
		}	
(11)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	MOB_ID_NEW_TMSI
		plmn	NOT_USED
		lac	NOT_USED

	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(13) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
(14) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(15) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(16) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(17) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	MMGMM_RESUMPTION_FAILURE

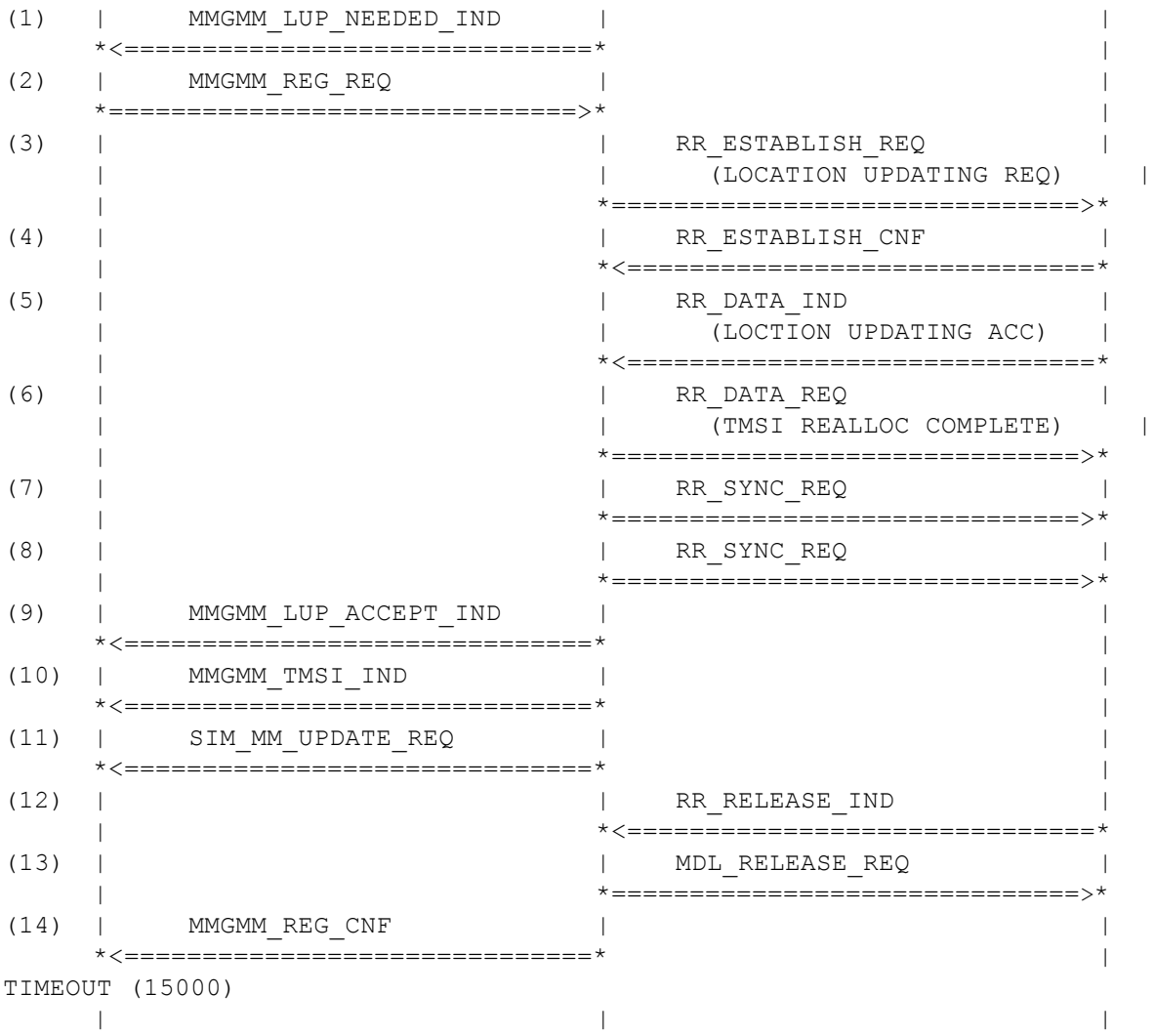
History:			
	24.08.00	HM	Initial
	04.01.01	HM	Revised
	16.01.02	HM	Revised

3.30.32 MMG1031: T3212 running after MM's own location updating procedure

Description: MM is idle updated/attempting to update after performing its own location registration procedures. As periodic updating is announced by the cell, T3212 is running. After expiry the need for a MM location updating procedure is announced to GMM. GMM triggers MM to start the location updating procedure.
After unsuccessful location updating, MM state MM_IDLE_ATTEMPT_TO_UPDATE

Preamble: MMG1013

```
     MMI/CM/SIM                    MM                              RR/DL
TIMEOUT (55000)
```



Parametrization

	Primitive	Parameter	Value
(3)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_T3212
(4)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(5)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL

	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(6) RR_ESTABLISH_CNF		
	param	NOT_USED
(7) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(8) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(9) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(10) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED

(11) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
(12) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(13) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(14) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(15) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(16) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	MMGMM_RESUMPTION_FAILURE

History:	09.02.01	HM	Initial
	18.01.02	HM	Revised

3.30.33 MMG1032: No action after successful combined attach

Description: The mobile is combined attached, network mode I. The cell requires periodic updating every 6 minutes and IMSI ATTACH/DETACH. No further cell (re)selection is done. It is checked that no MMGMM-LUP-NEEDED-IND is issued for seven minutes.

Preamble: MMG1020

Parametrization

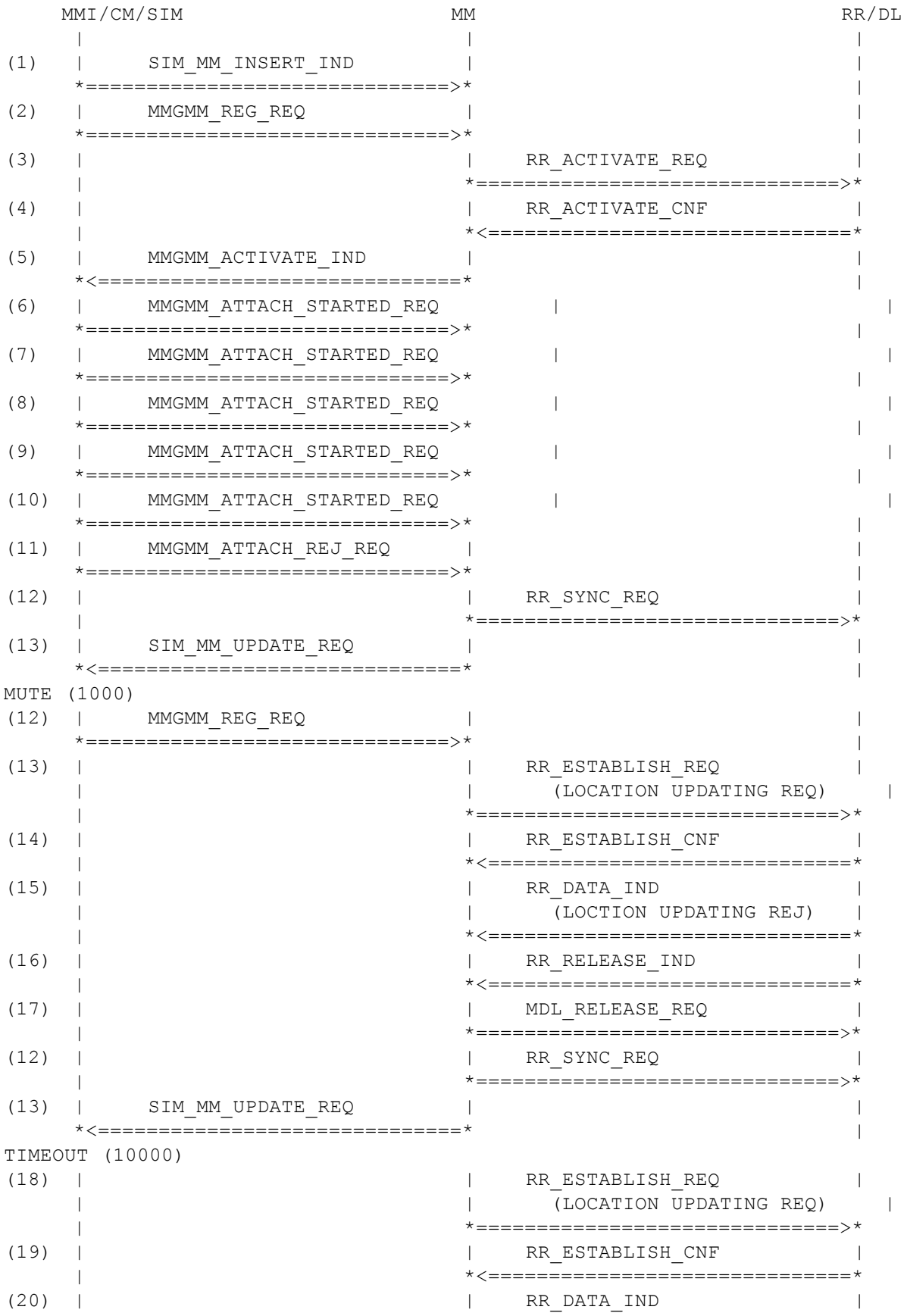
Primitive	Parameter	Value

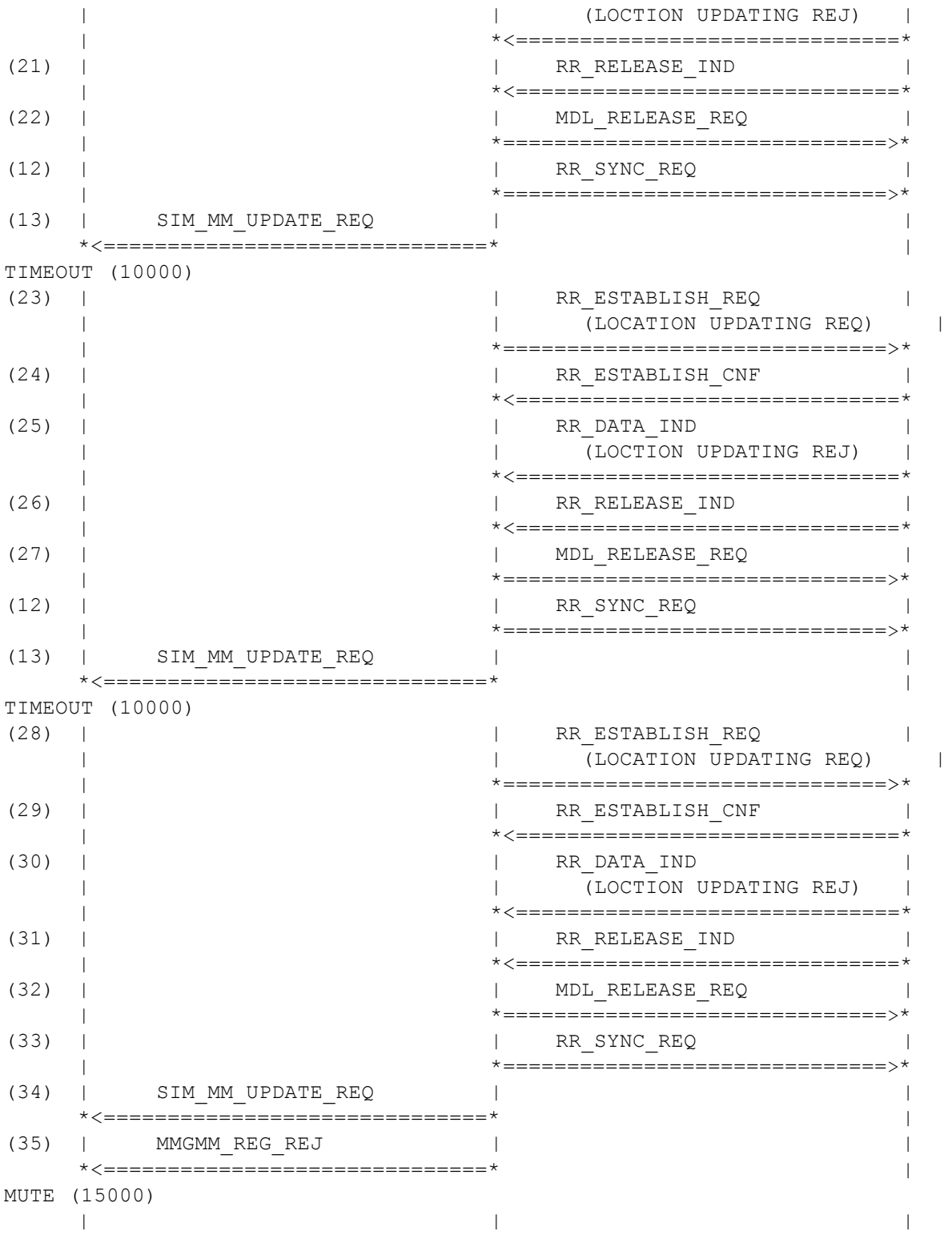
History:	01.02.02	HM	Initial

3.30.34 MMG1033: Unsuccessful combined attach, normal updating follows

Description: GMM tries to perform a combined attached, non-successful. After that, a GSM only normal update is performed for MAX_ATTEMPT tries.

Preamble: MMG0001


MMI/CM/SIM
MM
RR/DL
(1) SIM_MM_INSERT_IND
(2) MMGMM_REG_REQ
(3) RR_ACTIVATE_REQ
(4) RR_ACTIVATE_CNF
(5) MMGMM_ACTIVATE_IND
(6) MMGMM_ATTACH_STARTED_REQ
(7) MMGMM_ATTACH_STARTED_REQ
(8) MMGMM_ATTACH_STARTED_REQ
(9) MMGMM_ATTACH_STARTED_REQ
(10) MMGMM_ATTACH_STARTED_REQ
(11) MMGMM_ATTACH_REJ_REQ
(12) RR_SYNC_REQ
(13) SIM_MM_UPDATE_REQ
MUTE (1000)
(12) MMGMM_REG_REQ
(13) RR_ESTABLISH_REQ
(LOCATION UPDATING REQ)
(14) RR_ESTABLISH_CNF
(15) RR_DATA_IND
(LOCTION UPDATING REJ)
(16) RR_RELEASE_IND
(17) MDL_RELEASE_REQ
(12) RR_SYNC_REQ
(13) SIM_MM_UPDATE_REQ
TIMEOUT (10000)
(18) RR_ESTABLISH_REQ
(LOCATION UPDATING REQ)
(19) RR_ESTABLISH_CNF
(20) RR_DATA_IND



Parametrization

Primitive	Parameter	Value

(1)	SIM_MM_INSERT_IND	op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES
(4)	RR_ACTIVATE_CNF		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(5)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		t3212_val	T3212_6_MIN_MS
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES
(6)	MMGMM_ATTACH_STARTED_REQ		
(7)	MMGMM_ATTACH_STARTED_REQ		
(8)	MMGMM_ATTACH_STARTED_REQ		
(9)	MMGMM_ATTACH_STARTED_REQ		
(10)	MMGMM_ATTACH_STARTED_REQ		
(11)	MMGMM_ATTACH_REJ_REQ		
		cause	GMMCS_AAC_OVER_5

(12) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(13) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(14) MMGMM_REG_REQ

service_mode	SERVICE_MODE_FULL
reg_type	REG_REMOTE_CONTROLLED
mobile_class	MMGMM_CLASS_BC

(15) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(16) RR_ESTABLISH_CNF

param	NOT_USED

(17) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_NETWORK_FAILURE
}	

(18) RR_RELEASE_IND

cause	RRCS_NORM

	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(19) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(20) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(21) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(22) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(23) RR_ESTABLISH_CNF		
	param	NOT_USED
(24) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	

(25) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(26) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(27) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(28) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(29) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(30) RR_ESTABLISH_CNF

param	NOT_USED

(31) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_NETWORK_FAILURE
}	

(32) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(33) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(34) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(35) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(36) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(37) RR_ESTABLISH_CNF

param	NOT_USED

(38) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_NETWORK_FAILURE
}	

(39) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(40) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(41) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(42) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	NOT_USED
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(43) MMGMM_REG_REJ

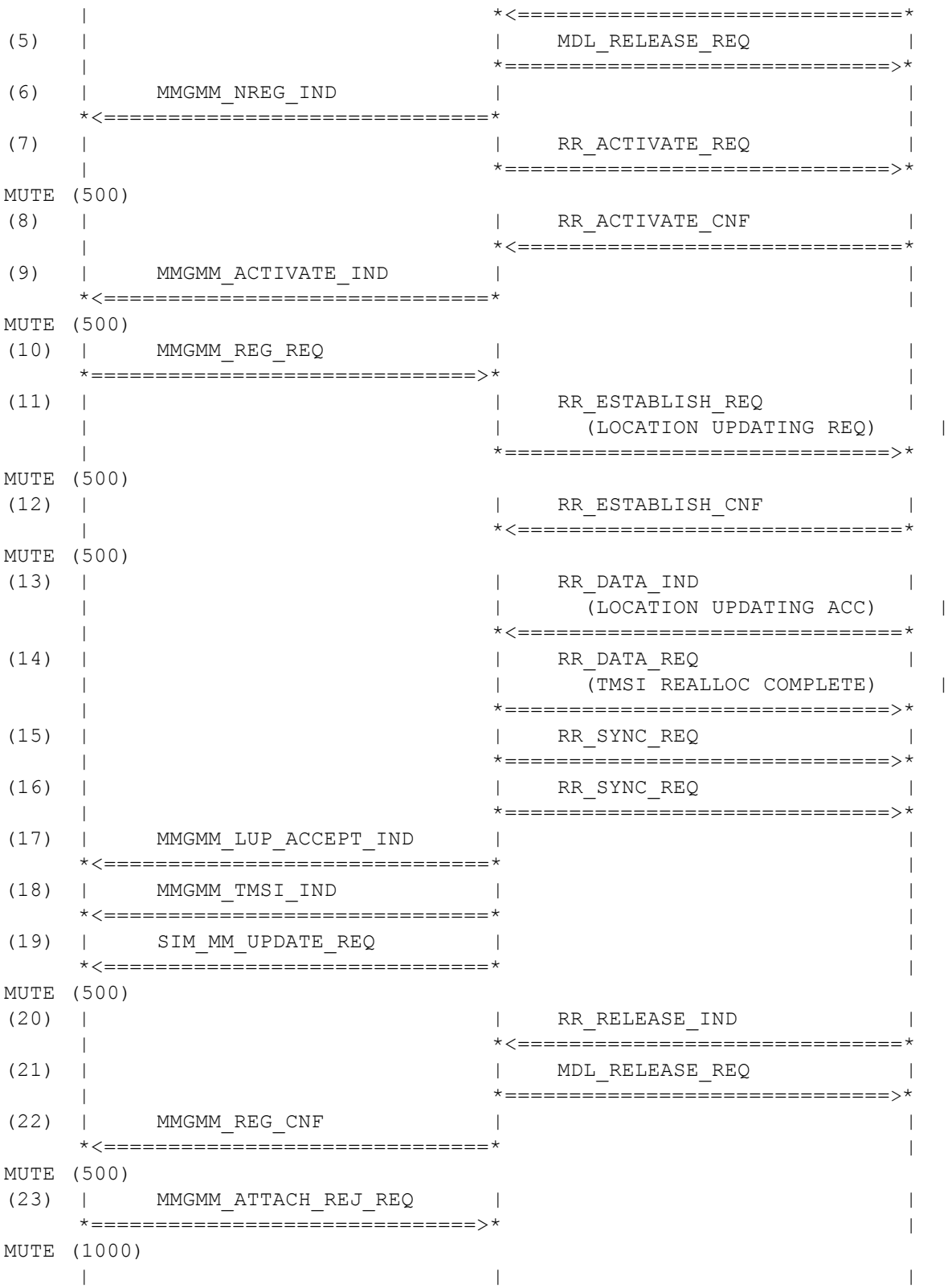
service	NREG_LIMITED_SERVICE
search_running	SEARCH_NOT_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_NETWORK_FAILURE
resumption	MMGMM_RESUMPTION_FAILURE

History: 18.02.02 HM Initial

3.30.35 MMG1035: MM receives #14 from GMM, NW list exists, NW mode II

Description: MM will become idle updated by its own procedures. In the beginning of the procedure, a PLMN with an alternative PLMN exists. MM receives MMGMM_ATTACH_REJ_REQ, cause #14 in network mode II. A network list existed. It is checked that MMGMM_ATTACH_REJ_REQ triggers no PLMN search in network mode BG.

Preamble: MMG1003



Parametrization

Primitive	Parameter	Value

(26) SIM_MM_INSERT_IND

op_mode	NORMAL_SIM_INS
imsi_field	IMSI_FIELD_1
loc_info	LOC_INFO_123_33_2147_FFFFFFFF
acc_ctrl	ACC_CTRL_2143
bcch_inf	BCCH_INF_1
kc_n	KC_EMPTY
pref_plmn	PREF_PLMN_NONE
forb_plmn	FORB_PLMN_NONE
phase	PHASE_2_SIM
hplmn	THPLMN_01

(27) MMGMM_REG_REQ

service_mode	SERVICE_MODE_FULL
reg_type	REG_CELL_SEARCH_ONLY
mobile_class	MMGMM_CLASS_BC

(28) RR_ACTIVATE_REQ

plmn	PLMN_123_33X
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID
thplmn	NOT_USED
bcch_info	BCCH_INFO_ECL
cell_test	CELL_TEST_DISABLE
gprs_indication	GPRS_YES

(29) RR_ABORT_IND

op	OP_SIM_AUTO_PLMNSRCH_FS
cause	RRCS_ABORT_CEL_SEL_FAIL
plmn_avail	TWO_PLMN_FOUND
plmn	PLMN_LIST_44_31
lac_list	NOT_USED
rxlevel	RXLEVEL_20_18
power	RF_CLASS_2

(30) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(31) MMGMM_NREG_IND

service	NREG_LIMITED_SERVICE
search_running	SEARCH_RUNNING
new_forb_plmn	PLMN_NO_ID
cause	MMCS_INT_NOT_PRESENT

(32) RR_ACTIVATE_REQ

plmn	PLMN_123_44
op	OP_SIM_AUTO_PLMNSRCH_NS
cksn	CKSN_RES
kcv	KCV_EMPTY
accc	ACC_2143
imsi_struct	MOB_ID_IMSI
tmsi_struct	MOB_ID_NO_ID

	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(33) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_44
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(34) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_44
	lac	LAC_0002
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_WAIT_FOR_UPDATE
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(35) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(36) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(37) RR_ESTABLISH_CNF		
	param	NOT_USED
(38) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_44_0002
	mob_id	MOB_IDENT_NEW_TMSI

	follow_proceed	NOT_USED
	}	
(39) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(40) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(41) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_44
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(42) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_44
	lac	LAC_0002
	cid	CELL_ID_1122
(43) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(44) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_44_0002_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(45) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK

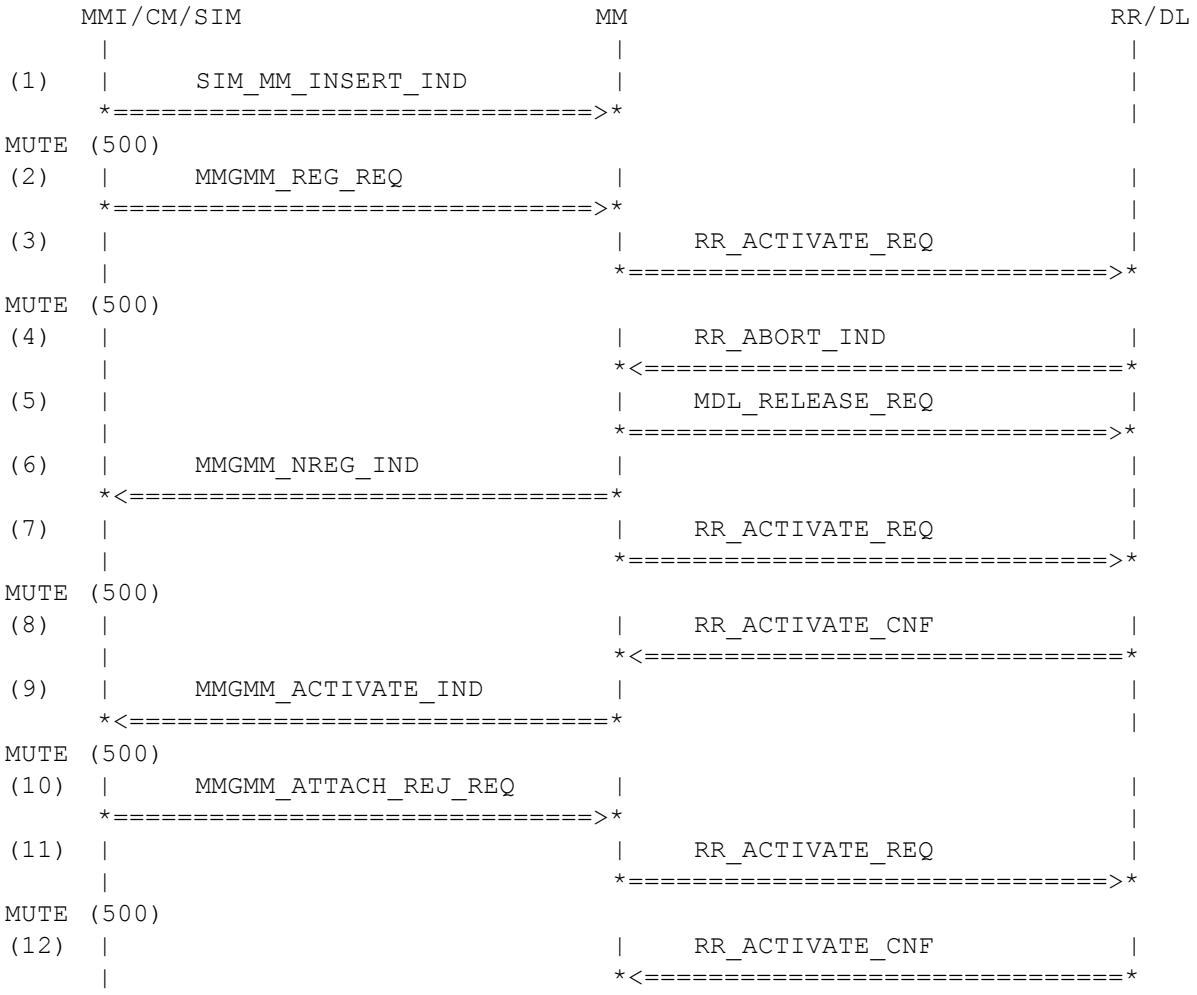
(46)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(47)	MMGMM_REG_CNF		
		plmn	PLMN_123_44
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	GPRS_RESUMPTION_NOT_ACK
(48)	MMGMM_ATTACH_REJ_REQ		
		cause	GMMCS_GPRS_NOT_ALLOWED_IN_PLMN

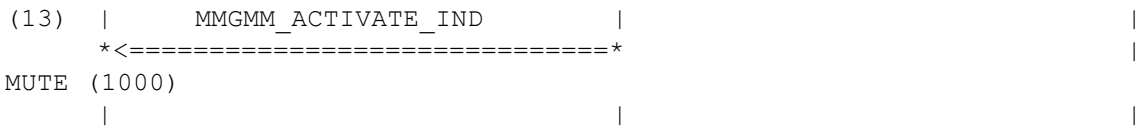
History:	30.04.02	HM	Initial
	10.02.03	LOL	added lac_list

3.30.36 MMG1036: MM receives #14 from GMM, class CG, NW list exists

Description: MM receives MMGMM_ATTACH_REJ_REQ, cause #14 in network mode II. A network list exists. It is checked that MMGMM_ATTACH_REJ_REQ triggers a PLMN search in network mode CG.

Preamble: MMG1003





Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND		
		op_mode	NORMAL_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_CG
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_SIM_AUTO_PLMNSRCH_NS
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_ECL
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES
(4)	RR_ABORT_IND		
		op	OP_SIM_AUTO_PLMNSRCH_FS
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	TWO_PLMN_FOUND
		plmn	PLMN_LIST_44_31
		lac_list	NOT_USED
		rxlevel	RXLEVEL_20_18
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_NREG_IND		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_RUNNING

	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(7) RR_ACTIVATE_REQ		
	plmn	PLMN_123_44
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(8) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_44
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(9) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_44
	lac	LAC_0002
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_WAIT_FOR_UPDATE
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(10) MMGMM_ATTACH_REJ_REQ		
	cause	GMMCS_GPRS_NOT_ALLOWED_IN_PLMN
(11) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(12) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_31
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES

(13) MMGMM_ACTIVATE_IND

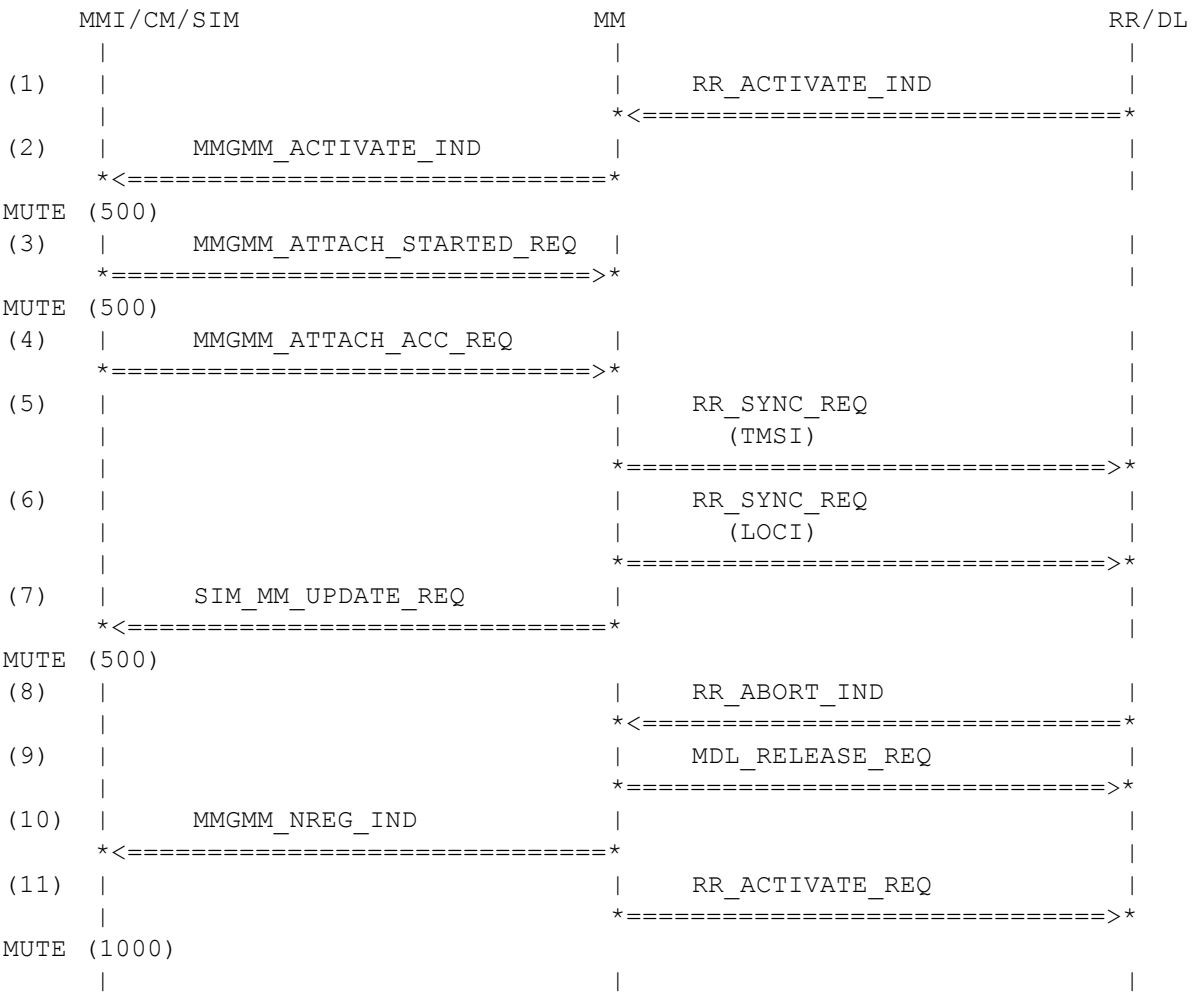
plmn	PLMN_123_31
lac	LAC_0002
cid	CELL_ID_1122
t3212_val	T3212_NO_PRD_UPDAT
status	MMGMM_WAIT_FOR_UPDATE
gprs_indicator	MMGMM_GPRS_SUPP_YES

History:	30.04.02	HM	Initial
	10.02.03	LOL	added lac_list

3.30.37 MMG1037: MM has #14 forbidden list, class BG

Description: MM will become idle updated on the HPLMN. On the HPLMN, MM looses service and gets the old network offered where #14 was received. It is checked that MM doesn't consider the forbidden PLMN for GPRS services list in its PLMN selection decision.

Preamble: MMG1035



Parametrization

Primitive	Parameter	Value

(1) RR_ACTIVATE_IND

op	OP_SIM_AUTO_PLMNSRCH_FS
mm_info	MM_INFO
cid	CELL_ID_1122
plmn	PLMN_123_33
lac	LAC_2147
power	RF_CLASS_2
gprs_indication	GPRS_YES

(2) MMGMM_ACTIVATE_IND

plmn	PLMN_123_33
lac	LAC_2147
cid	CELL_ID_1122
t3212_val	T3212_NO_PRD_UPDAT
status	MMGMM_WAIT_FOR_UPDATE
gprs_indicator	MMGMM_GPRS_SUPP_YES

(3) MMGMM_ATTACH_STARTED_REQ

(4) MMGMM_ATTACH_ACC_REQ

plmn	PLMN_123_33
lac	LAC_2147
v_tmsi	MMGMM_TMSI_USED
tmsi	TMSI_34125708_ULONG

(5) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	MOB_ID_NEW_TMSI
plmn	NOT_USED
lac	NOT_USED
synccs	NOT_USED
accc	NOT_USED
thplmn	NOT_USED

(6) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	PLMN_123_33
lac	LAC_2147
synccs	SYNCCS_LAI_ALLOW
accc	NOT_USED
thplmn	NOT_USED

(7) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_2147_34125708
bcch_inf	BCCH_INF_1
forb_plmn	NOT_USED
cksn	CKSN_RES
kc	KC_VALUE_EMPTY
cell_identity	CELL_ID_1122

(8) RR_ABORT_IND

op	OP_SIM_AUTO_PLMNSRCH_FS

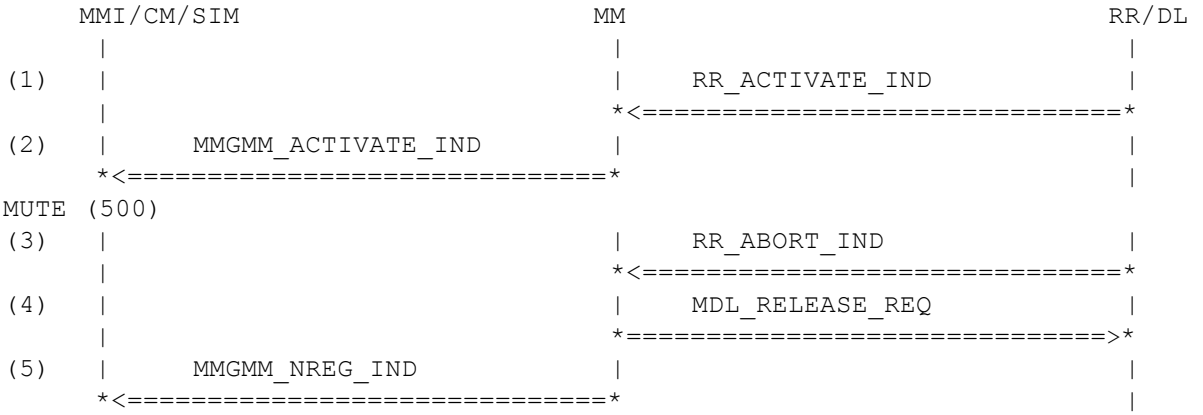
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_44_31
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(9) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(10) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(11) RR_ACTIVATE_REQ		
	plmn	PLMN_123_44
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NEW_TMSI
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES

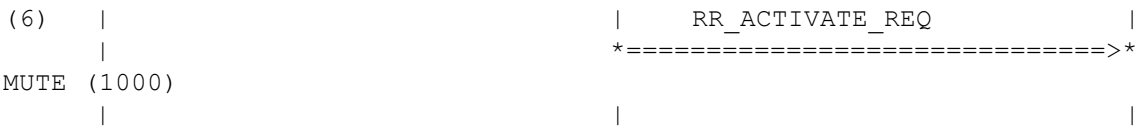
History:	30.04.02	HM	Initial
	10.02.03	LOL	added lac_list

3.30.38 MMG1038: MM has #14 forbidden list, class CG

Description: MM will become idle updated on the HPLMN. On the HPLMN, MM looses service and gets the old network offered where #14 was received. It is checked that MM considers the forbidden PLMN for GPRS services list in its PLMN selection decision and selects the other network offered. (As the MS is updated on the SIM in this location area and no ATTACH is necessary, MM immediately is able to indicate full service in the first MMGMM_ACTIVATE_IND.)

Preamble: MMG1036





Parametrization

Primitive	Parameter	Value
(49) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(50) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_FULL_SERVICE
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(51) RR_ABORT_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_44_31
	lac_list	NOT_USED
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(52) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(53) MMGMM_NREG_IND		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
(54) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE

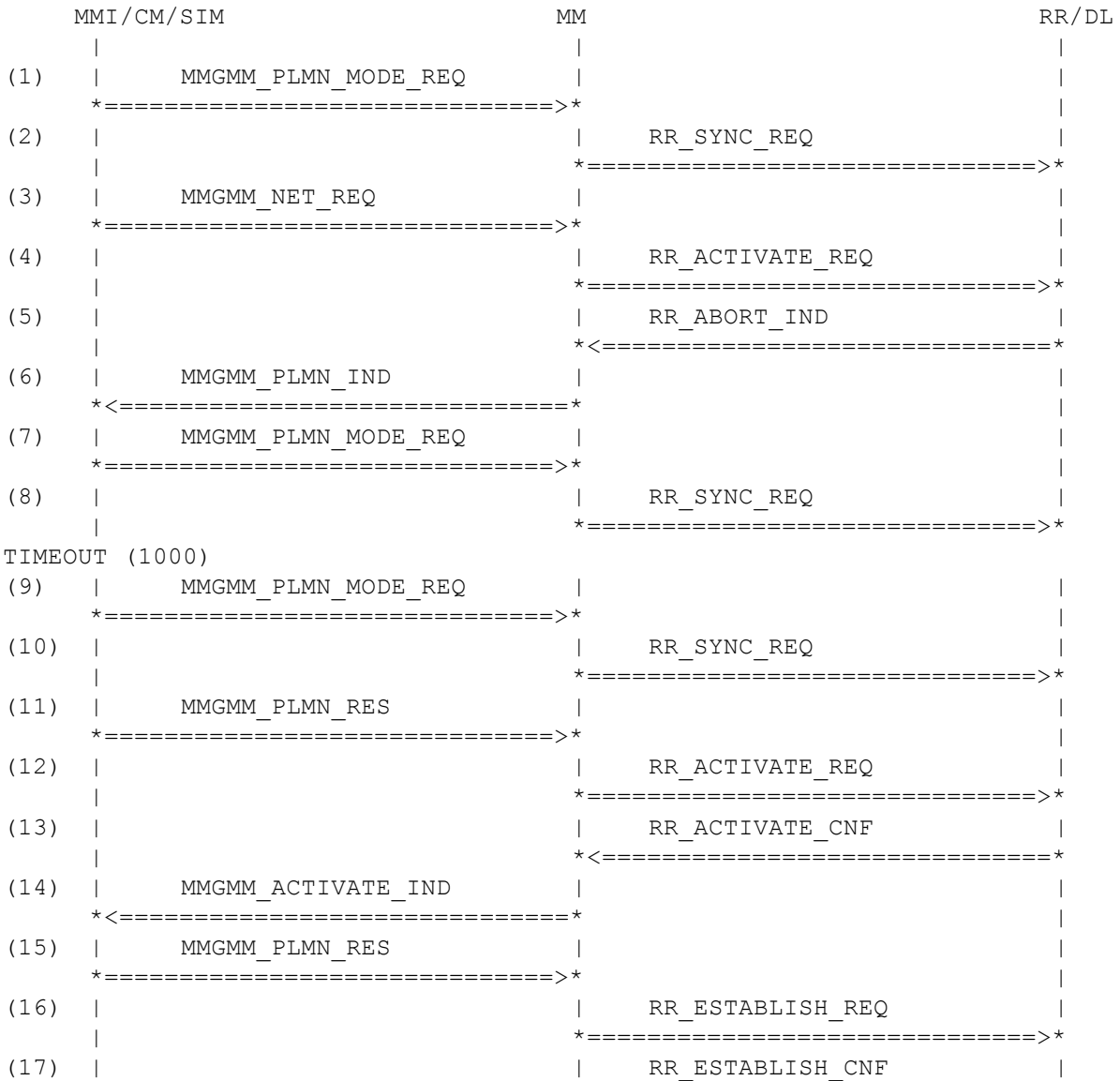
cell_test		CELL_TEST_DISABLE
gprs_indication		GPRS_YES

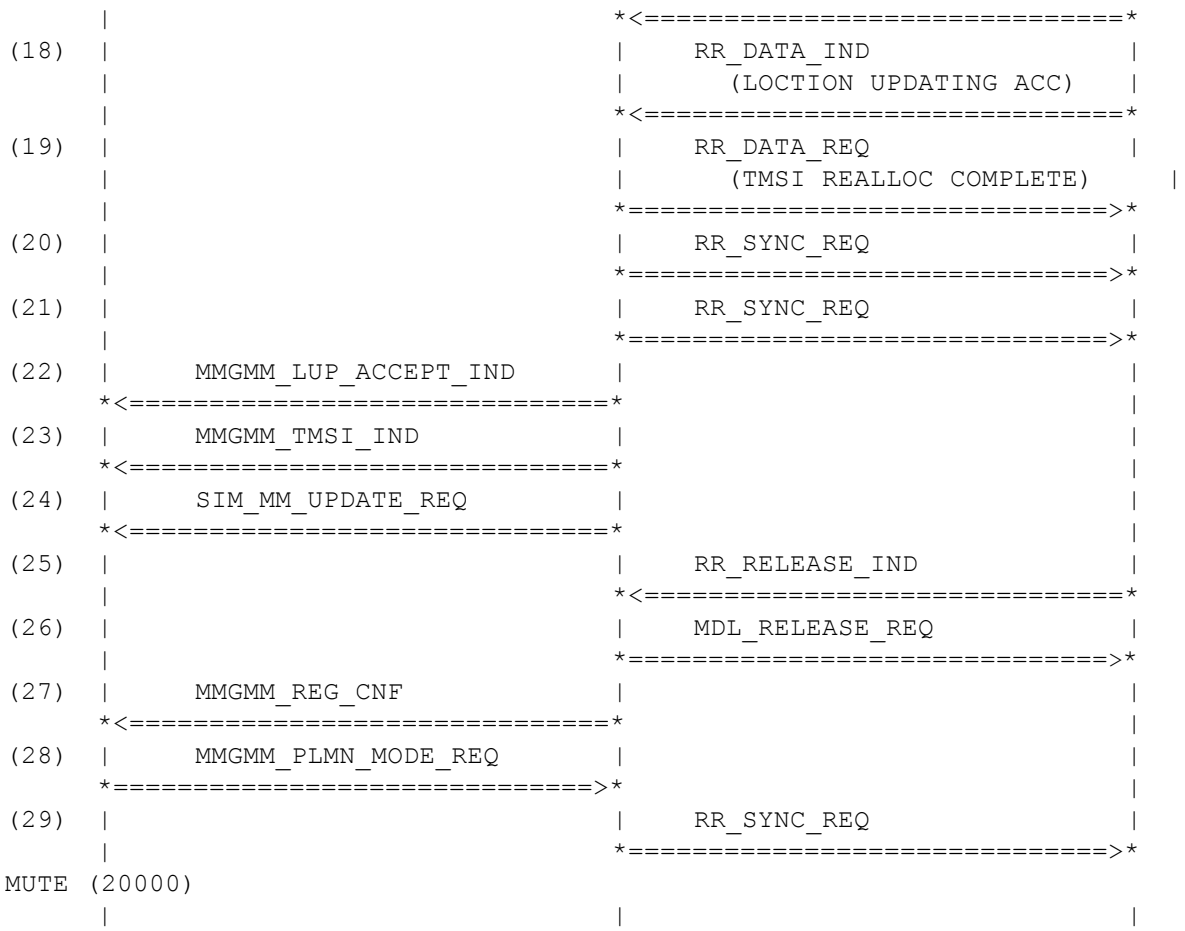
History:	30.04.02	HM	Initial
	10.02.03	LOL	added lac_list

3.30.39 MMG1040: User requires different network manually

Description: The mobile is registered in full service mode and camped on a cell where it is updated for, the MM state is MM_IDLE_NORMAL_SERVICE. The user decides to select another network manually.
[This testcase shows that it is still not possible to inform GMM and the MMI about the GPRS status of the networks found. This was foreseen in the MMGMM SAP interface, but is currently not possible. HM, 03.05.01]

Preamble: MMG1010A





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(2)	RR_SYNC_REQ		
		op	OP_TEST_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED
(3)	MMGMM_NET_REQ		
(4)	RR_ACTIVATE_REQ		
		plmn	PLMN_NO_ID
		op	OP_TEST_MAN_NETSRCH_NS
		cksn	CKSN_NO_KEY
		kcv	KCV_DELETED
		accc	ACC_CLASS_0000
		imsi_struct	MOB_ID_NO_ID

	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(5) RR_ABORT_IND		
	op	OP_TEST_MAN_NETSRCH_FS
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	TWO_PLMN_FOUND
	plmn	PLMN_LIST_2_PLMN
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18
	power	RF_CLASS_2
(6) MMGMM_PLMN_IND		
	cause	MMCS_SUCCESS
	plmn	PLMN_LIST_2_PLMN_0XFF
	forb_ind	FORB_PLMN_ID
	lac_list	LAC_LIST_2
	rxlevel	RXLEVEL_20_18_A
	gprs_status	NOT_USED
(7) MMGMM_PLMN_MODE_REQ		
	mode	MODE_AUTO
(8) RR_SYNC_REQ		
	op	OP_TEST_AUTO_NETSRCH_NS
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_PRESENT_16BIT
	accc	NOT_USED
	thplmn	NOT_USED
(9) MMGMM_PLMN_MODE_REQ		
	mode	MODE_MAN
(10) RR_SYNC_REQ		
	op	OP_TEST_MAN_NETSRCH_NS
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_PRESENT_16BIT
	accc	NOT_USED
	thplmn	NOT_USED
(11) MMGMM_PLMN_RES		
	plmn	PLMN_123_31
	reg_type	REG_CELL_SEARCH_ONLY
	mobile_class	MMGMM_CLASS_BC
(12) RR_ACTIVATE_REQ		
	plmn	PLMN_123_31

	op	OP_TEST_MAN_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(13) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_31
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(14) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_31
	lac	LAC_0002
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_WAIT_FOR_UPDATE
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(15) MMGMM_PLMN_RES		
	plmn	PLMN_123_31
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(16) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(17) RR_ESTABLISH_CNF		
	param	NOT_USED
(18) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM

	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_31_0002
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(19) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(20) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(21) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_31
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(22) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_31
	lac	LAC_0002
	cid	CELL_ID_1122
(23) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(24) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_31_0002_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122

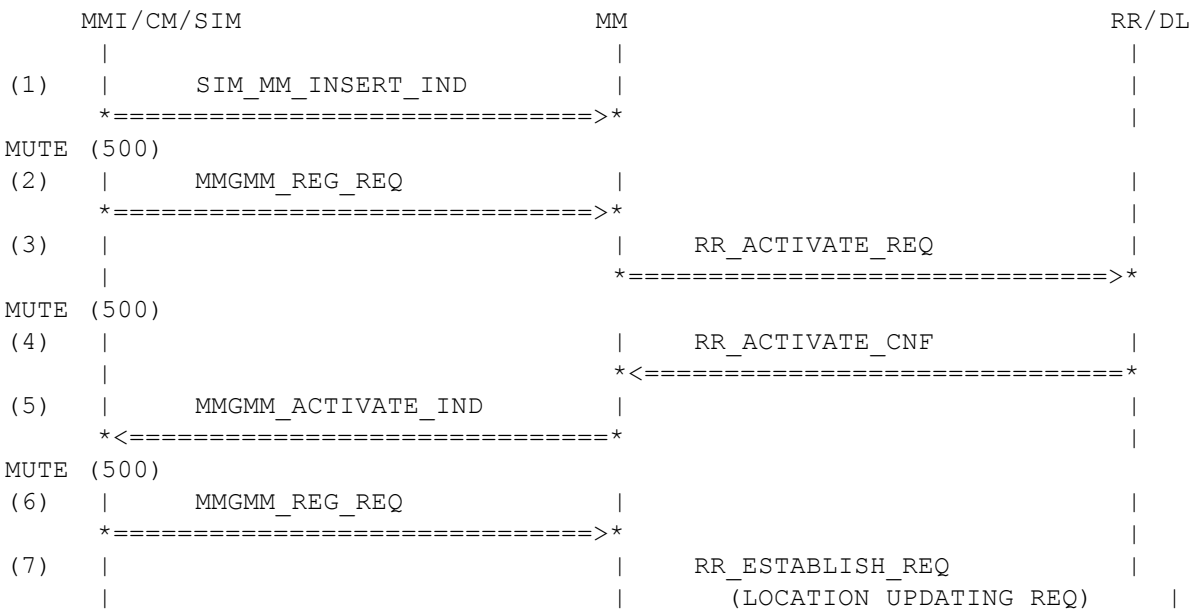
(25)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(26)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(27)	MMGMM_REG_CNF		
		plmn	PLMN_123_31
		lac	LAC_0002
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE
(28)	MMGMM_PLMN_MODE_REQ		
		mode	MODE_MAN
(29)	RR_SYNC_REQ		
		op	OP_TEST_MAN_PLMNSRCH_NS
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	NOT_PRESENT_16BIT
		accc	NOT_USED
		thplmn	NOT_USED

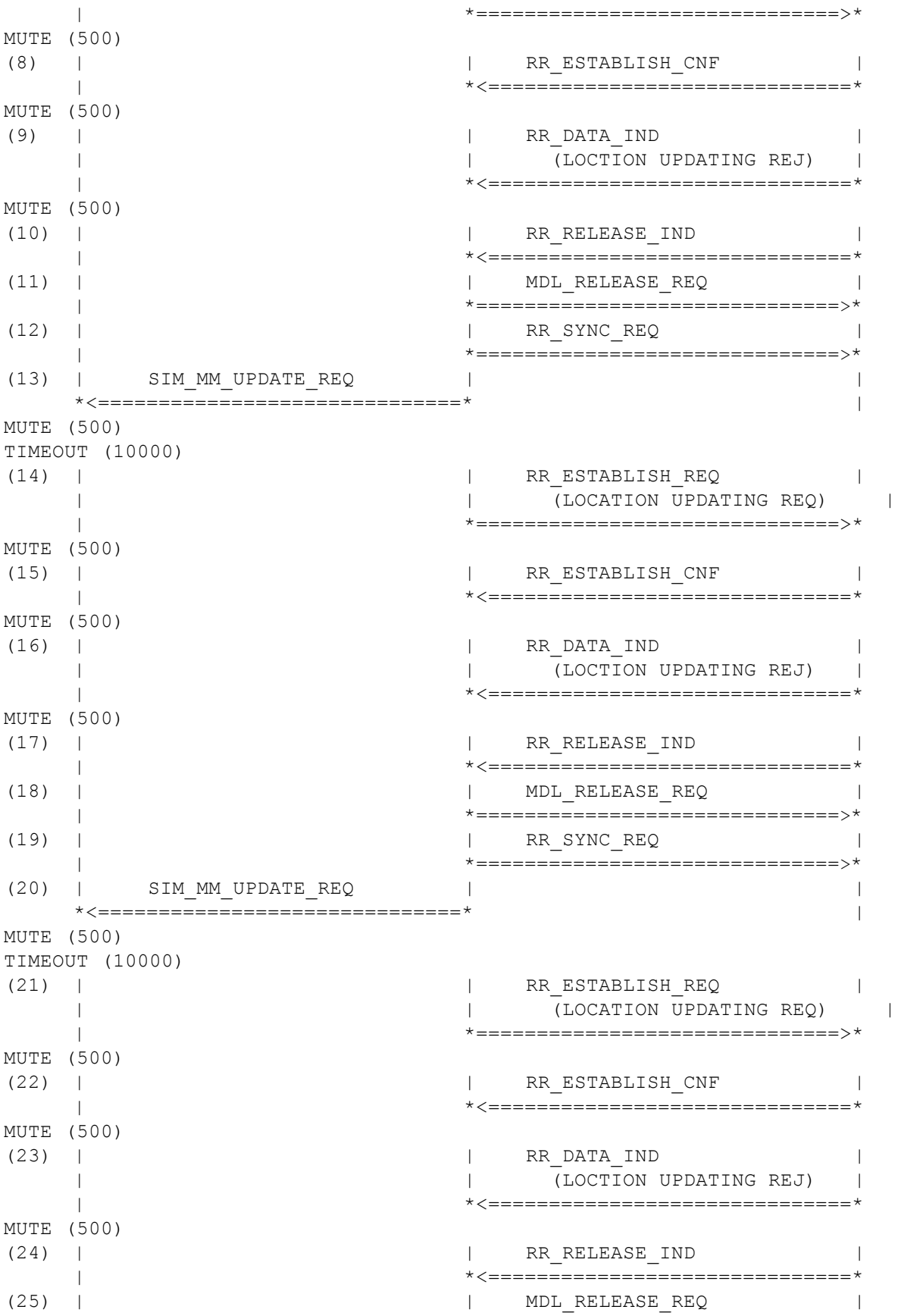
History:	03.05.01	HM	Initial
	18.01.02	HM	Revised
	10.02.03	LOL	added lac_list

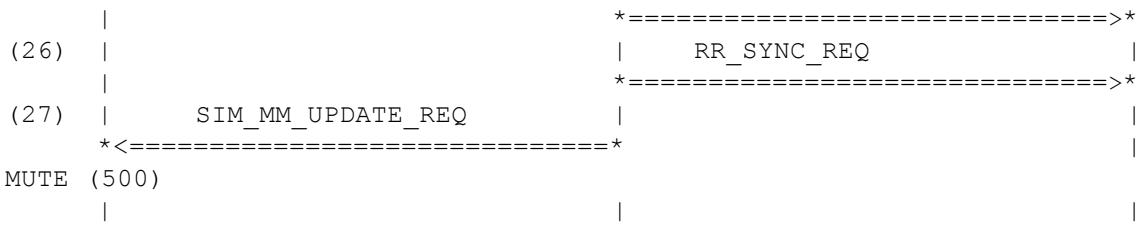
3.30.40 MMG1050: Normal updating with cell reselection

Description: MM IDLE ATTEMPT TO UPDATE. One attempt left as final state.

Preamble: MMG0001




MUTE (500)
(8) RR_ESTABLISH_CNF
MUTE (500)
(9) RR_DATA_IND
(LOCTION UPDATING REJ)
MUTE (500)
(10) RR_RELEASE_IND
(11) MDL_RELEASE_REQ
(12) RR_SYNC_REQ
(13) SIM_MM_UPDATE_REQ
MUTE (500)
TIMEOUT (10000)
(14) RR_ESTABLISH_REQ
(LOCATION UPDATING REQ)
MUTE (500)
(15) RR_ESTABLISH_CNF
MUTE (500)
(16) RR_DATA_IND
(LOCTION UPDATING REJ)
MUTE (500)
(17) RR_RELEASE_IND
(18) MDL_RELEASE_REQ
(19) RR_SYNC_REQ
(20) SIM_MM_UPDATE_REQ
MUTE (500)
TIMEOUT (10000)
(21) RR_ESTABLISH_REQ
(LOCATION UPDATING REQ)
MUTE (500)
(22) RR_ESTABLISH_CNF
MUTE (500)
(23) RR_DATA_IND
(LOCTION UPDATING REJ)
MUTE (500)
(24) RR_RELEASE_IND
(25) MDL_RELEASE_REQ



Parametrization

Primitive	Parameter	Value
(10) SIM_MM_INSERT_IND	op_mode	NORMAL_SIM_INS
	imsi_field	IMSI_FIELD_1
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	acc_ctrl	ACC_CTRL_2143
	bcch_inf	BCCH_INF_1
	kc_n	KC_EMPTY
	pref_plmn	PREF_PLMN_NONE
	forb_plmn	FORB_PLMN_NONE
	phase	PHASE_2_SIM
	hplmn	THPLMN_01
(11) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_CELL_SEARCH_ONLY
	mobile_class	MMGMM_CLASS_BC
(12) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_SIM_AUTO_PLMNSRCH_NS
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(13) RR_ACTIVATE_CNF		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(14) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT

	status	MMGMM_WAIT_FOR_UPDATE
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(15) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(16) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(17) RR_ESTABLISH_CNF		
	param	NOT_USED
(18) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(19) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(20) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(21) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED

(22) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(23) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(24) RR_ESTABLISH_CNF

param	NOT_USED

(25) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_NETWORK_FAILURE
}	

(26) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(27) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(28) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(29) SIM_MM_UPDATE_REQ

loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

(30) RR_ESTABLISH_REQ

estcs	ESTCS_SERV_REQ_BY_MM
sdu	
{	
component	MM
direction	UPLINK
pd	U_LOC_UPD_REQ
ti	TI_0
loc_upd_type	LOC_UPD_TYPE_NORMAL
ciph_key_num	CIPH_KEY_NUM_RES
loc_area_ident	LOC_AREA_ID_123_33_FEFF
mob_class_1	MOB_CLASS_1
mob_id	MOB_IDENT_IMSI
}	

(31) RR_ESTABLISH_CNF

param	NOT_USED

(32) RR_DATA_IND

d1	NOT_USED
d2	NOT_USED
sdu	
{	
component	MM
direction	DOWNLINK
pd	D_LOC_UPD_REJ
ti	TI_0
rej_cause	RC_NETWORK_FAILURE
}	

(33) RR_RELEASE_IND

cause	RRCS_NORM
sapi	SAPI_0
gprs_resumption	GPRS_RESUMPTION_NOT_ACK

(34) MDL_RELEASE_REQ

ch_type	NOT_PRESENT_8BIT
sapi	SAPI_0

(35) RR_SYNC_REQ

op	NOT_USED
cksn	NOT_USED
kcv	NOT_USED
tmsi_struct	NOT_USED
plmn	NOT_USED
lac	NOT_USED
synccs	SYNCCS_TMSI_CKSN_KC_INVAL
accc	NOT_USED
thplmn	NOT_USED

(36) SIM_MM_UPDATE_REQ

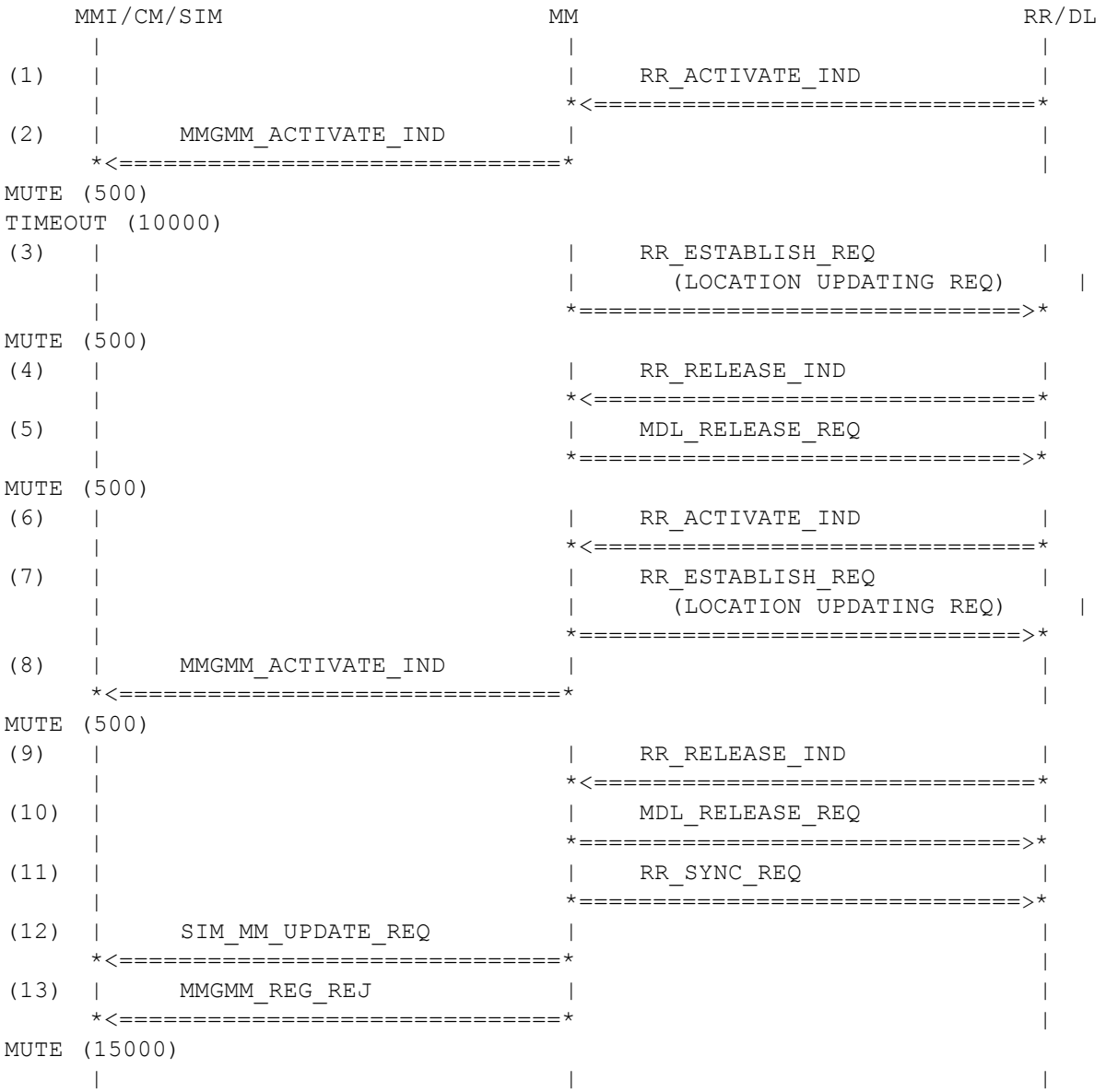
loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
bcch_inf	BCCH_INF_2
forb_plmn	NOT_USED
cksn	CKSN_NO_KEY
kc	KC_DELETED_SIM
cell_identity	CELL_ID_1122

History:	06.03.03	HM	Initial

3.30.41 MMG1051: Normal updating with cell reselection

Description: MM IDLE ATTEMPT TO UPDATE. One attempt left as initial state. Cell reselection after network failure. No network visible action until T3211 expiry. Unsuccessful attempt with random access failure. Cell reselection. Attempt with random access failure. Cell reselection.

Preamble: MMG1050



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_0045
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(2) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_0045
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_CELL_SELECTED
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(3) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(4) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(6) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(7) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	

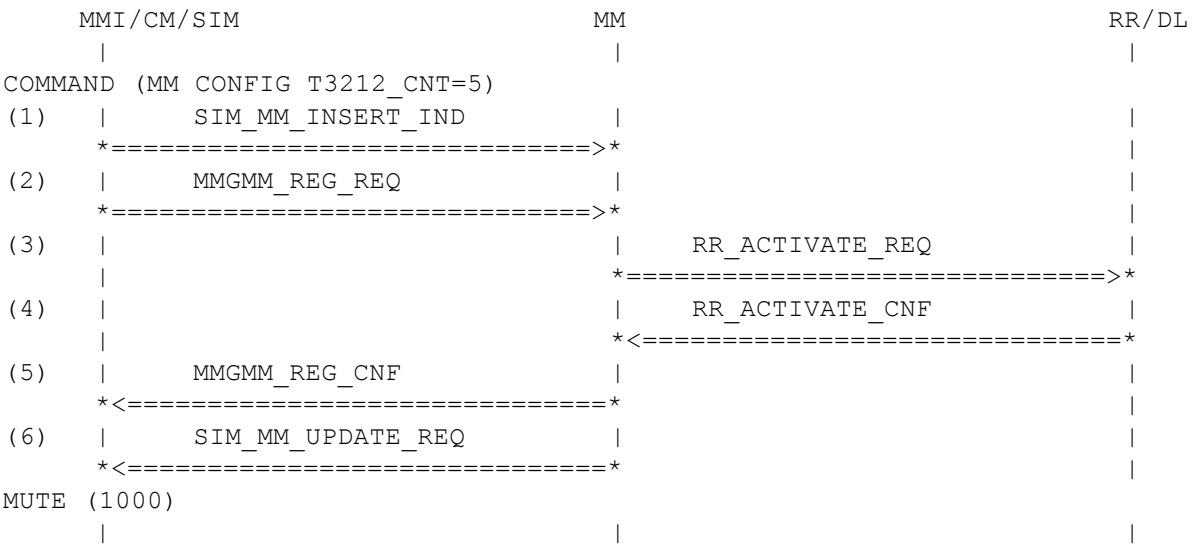
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(8) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_CELL_SELECTED
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(9) RR_RELEASE_IND		
	cause	RRCS_RND_ACC_FAIL
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(11) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(12) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122
(13) MMGMM_REG_REJ		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_INT_NOT_PRESENT
	resumption	MMGMM_RESUMPTION_FAILURE

History:	06.03.03	HM	Initial

3.30.42 MMG1053: SIM inserted, GMM requests RR activation

Description: MM receives a SIM_MM_INSERT_IND from the SIM entity. A test SIM is inserted in the mobile station. The data delivered by this primitive will be stored in the respective MM data structures. GMM requests a RR activation by MMGMM_REG_REQ while MM is in full service state.

Preamble: MMG0001



Parametrization

Primitive		Parameter	Value
(1)	SIM_MM_INSERT_IND	op_mode	TEST_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		acc_ctrl	ACC_CTRL_2143
		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_GPRS_INACTIVE
		mobile_class	MMGMM_CLASS_BC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_MODE_TEST_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NO_ID
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_NO

(4)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE
(6)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122

History:	12.12.01	HM	Initial
	04.02.02	HM	Revised

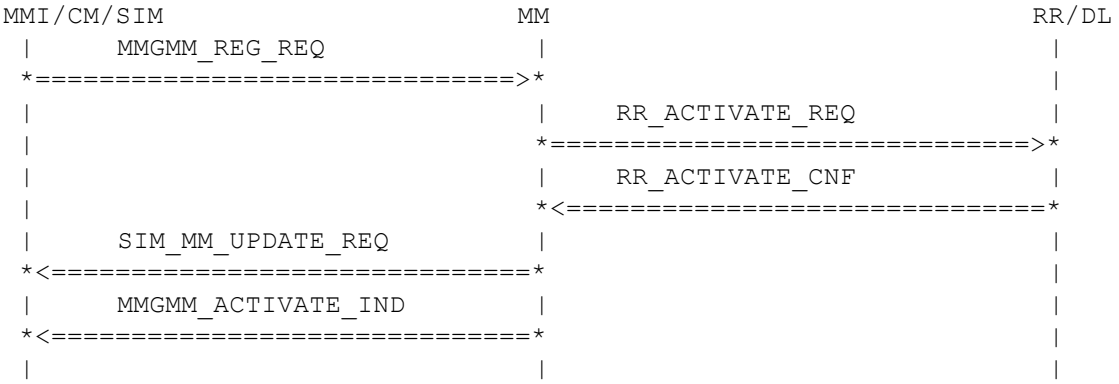
3.30.43 MMG1054: Full Service in GSM, no ATTACH needed

Description: MM receives a RR_ACTIVATE_CNF primitive indicating that RR has selected a cell. MM had to start a cell selection for GMM only. Full service is indicated, no IMSI ATTACH is necessary. MM will not inform GMM by MMGMM-REG-CNF about the full service condition until it is required to do so, only a MMGMM-ACTIVATE-IND is sent to inform GMM about the successfull cell selection.

<A> No IMSI attach, no periodic update
<B> No IMSI attach, periodic update
<C> IMSI attach (but already done), no periodic update
<D> IMSI attach (but already done), periodic update

Variants: <A>....<D>

Preamble:
<A> MMG1053
<B> MMG1053
<C> MMG1011B
<D> MMG1009



Parametrization

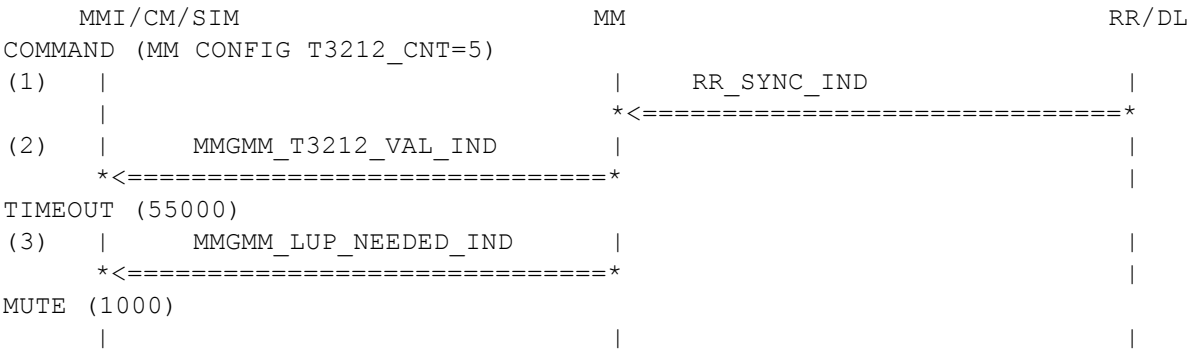
Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_MODE_TEST_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
<A>		tmsi_struct	MOB_ID_NO_ID
<B>		tmsi_struct	MOB_ID_NO_ID
<C>		tmsi_struct	MOB_ID_NEW_TMSI
<D>		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
<A>		mm_info	MM_INFO
<B>		mm_info	MM_INFO_PER
<C>		mm_info	MM_INFO_ATT
<D>		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(4)	SIM_MM_UPDATE_REQ		
<A>		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<B>		loc_info	LOC_INFO_123_33_2147_FFFFFFFF
<C>		loc_info	LOC_INFO_123_33_2147_34125708
<D>		loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	NOT_USED	
		forb_plmn	NOT_USED
		cksn	CKSN_RES
<A>		kc	KC_DELETED_SIM
<B>		kc	KC_DELETED_SIM
<C>		kc	KC_VALUE_EMPTY
<D>		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122
(5)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
<A>		t3212_val	T3212_NO_PRD_UPDAT
<B>		t3212_val	T3212_50_SEK_MS

<C>		t3212_val	T3212_NO_PRD_UPDAT
<D>		t3212_val	T3212_50_SEK_MS
		status	MMGMM_FULL_SERVICE
		gprs_indicator	MMGMM_GPRS_SUPP_YES
History:	12.12.00	HM	Initial
	02.02.01	HM	Revised
	04.02.02	HM	Revised

3.30.44 MMG1055: T3212 change in full service mode

Description: MM is in full service mode. The cell doesn't support periodic update. After a while, periodic update on the cell is activated and GMM is informed. Some time later, MM announces it needs a periodic updating procedure.

Preamble: MMG1010A



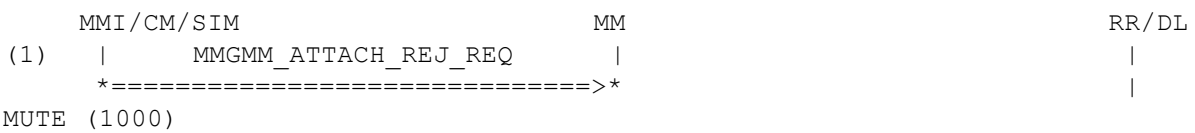
Parametrization

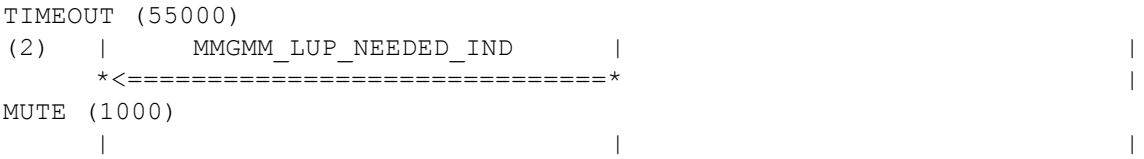
Primitive		Parameter	Value
(1)	RR_SYNC_IND		
		ciph	CIPH_NOT_PRES
		mm_info	MM_INFO_PER
		bcch_info	BCCH_INFO_NONE
		synccs	NOT_USED
		chm	NOT_USED
(2)	MMGMM_T3212_VAL_IND		
		t3212_val	T3212_50_SEK_MS
(3)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_T3212
History:	03.05.01	HM	Initial

3.30.45 MMG1056: T3212 change in full service mode

Description: MM is in full service mode after own location updating procedure. MM receives a MMGMM_ATTACH_REJ_REQ (GPRS not allowed in PLMN). This shall have no influencce on GSM services and/or T3212.

Preamble: MMG1011B





Parametrization

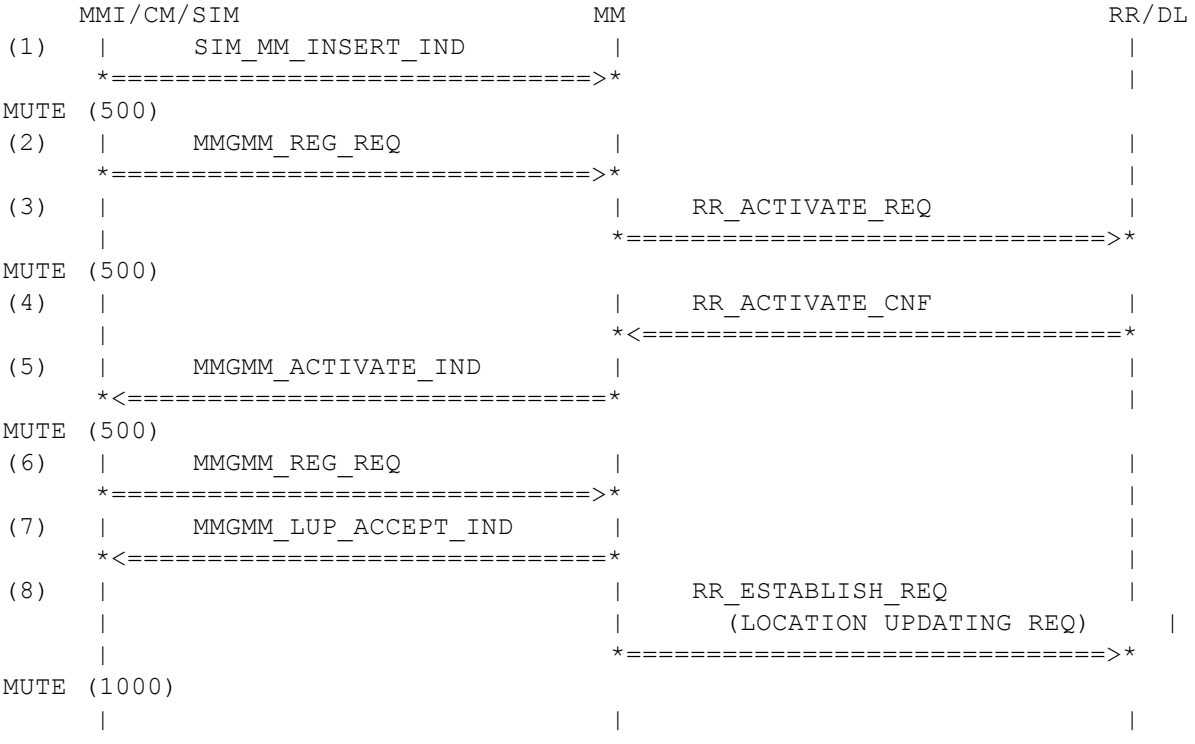
	Primitive	Parameter	Value
(1)	MMGMM_ATTACH_REJ_REQ		
		cause	GMMCS_GPRS_NOT_ALLOWED_IN_PLMN
(2)	MMGMM_LUP_NEEDED_IND		
		reason	MMGMM_T3212

History: 06.01.03 HM Initial

3.30.46 MMG1060: IMSI ATTACH, MM_WAIT_FOR_RR_CONN_LUP

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started. The final MM state in this test case is MM_WAIT_FOR_RR_CONN_LUP.

Preamble: MMG0001



Parametrization

	Primitive	Parameter	Value
(1)	SIM_MM_INSERT_IND	op_mode	TEST_SIM_INS
		imsi_field	IMSI_FIELD_1
		loc_info	LOC_INFO_123_33_2147_34125708
		acc_ctrl	ACC_CTRL_2143

		bcch_inf	BCCH_INF_1
		kc_n	KC_EMPTY
		pref_plmn	PREF_PLMN_NONE
		forb_plmn	FORB_PLMN_NONE
		phase	PHASE_2_SIM
		hplmn	THPLMN_01
(2)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(3)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_MODE_TEST_SIM_NO_SERV
		cksn	CKSN_RES
		kcv	KCV_EMPTY
		accc	ACC_2143
		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES
(4)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(5)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		t3212_val	T3212_NO_PRD_UPDAT
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES
(6)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(7)	MMGMM_LUP_ACCEPT_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM

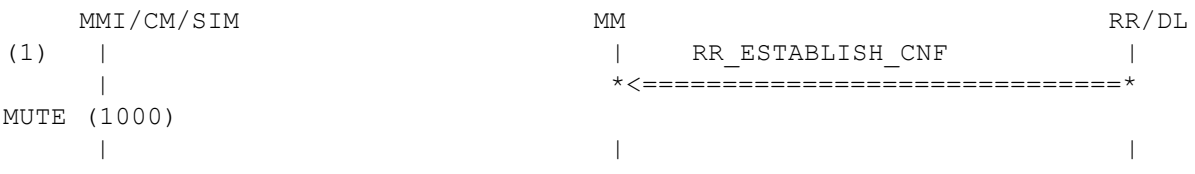
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_ATTACH
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_TMSI
	}	

History: 10.01.03 HM Initial

3.30.47 MMG1061: IMSI ATTACH, MM_LUP_INITIATED

Description: In a remote controlled IMSI ATTACH MM enters state MM_LUP_INITIATED.

Preamble: MMG1060



Parametrization

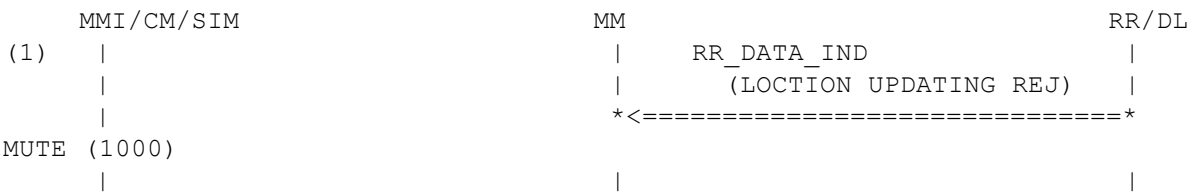
Primitive	Parameter	Value
(14) RR_ESTABLISH_CNF		
	param	NOT_USED

History: 10.01.03 HM Initial

3.30.48 MMG1062: IMSI ATTACH, MM_LUP_REJECTED

Description: In a remote controlled IMSI ATTACH MM enters MM_LUP_REJECTED (network failure).

Preamble: MMG1061



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0

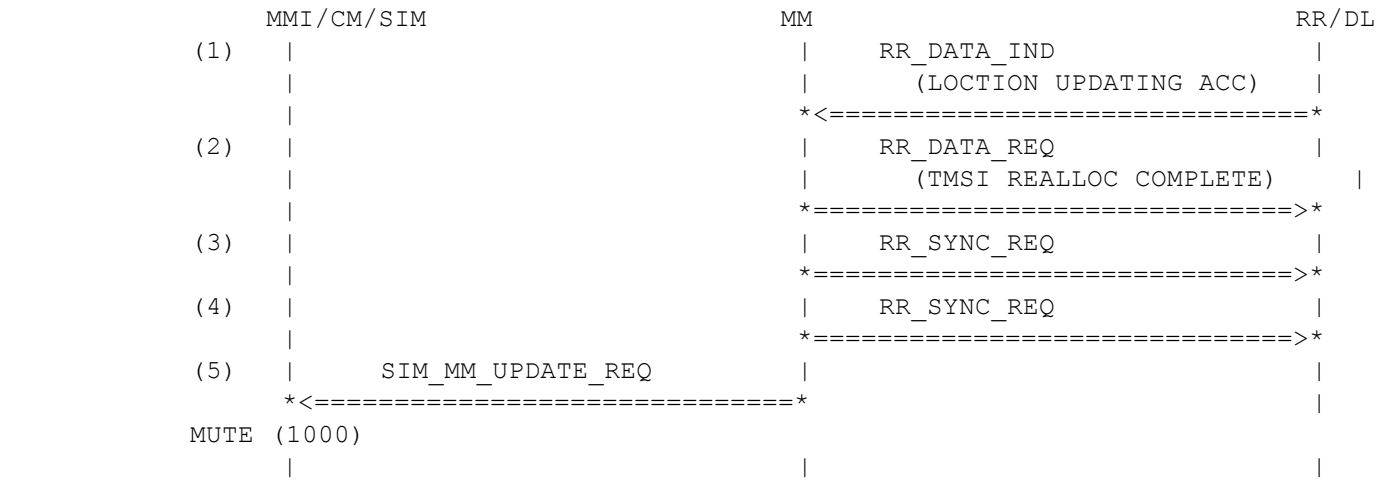
	rej_cause	RC_NETWORK_FAILURE
	}	

History: 10.01.03 HM Initial

3.30.49 MMG1063: IMSI ATTACH, MM_WAIT_FOR_NW_CMD

Description: In a remote controlled IMSI ATTACH MM enters MM_WAIT_FOR_NW_CMD.

Preamble: MMG1061



Parametrization

Primitive	Parameter	Value
(1) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(2) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(3) RR_SYNC_REQ		
	op	NOT_USED

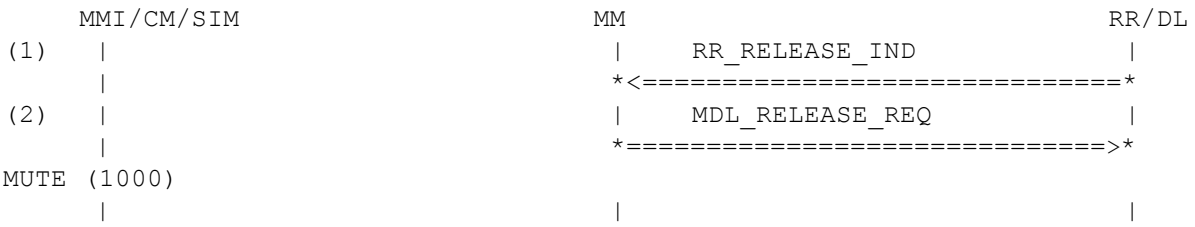
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED
	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(4) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(5) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122

History: 10.01.03 HM Initial

3.30.50 MMG1064: IMSI ATTACH, MM_IDLE_NORMAL_SERVICE (T3211)

Description: In a remote controlled IMSI ATTACH MM enters MM_IDLE_NORMAL_SERVICE, T3211 running.

Preamble: MMG1061



Parametrization

Primitive	Parameter	Value
(1) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0

History: 10.01.03 HM Initial

3.31 GPRS related deregistration

3.31.1 MMG1100: NREG_REQ in IDLE mode (SIM remove, no further action)

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_SIM_REM, MMGMM_DETACH_NOT_DONE. Either no IMSI attach is announced by the cell or GMM indicates that the IMSI detach has already been done.
<A> IDLE Updated, no IMSI ATTACH
<B> IDLE Updated after IMSI ATTACH

Variants: <A>....<B>

Preamble: <A> MMG1004A
<B> MMG1011B

Parametrization

Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_SIM_REM
<A>	detach_done	MMGMM_PERFORM_DETACH
<B>	detach_done	MMGMM_DETACH_DONE
	cause	GMMCS_INT_NOT_PRESENT
(2) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(3) RR_ABORT_REQ		
	abcs	ABCS_SIM_REM
(4) MMGMM_NREG_CNF		
	detach_cause	CS_SIM_REM

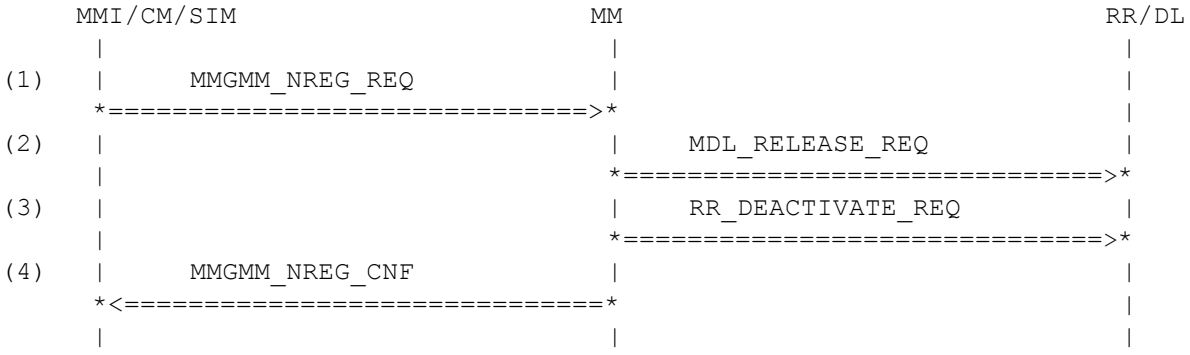
History: 21.11.00 HM Initial

3.31.2 MMG1101: NREG_REQ in IDLE mode (Off, no further action)

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_SIM_REM, MMGMM_DETACH_NOT_DONE. Either no IMSI attach is announced by the cell or GMM indicates that the IMSI detach has already been done.
<A> IDLE Updated, no IMSI ATTACH
<B> IDLE Updated after IMSI ATTACH

Variants: <A>....<B>

Preamble: <A> MMG1004A
<B> MMG1011B



Parametrization

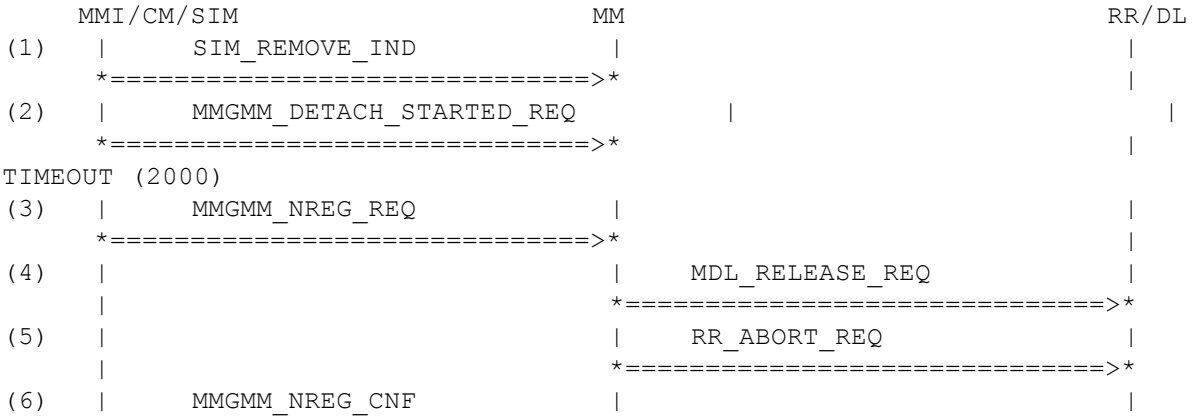
	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_POW_OFF
<A>		detach_done	MMGMM_PERFORM_DETACH
<B>		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_POW_OFF

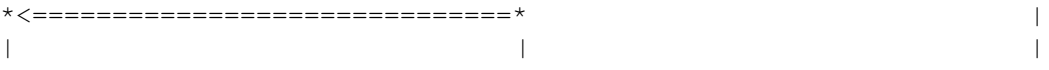
History: 21.11.00 HM Initial

3.31.3 MMG1102: NREG_REQ in IDLE mode (SIM remove, no IMSI DETACH)

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_SIM_REM, MMGMM_DETACH_NOT_DONE. IMSI attach/detach is not announced by the cell, the detach is not yet done by GPRS.
No IMSI attach, no periodic update

Preamble: MMG1004A





Parametrization

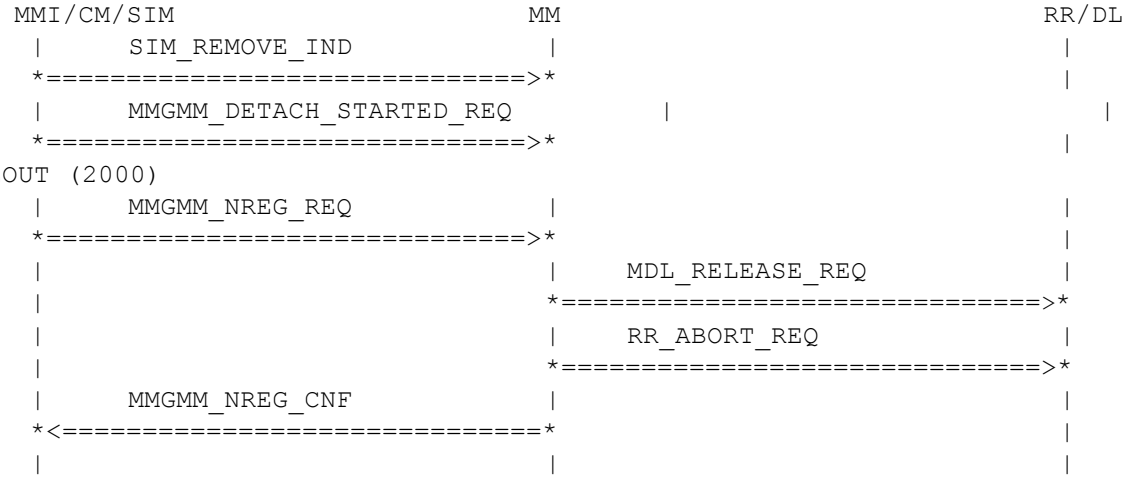
	Primitive	Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMGMM_DETACH_STARTED_REQ		
(3)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(6)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History: 06.12.00 HM Initial

3.31.4 MMG1103: NREG_REQ in IDLE mode (SIM remove, no IMSI DETACH)

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_SIM_REM, MMGMM_DETACH_NOT_DONE. IMSI attach/detach is not announced by the cell, the detach is not yet done by GPRS.
IMSI attach, no periodic update, IMSI attach not yet done
It is assumed that the lack of an MDL_RELEASE_REQ is correct here, but this has still to be cross-checked.

Preamble: MMG1005A



Parametrization

	Primitive	Parameter	Value

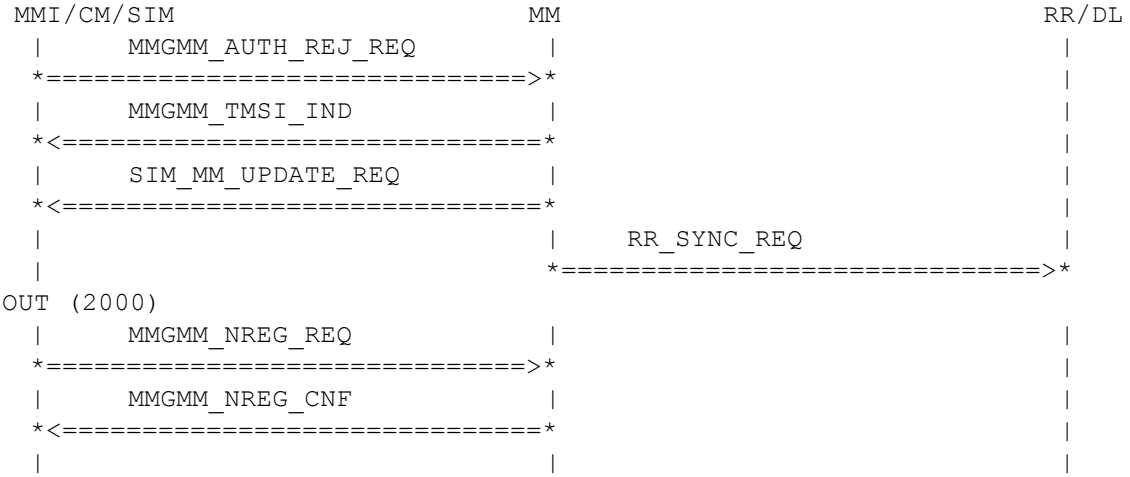
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMGMM_DETACH_STARTED_REQ		
(3)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(6)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	06.12.00	HM	Initial
	04.01.01	HM	Revised
	07.02.01	HM	Revised

3.31.5 MMG1104: NREG_REQ in IDLE mode, GPRS authentication failed

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_SIM_REM, MMGMM_AUTHENTICATION FAILED. The request is confirmed immediately by MM without further action. The mmgmm_error_cause is ignored here.

Preamble: MMG1011B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_AUTH_REJ_REQ		
(2)	MMGMM_TMSI_IND		
		tmsi	TMSI_INVALID_ULONG
(3)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_PLMN_NOT_ALLOW
		bcch_inf	NOT_USED

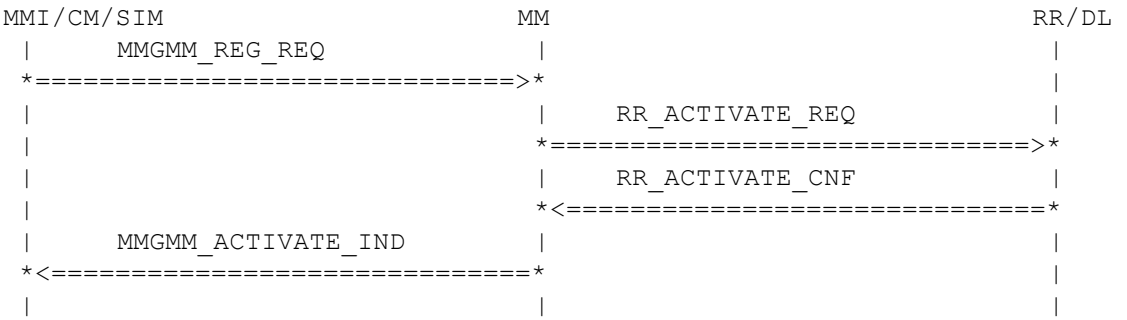
		forb_plmn	NOT_USED
		cksn	CKSN_NO_KEY
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(4)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
		accc	NOT_USED
		thplmn	NOT_USED
(5)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_AUTHENTICATION_REJECTED
(6)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History:	12.12.00	HM	Initial
	18.01.02	HM	Revised

3.31.6 MMG1148: Network search after #2 by GPRS

Description: MM receives an MMGMM_REG_REQ primive after having received reject cause #2 from GMM and not by the LOCATION UPDATING REJECT message. It is checked that the reception of #2 didn't disturb MM's operation for GPRS services.

Preamble: MMG1150A



Parametrization

Primitive		Parameter	Value
(9)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_CELL_SEARCH_ONLY
		mobile_class	MMGMM_CLASS_BC
(10)	RR_ACTIVATE_REQ		
		plmn	PLMN_123_33X
		op	OP_MODE_TEST_SIM_NO_SERV
		cksn	CKSN_RES

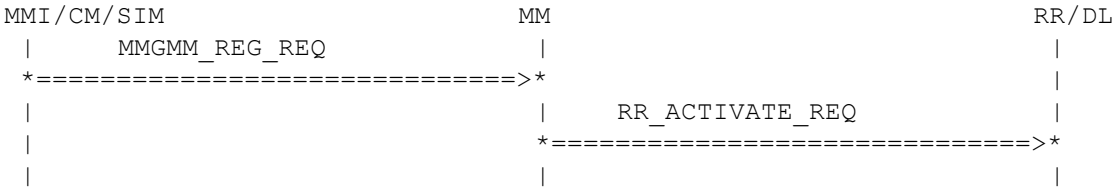
	kcv	KCV_EMPTY
	accc	ACC_2143
	imsi_struct	MOB_ID_IMSI
	tmsi_struct	MOB_ID_NO_ID
	thplmn	NOT_USED
	bcch_info	BCCH_INFO_NONE
	cell_test	CELL_TEST_DISABLE
	gprs_indication	GPRS_YES
(11) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_ATT_PER
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_2147
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(12) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	t3212_val	T3212_50_SEK_MS
	status	MMGMM_WAIT_FOR_UPDATE
	gprs_indicator	MMGMM_GPRS_SUPP_YES

History: 06.08.01 HM Initial

3.31.7 MMG1149: Network search after #8 by GPRS

Description: MM receives an MMGMM_REG_REQ primive after having received reject cause #8 from GMM and not by the LOCATION UPDATING REJECT message. It is checked that the reception of #8 invalidated the SIM.

Preamble: MMG1150B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_CELL_SEARCH_ONLY
	mobile_class	MMGMM_CLASS_BC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_NO_ID
	op	OP_MODE_NO_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_DELETED
	accc	ACC_CLASS_0000

			imsi_struct	MOB_ID_NO_ID
			tmsi_struct	MOB_ID_NO_ID
			thplmn	NOT_USED
			bcch_info	NOT_USED
			cell_test	CELL_TEST_DISABLE
			gprs_indication	GPRS_YES

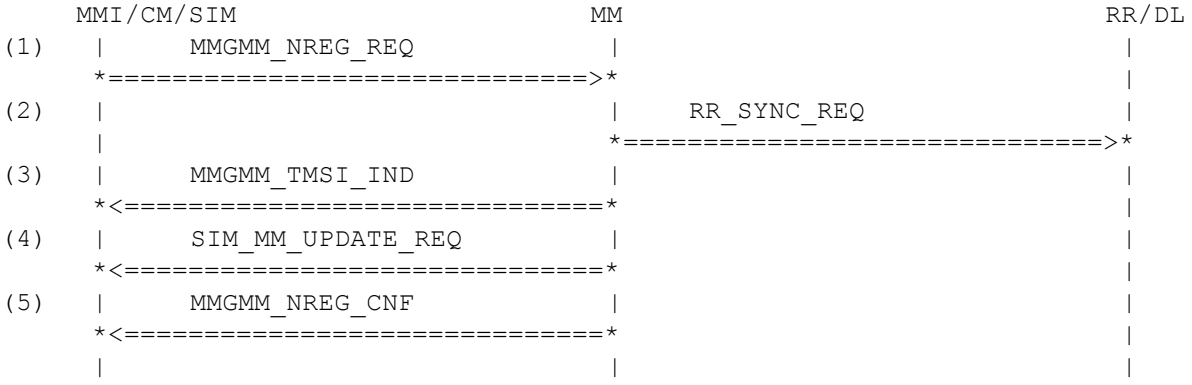
History:	06.08.01	HM	Initial
	02.11.01	HM	Revised

3.31.8 MMG1150: NREG_REQ in IDLE mode, cause #2, cause #8

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, IMSI UNKNOWN IN HLR or GSM AND GPRS NOT ALLOWED. The request is confirmed by MM after notifying RR. The parameter detach_done is ignored here.

Variants: <A>....<B>

Preamble: MMG1011B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_DISABLE
	detach_done	MMGMM_PERFORM_DETACH
<A>	cause	GMMCS_IMSI_UNKNOWN
<B>	cause	GMMCS_GSM_GPRS_NOT_ALLOWED
(2) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
<A>	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
<B>	synccs	SYNCCS_TMSI_CKSN_KC_INVAL_NO_PAG
	accc	NOT_USED
	thplmn	NOT_USED
(3) MMGMM_TMSI_IND		
	tmsi	TMSI_INVALID_ULONG

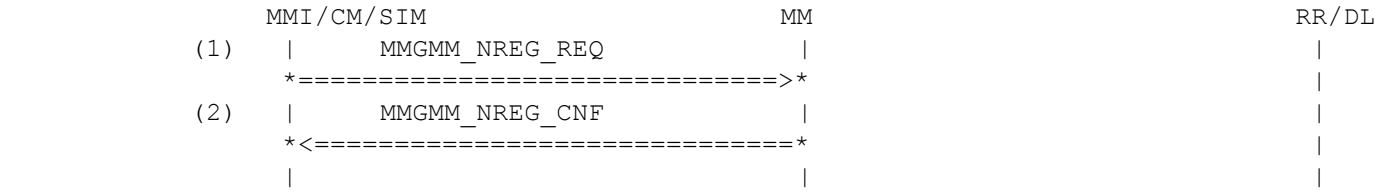
(4)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_PLMN_NOT_ALLOW
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_NO_KEY
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(5)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History:			
	02.02.01	HM	Initial
	06.08.01	HM	Revised after stack change
	18.01.02	HM	Revised

3.31.9 MMG1151: NREG_REQ in IDLE mode, cause #17 (network failure)

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, NETWORK FAILURE. The request is confirmed immediately by MM without further action, as a cause not specified shall not have any impact on the registration state, so neither RR nor SIM is informed about the event. The request is confirmed immediately to GMM without performing further action. The parameter detach_done is ignored here.

Preamble: MMG1011B



Parametrization

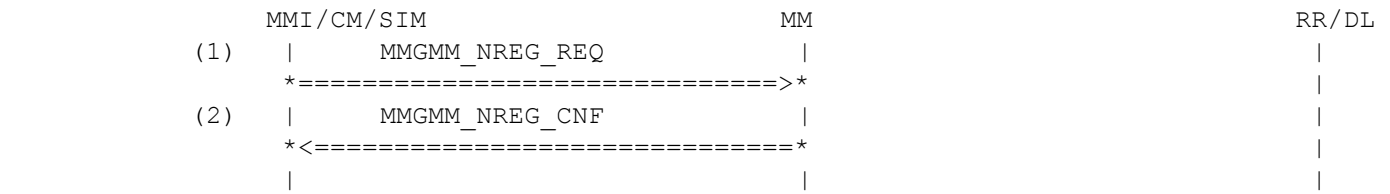
Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_NET_FAIL
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History:			
	02.02.01	HM	Initial

3.31.10 MMG1152: NREG_REQ in IDLE mode after AUTH FAIL req from GMM

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, IMSI UNKNOWN IN HLR. The request is immediately confirmed witout performing further action as the SIM already is considered as invalid here.

Preamble: MMG1104



Parametrization

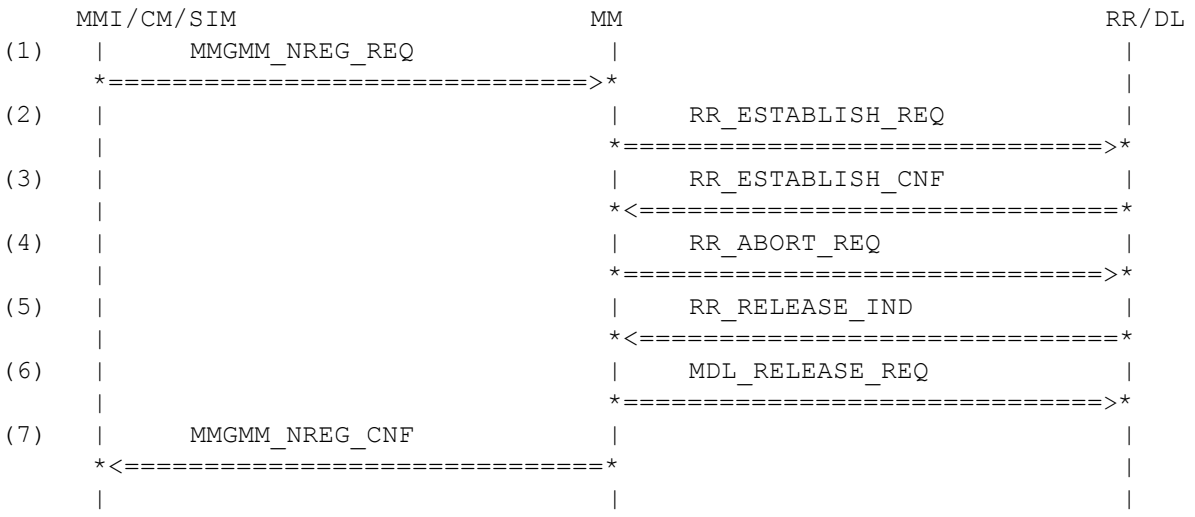
	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_IMSI_UNKNOWN
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 02.02.01 HM Initial

3.31.11 MMG1153: Remote controlled detach without SIM remove/switch off I

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is allowed on the cell. This is a remote controlled IMSI DETACH. It is expected that the DETACH operation will be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here. Here a T3220 timeout aborts the connection. After release of the layer 2 connection, RR guarantees to send a RR_RELEASE_IND in this case.

Preamble: MMG1011B



Parametrization

	Primitive	Parameter	Value
(13)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(14)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND

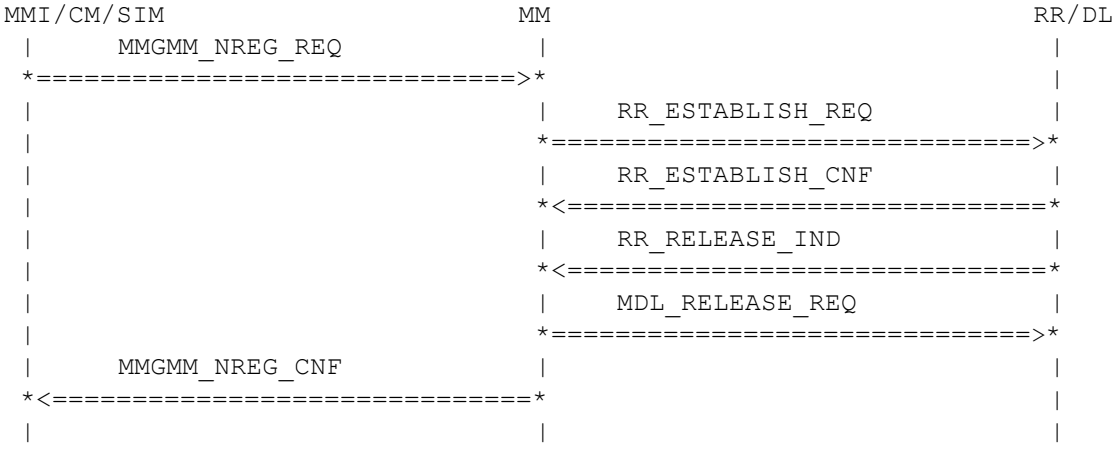
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(15)	RR_ESTABLISH_CNF		
		param	NOT_USED
(16)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(17)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(18)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(19)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 02.05.01 HM Initial

3.31.12 MMG1154: Remote controlled detach without SIM remove/switch off II

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is allowed on the cell. This is a remote controlled IMSI DETACH. It is expected that the DETACH operation will be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here. Here the connection is released by the network (CHANNEL RELEASE) message received, which leads after release of the layer 2 connection to a RR_RELEASE_IND from RR.

Preamble: MMG1011B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE

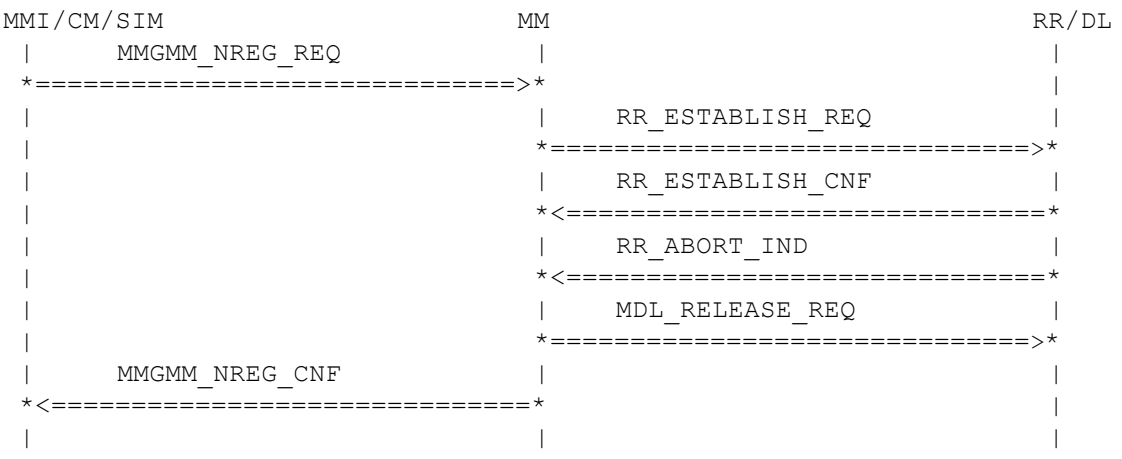
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(3)	RR_ESTABLISH_CNF		
		param	NOT_USED
(4)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 02.05.01 HM Initial

3.31.13 MMG1155: Remote controlled detach without SIM remove/switch off III

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is allowed on the cell. This is a remote controlled IMSI DETACH. It is expected that the DETACH operation will be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here. Here the connection is aborted by RR due to a radio link failure.

Preamble: MMG1011B



Parametrization

Primitive	Parameter	Value
(20) MMGMM_NREG_REQ		
	detach_cause	CS_DISABLE
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(21) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(22) RR_ESTABLISH_CNF		
	param	NOT_USED
(23) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(24) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(25) MMGMM_NREG_CNF		
	detach_cause	CS_DISABLE

History:			
	02.05.01	HM	Initial
	10.02.03	LOL	added lac_list

3.31.14 MMG1156: Remote controlled detach without SIM remove/switch off IV

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is either not allowed on the cell or detach_done equals to MMGMM_DETACH_DONE to indicate no further action (IMSI DETACH) is required by MM. This is a remote controlled IMSI DETACH. It is expected that the DETACH operation will not be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here.

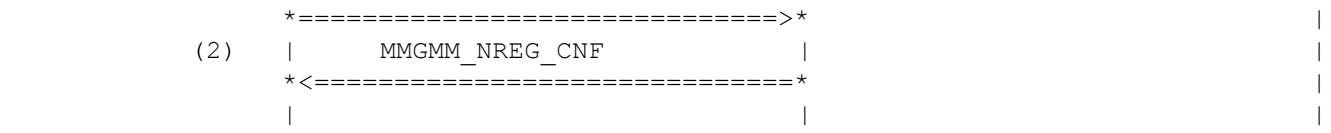
<A> No IMSI ATTACH/DETACH, but MMGMM_PERFORM_DETACH

<B> IMSI ATTACH/DETACH allowed, but MMGMM_DETACH_DONE

Variants: <A>....<B>

Preamble: <A> MMG1010A

<B> MMG1011B



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
<A>		detach_done	MMGMM_PERFORM_DETACH
<B>		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 02.05.01 HM Initial

3.31.15 MMG1160: MM Connection before deregistration, preliminary test

Description: The MM connection is confirmed by the network in the form of a RR_ESTABLISH_CNF primitive followed by RR_SYNC_IND indicating the completion of ciphering setting. MM changes to State 6 (MM Connection Active) and informs CC by issuing a MMCC_ESTABLISH_CNF primitive followed by MMCC_SYNC_IND indicating the completion of cipher mode setting.

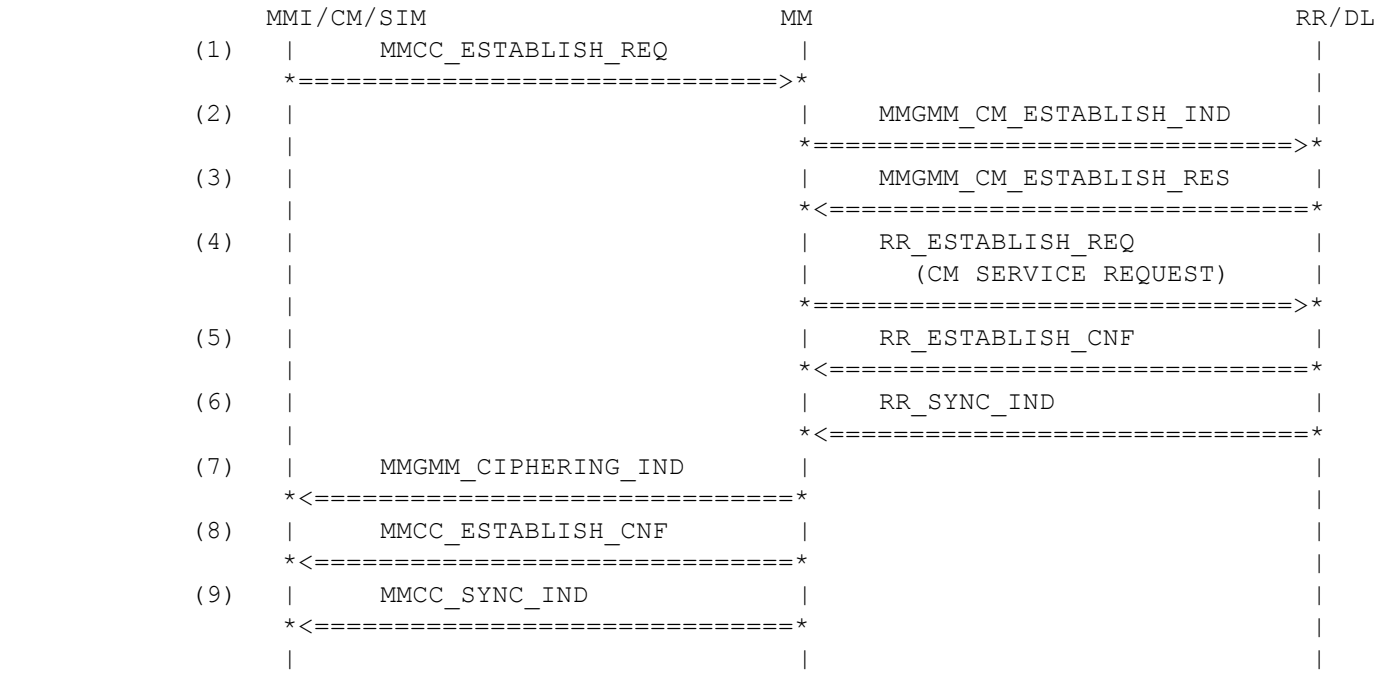
<A> No IMSI ATTACH/DETACH, but MMGMM_PERFORM_DETACH

<B> IMSI ATTACH/DETACH allowed, but MMGMM_DETACH_DONE

Variants: <A>....<B>

Preamble: <A> MMG1010A

<B> MMG1011B



Parametrization

	Primitive	Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMGMM_CM_ESTABLISH_IND		
(3)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
<A>		mob_id	MOB_IDENT_IMSI
<B>		mob_id	MOB_IDENT_NEW_TMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_SYNC_IND		
		ciph	CIPH_ON
		mm_info	MM_INFO_NONE
		bcch_info	BCCH_INFO_NONE
		synccs	NOT_USED
		chm	CHM_SDCCH_SIGNALLING
(7)	MMGMM_CIPHERING_IND		
		ciph	CIPH_ON
(8)	MMCC_ESTABLISH_CNF		
		ti	TI_2
(9)	MMCC_SYNC_IND		
		ti	TI_0
		chm	CHM_SDCCH_SIGNALLING

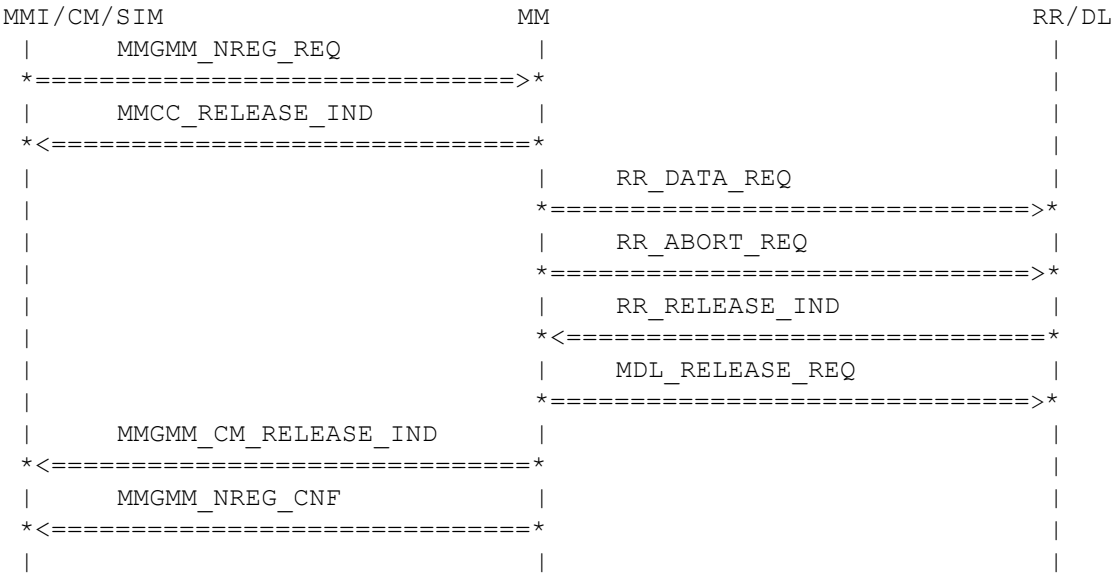
History:			
	02.05.01	HM	Initial
	20.11.01	HM	Revised

3.31.16 MMG1161: Remote controlled detach without SIM remove/switch off V

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is allowed on the cell. This is a remote controlled IMSI DETACH. All calls are released to the upper layers. It is expected that the DETACH operation will be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here. Here a T3220 timeout aborts the connection. After release of the layer 2 connection, RR guarantees to send a RR_RELEASE_IND in this case. Before returning to IDLE state and before indicating the end of

deregistration, MM sends a MMGMM_CM_RELEASE_IND to inform GMM that the last call has been released.

Preamble: MMG1160B



Parametrization

Primitive	Parameter	Value
(1) MMGMM_NREG_REQ		
	detach_cause	CS_DISABLE
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(2) MMCC_RELEASE_IND		
	ti	TI_2
	cause	MMCS_NO_REGISTRATION
(3) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_IMSI_DETACH_IND
	ti	TI_0
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(4) RR_ABORT_REQ		
	abcs	ABCS_NORM
(5) RR_RELEASE_IND		
	cause	RRCS_ABNORM_UNSPEC
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK

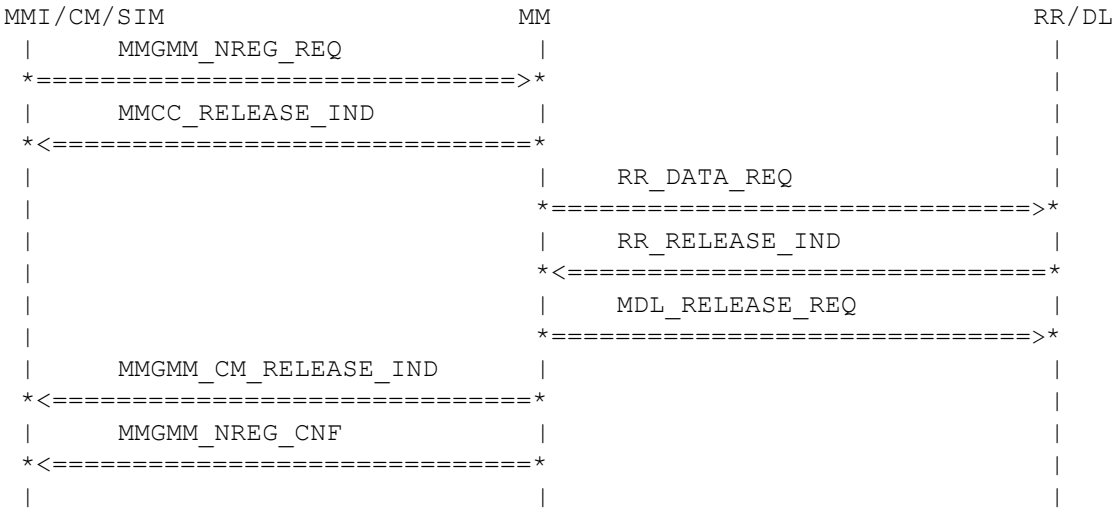
(6)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(7)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE
(8)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 02.05.01 HM Initial

3.31.17 MMG1162: Remote controlled detach without SIM remove/switch off VI

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is allowed on the cell. This is a remote controlled IMSI DETACH. All calls are released to the upper layers. It is expected that the DETACH operation will be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here. Here the connection is released normally, initiated by a CHANNEL RELEASE message received by the network. After release of the layer 2 connection, MM receives a RR_RELEASE_IND. Before returning to IDLE state and before indicating the end of deregistration, MM sends a MMGMM_CM_RELEASE_IND to inform GMM that the last call has been released.

Preamble: MMG1160B



Parametrization

Primitive	Parameter	Value
(26) MMGMM_NREG_REQ		
	detach_cause	CS_DISABLE
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT
(27) MMCC_RELEASE_IND		
	ti	TI_2
	cause	MMCS_NO_REGISTRATION
(28) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED

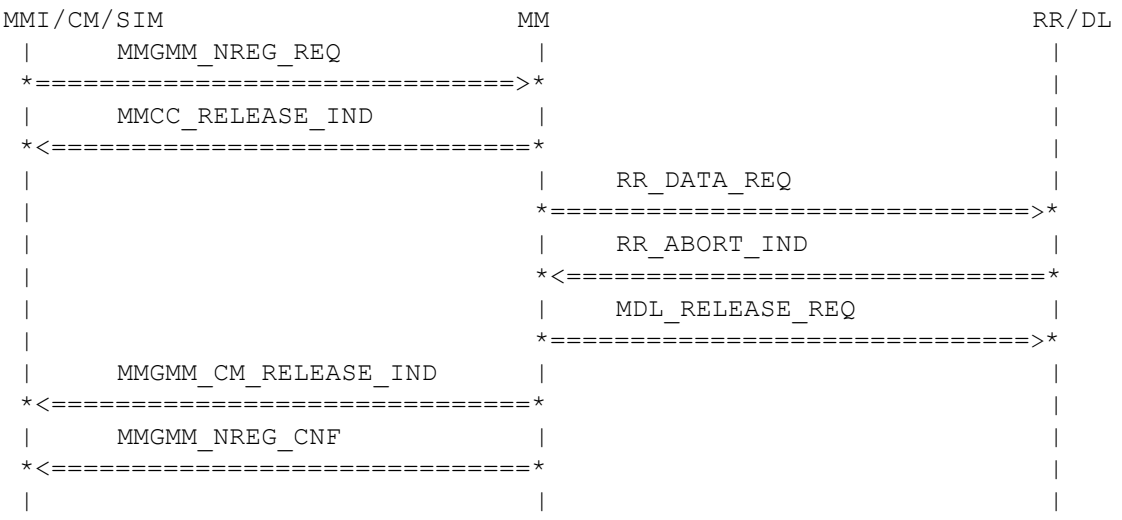
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(29)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(30)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(31)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE
(32)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 02.05.01 HM Initial

3.31.18 MMG1163: Remote controlled detach without SIM remove/switch off VII

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is allowed on the cell. This is a remote controlled IMSI DETACH. All calls are released to the upper layers. It is expected that the DETACH operation will be performed and neither the SIM will be invalidated nor the lower layers will be switches off. The parameter detach_done is not ignored here. Here the connection is aborted by RR due to a radio link failure. Before returning to IDLE state and before indicating the end of deregistration, MM sends a MMGMM_CM_RELEASE_IND to inform GMM that the last call has been released.

Preamble: MMG1160B



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION
(3)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(4)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History:			
	02.05.01	HM	Initial
	10.02.03	LOL	added lac_list

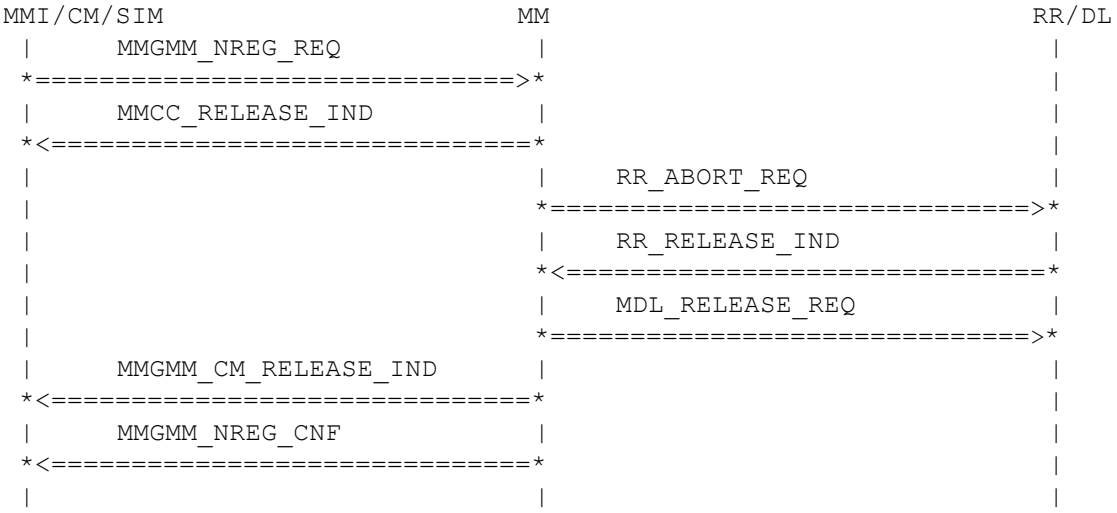
3.31.19 MMG1164: Remote controlled detach without SIM remove/switch off VIII

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is either not allowed on the cell or detach_done equals to MMGMM_DETACH_DONE to indicate no IMSI DETACH is required by MM anymore. It is expected that no IMSI DETACH message will be sent to the network and neither the SIM will be invalidated nor the lower layers will be switched off. The CM connections are released to the CM entities, then the RR connection is aborted. After MM has received the RR_RELEASE_IND from RR, indicating the L2 connection also has been released, a MDL_RELEASE_REQ is sent and MM indicates the release of the last CM connection to GMM by sending a MMGMM_CM_RELEASE_IND and subsequent (order matters) a MMGMM_NREG_CNF to confirm the end of the end of the deregistration procedure.

<A> No IMSI ATTACH/DETACH, but MMGMM_PERFORM_DETACH
<B> IMSI ATTACH/DETACH allowed, but MMGMM_DETACH_DONE

Variants: <A>....<B>

Preamble: <A> MMG1160A
<B> MMG1160B



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
<A>		detach_done	MMGMM_PERFORM_DETACH
<B>		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION
(3)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(4)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History: 03.05.01 HM Initial

3.31.20 MMG1165: Remote controlled detach without SIM remove/switch off VIII

Description: MM receives an MMGMM_NREG_REQ primive with parameter CS_DISABLE, MMGMM_NO_ERROR. IMSI ATTACH/DETACH is either not allowed on the cell or detach_done equals to MMGMM_DETACH_DONE to indicate no IMSI DETACH is required by MM anymore. It is expected that no IMSI DETACH message will be sent to the network and neither the SIM will be invalidated nor the lower layers will be switched off. The CM connections are released to the CM entities, then the RR connection is aborted. Here the exceptional case is tested that just in this moment instead of the expected RR_RELEASE_IND a RR_ABORT_IND is received to indicate a radio link failure.

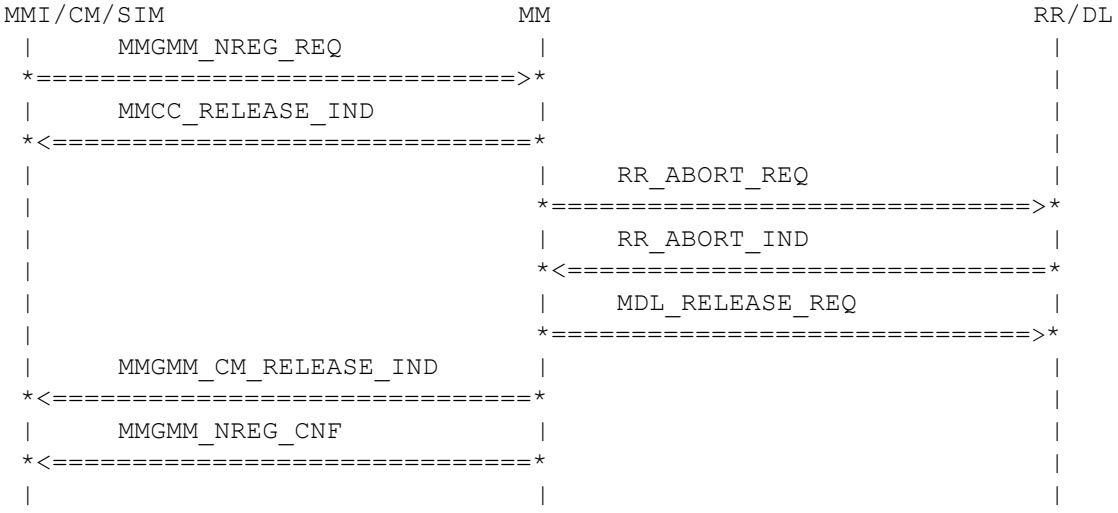
<A> No IMSI ATTACH/DETACH, but MMGMM_PERFORM_DETACH

<B> IMSI ATTACH/DETACH allowed, but MMGMM_DETACH_DONE

Variants: <A>....<B>

Preamble: <A> MMG1160A

<B> MMG1160B



Parametrization

	Primitive	Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_DISABLE
<A>		detach_done	MMGMM_PERFORM_DETACH
<B>		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION
(3)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(4)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2

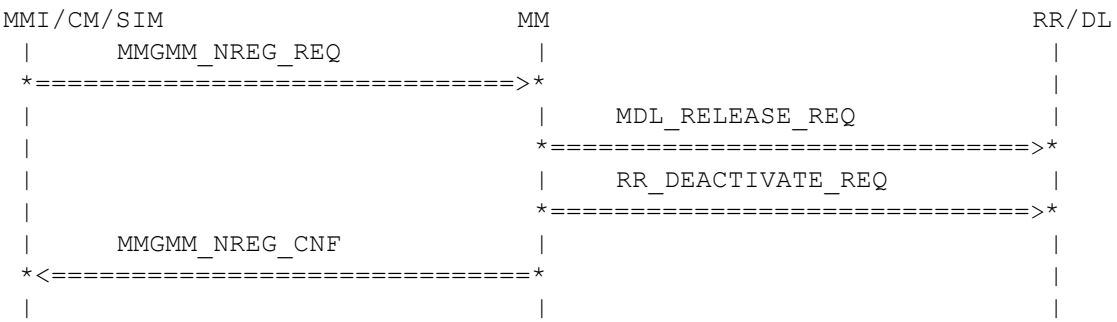
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE
(7)	MMGMM_NREG_CNF		
		detach_cause	CS_DISABLE

History:	03.05.01	HM	Initial
	10.02.03	LOL	added lac_list

3.31.21 MMG1166: Soft switch off after remote controlled IMSI DETACH

Description: MM receives an MMGMM_NREG_REQ primive indicating switch off after beeing disabled. The lower layers are deactivated without performing IMSI DETACH, as GMM sent MMGMM_NREG_REQ with parameter MMGMM_DETACH_DONE. The parameter mmgmm_error_cause is ignored here.

Preamble: MMG1163



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_NREG_REQ		
		detach_cause	CS_SOFT_OFF
		detach_done	MMGMM_DETACH_DONE
		cause	GMMCS_INT_NOT_PRESENT
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	RR_DEACTIVATE_REQ		
		param	NOT_USED
(4)	MMGMM_NREG_CNF		
		detach_cause	CS_SOFT_OFF

History:	02.05.01	HM	Initial
	27.06.01	HM	Revised

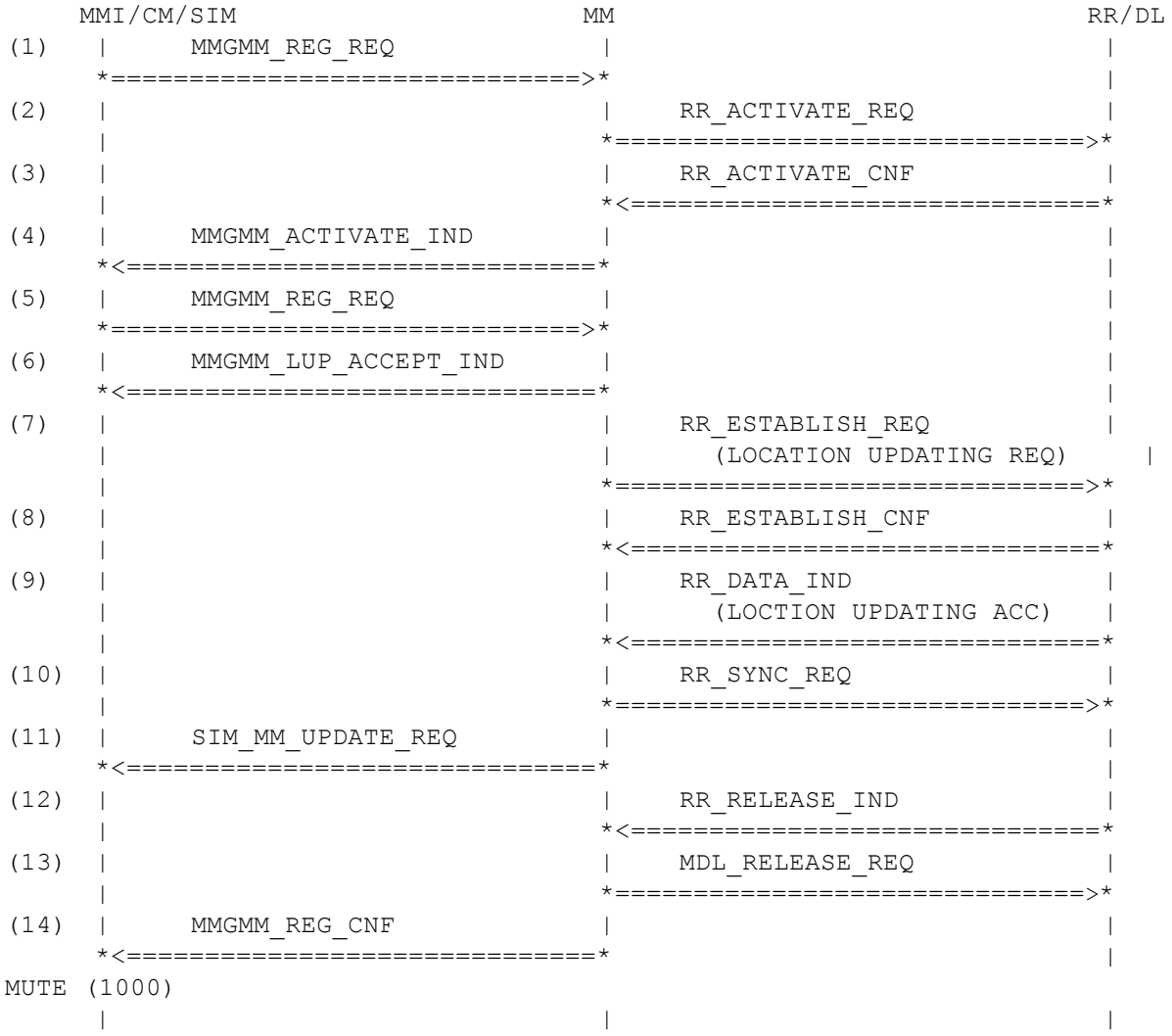
3.31.22 MMG1170: Switch on after MMI requested deregistration, IMSI ATTACH, I

Description: MM receives an MMGMM_REG_REQ primive indicating switch on to full service after MMI requested deregistration.

<A> After remote controlled IMSI DETACH without switch off
<B> After remoted controlled IMSI DETACH and subsequent soft switch off

Variants: <A>....<B>

Preamble: <A> MMG1163
<B> MMG1166



Parametrization

Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_CELL_SEARCH_ONLY
	mobile_class	MMGMM_CLASS_BC
(2) RR_ACTIVATE_REQ		
	plmn	PLMN_123_33X
	op	OP_MODE_TEST_SIM_NO_SERV
	cksn	CKSN_RES
	kcv	KCV_EMPTY
	accc	ACC_2143

		imsi_struct	MOB_ID_IMSI
		tmsi_struct	MOB_ID_NEW_TMSI
		thplmn	NOT_USED
		bcch_info	BCCH_INFO_NONE
		cell_test	CELL_TEST_DISABLE
		gprs_indication	GPRS_YES
(3)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(4)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		t3212_val	T3212_50_SEK_MS
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES
(5)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(6)	MMGMM_LUP_ACCEPT_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	

	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2147
	}	
(10) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_2147
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(11) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_2147_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(12) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(13) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(14) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	MMGMM_RESUMPTION_FAILURE

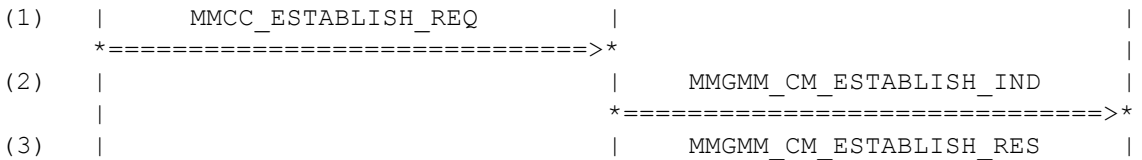
History:			
	03.05.01	HM	Initial
	16.01.02	HM	Revised

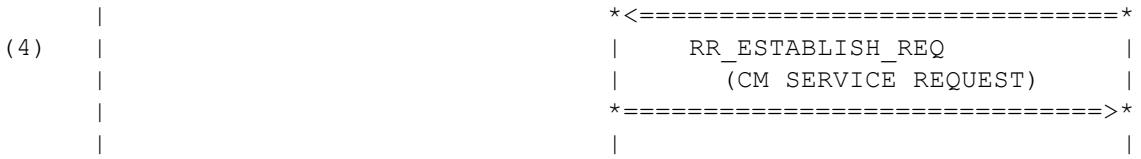
3.32 GPRS related CM service

3.32.1 MMG1200: MM wants to establish a RR connection for CM, GPRS is active

Description: MM receives the request to establish a MO call. GPRS is active, so it has to ask whether it is allowed to establish the call.

Preamble: MMG1010A





Parametrization

Primitive	Parameter	Value
(10) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_MOB_ORIG_SPCH
(11) MMGMM_CM_ESTABLISH_IND		
(12) MMGMM_CM_ESTABLISH_RES		
	cm_establish_res	MMGMM_ESTABLISH_OK
(13) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	

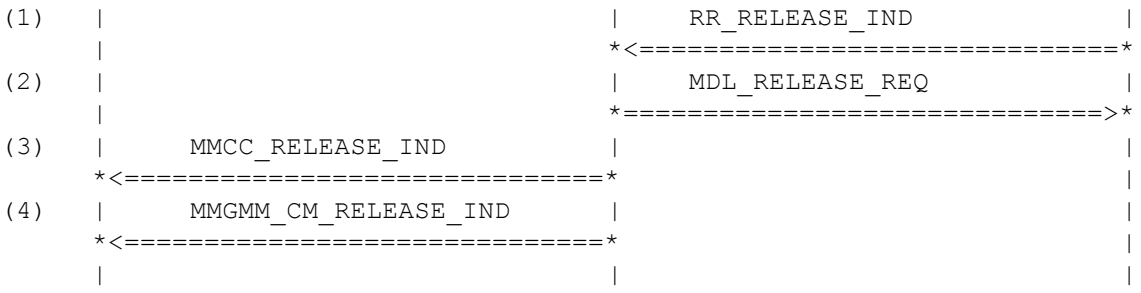
History: 30.08.00 HM Initial

3.32.2 MMG1201: MM allowed to establish a call for CM, RR releases

Description: MM receives the request to establish a MO call. GPRS is active, so it has to ask whether it is allowed to establish the call. The answer was positive, the CM SERVICE REQUEST message has been sent to the network. RR releases the connection.

Variants: <A>....<B>

Preamble: MMG1200



Parametrization

Primitive	Parameter	Value

(1)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
<A>		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
<B>		gprs_resumption	GPRS_RESUMPTION_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_NORM
(4)	MMGMM_CM_RELEASE_IND		
<A>		resumption	MMGMM_RESUMPTION_FAILURE
<B>		resumption	MMGMM_RESUMPTION_OK

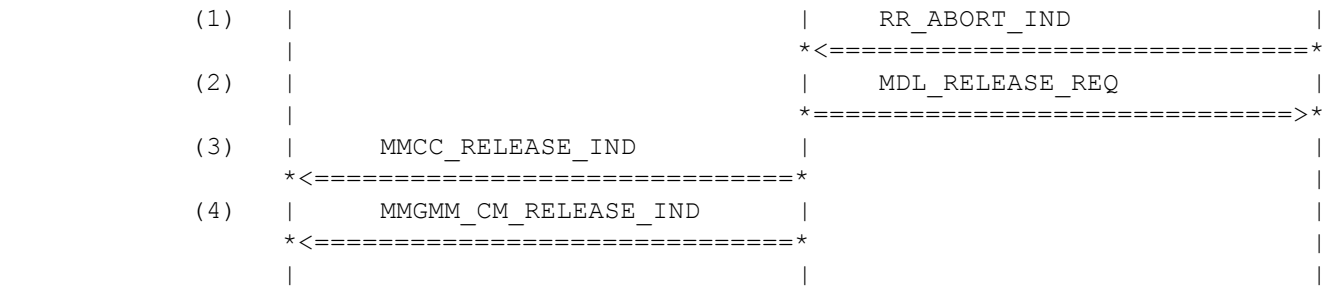
History: 03.11.00 HM Initial

3.32.3 MMG1202: MM allowed to establish a call for CM, RR aborts

Description: MM receives the request to establish a MO call. GPRS is active, so it has to ask whether it is allowed to establish the call. The answer was positive, the CM SERVICE REQUEST message has been sent to the network. RR aborts the connection.

Variants: <A>....<B>

Preamble: MMG1200



Parametrization

Primitive		Parameter	Value
(1)	RR_ABORT_IND		
<A>		op	OP_MODE_TEST_SIM_NO_SERV
<B>		op	OP_MODE_TEST_SIM_LIM_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

(3)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_ABORT_CEL_SEL_FAIL
(4)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE

History:	03.11.00	HM	Initial
	21.06.01	HM	Revised
	10.02.03	LOL	added lac_list

3.32.4 MMG1203: MM wants to establish a RR connection for CM, GPRS is active

Description: MM receives the request to establish a MO call. GPRS is active, so it has to ask whether it is allowed to establish the call. The answer is negative, no call is established.

Preamble: MMG1004A

Parametrization

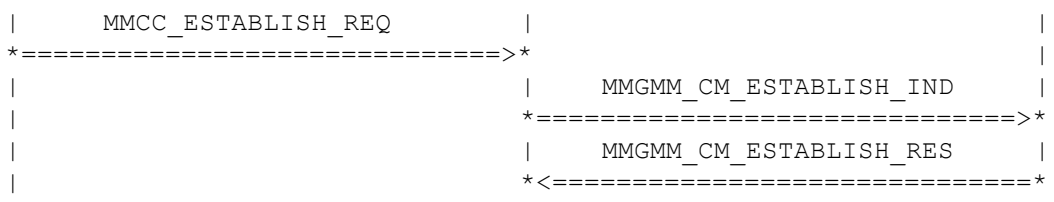
Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMGMM_CM_ESTABLISH_IND		
(3)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_REJECT
(4)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_INT_NOT_PRESENT

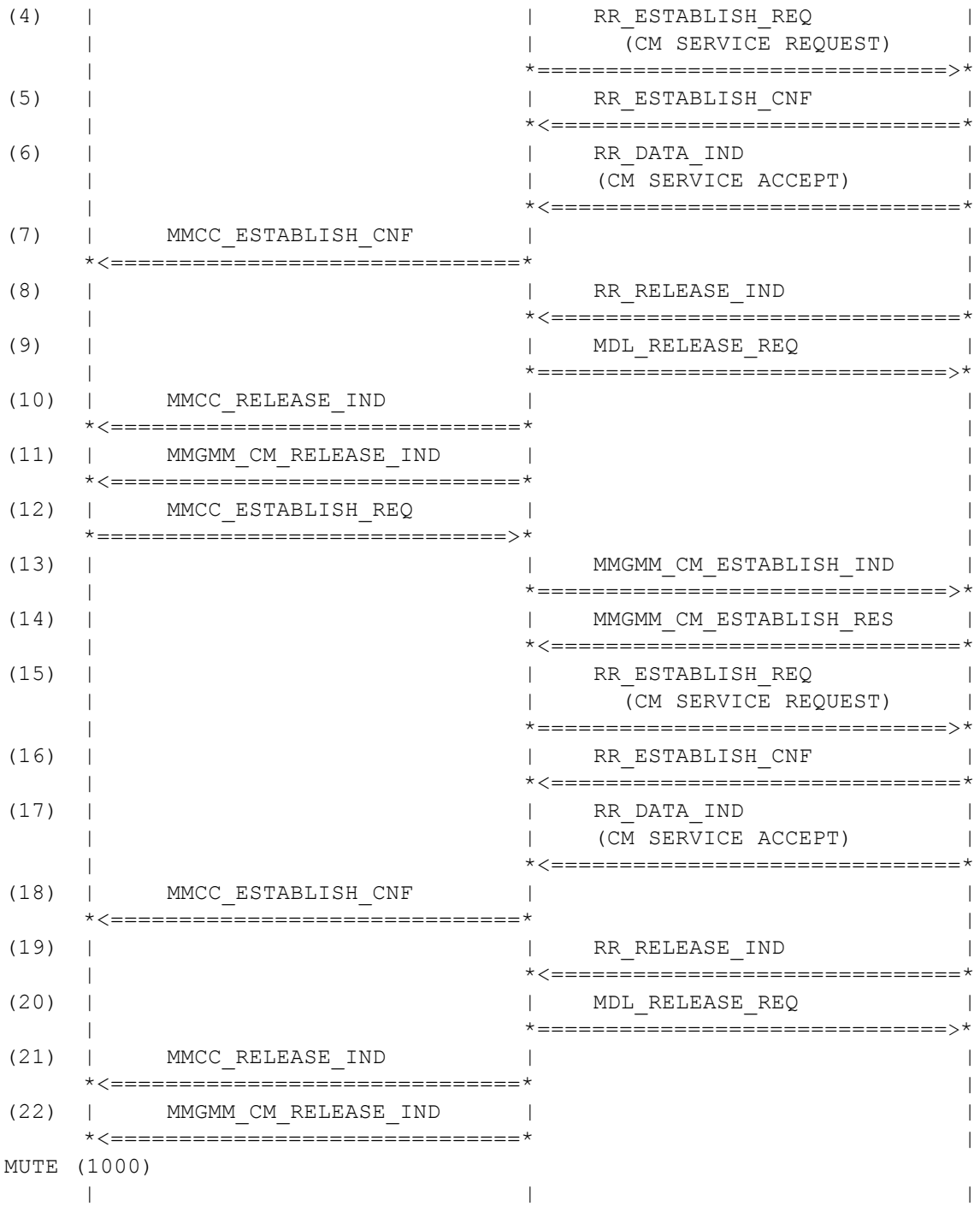
History:	30.08.00	HM	Initial

3.32.5 MMG1204: MM performs two MOCs in a row after combined attach

Description: MM has been combined attached (IMSI ATTACH was necessary). There are two subsequent MO calls.

Preamble: MMG1020





Parametrization

Primitive	Parameter	Value
(5) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_MOB_ORIG_SPCH
(6) MMGMM_CM_ESTABLISH_IND		

(7)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_TMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(11)	MMCC_ESTABLISH_CNF		
		ti	TI_2
(12)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(13)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(14)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_NORM
(15)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_OK
(16)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(17)	MMGMM_CM_ESTABLISH_IND		
(18)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK

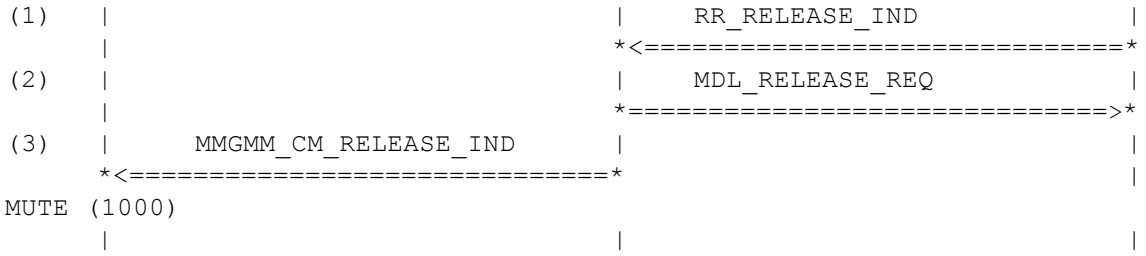
(19) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_TMSI
	}	
(20) RR_ESTABLISH_CNF		
	param	NOT_USED
(21) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(22) MMCC_ESTABLISH_CNF		
	ti	TI_2
(23) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_ACK
(24) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(25) MMCC_RELEASE_IND		
	ti	TI_2
	cause	RRCS_NORM
(26) MMGMM_CM_RELEASE_IND		
	resumption	MMGMM_RESUMPTION_OK

History:	20.03.02	HM	Initial

3.32.6 MMG1205: MM receives RR_RELEASE_IND in IDLE state

Description: MM receives a RR_RELEASE_IND in IDLE state. GMM is informed. This is the case when GMM already switched the stack to circuit switched operation for the establishment of a MT call, MM was not yet informed and the establishment of the MT failed.

Preamble: MMG1020



Parametrization

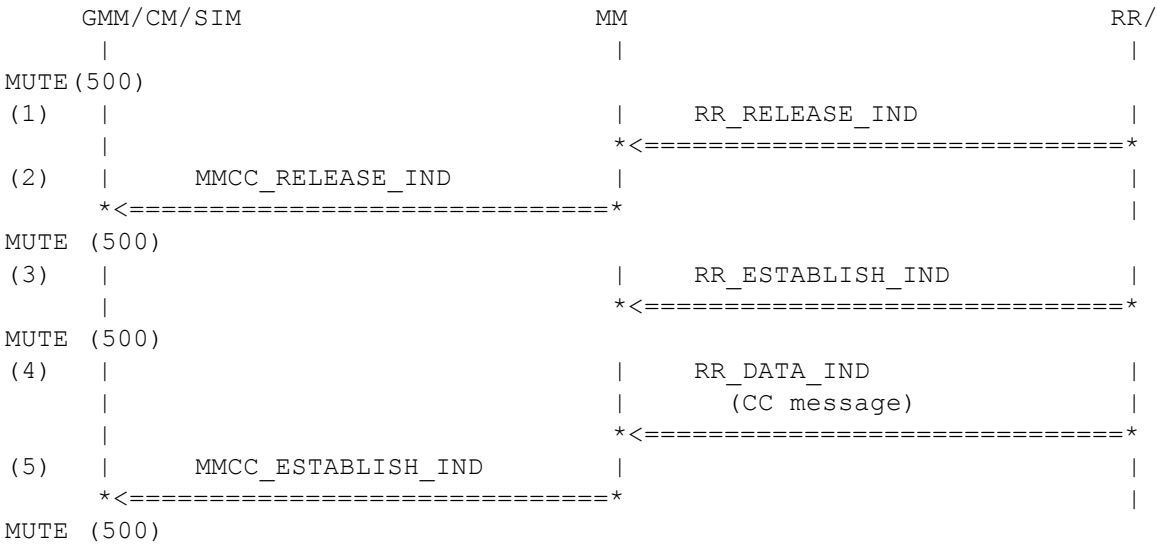
Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(2)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(3)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_OK

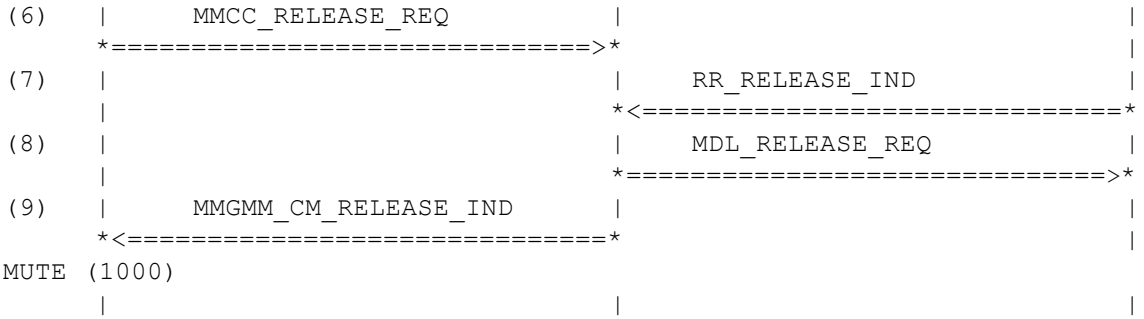
History: 30.04.02 HM Initial

3.32.7 MMG1206: RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM

Description: MM receives a RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM. This is a clash case. There is an incoming MT call already in RR, the MT connection has precedence, RR sends a RR_RELEASE_IND for the MO connection and then the MT connection is going to be established. It is important here that the L2 connection is not releases by issuing a MDL_RELEASE_REQ. It is also important that when the MO call is released for the CM layer GMM will not be informed about the end of all CS operations as there is still the MT call present in RR. This is be done when the MT call terminates, not before.

Preamble: MMG1200





Parametrization

Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_MO_MT_COLL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_MO_MT_COLL
(3)	RR_ESTABLISH_IND		
		param	NOT_USED
(4)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(5)	MMCC_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(6)	MMCC_RELEASE_REQ		
		ti	TI_10
(7)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_OK

History: 20.11.02 HM Initial

3.32.8 MMG1207: RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM

Description: MM receives a RR_RELEASE_IND in state MM_WAIT_FOR_RR_CONN_MM. This is a clash case. There is an incoming MT call already in RR, the MT connection has precedence, RR sends a RR_RELEASE_IND for the MO connection and then the MT connection is going to be established. It is important here that the L2 connection is not releases by issuing a

MDL_RELEASE_REQ. It is also important that when the MO call is released for the CM layer GMM will not be informed about the end of all CS operations as there is still the MT call present in RR. This is be done when the MT call terminates, not before. Here there are problems with the establishment of the MT call, so the RR_ESTABLISH_IND will never be received by MM.

Preamble: MMG1200

Parametrization

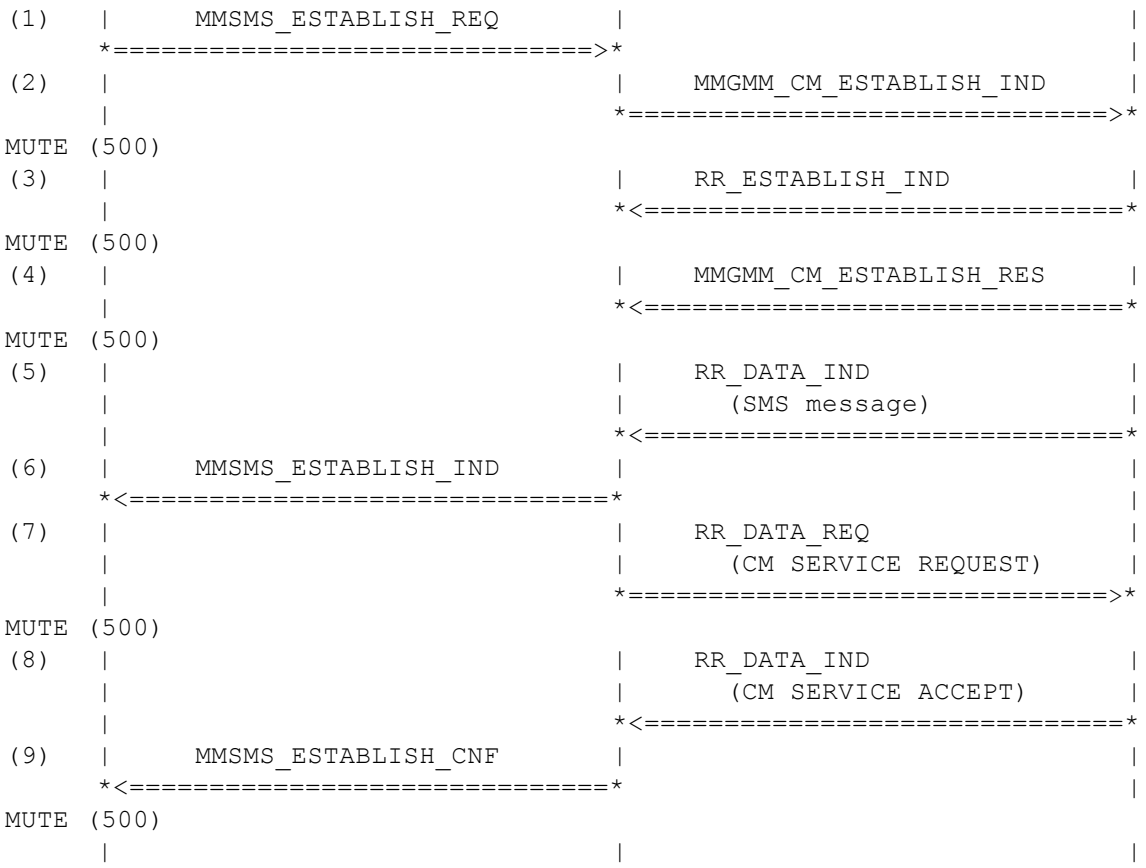
Primitive		Parameter	Value
(1)	RR_RELEASE_IND		
		cause	RRCS_MO_MT_COLL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	RRCS_MO_MT_COLL
(3)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE

History: 20.11.02 HM Initial

3.32.9 MMG1208: Clash of establishment MO/MT in case of SMS

Description: MM receives the request to establish a MO call. GPRS is active, so it has to ask whether it is allowed to establish the call. A MT call is received. The answer from GMM is negative, this negative response is to be ignored as we have a circuit switched CM service ongoing. After entering MM_CONN_ACTIVE the MO call has to be established.

Preamble: MMG1004A



Parametrization

Primitive		Parameter	Value
(1)	MMSMS_ESTABLISH_REQ		
		ti	TI_2
(2)	MMGMM_CM_ESTABLISH_IND		
(3)	RR_ESTABLISH_IND		
		param	NOT_USED
(4)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_REJECT
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	SMS_MESSAGE_5
(6)	MMSMS_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	SMS_MESSAGE_5
(7)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED

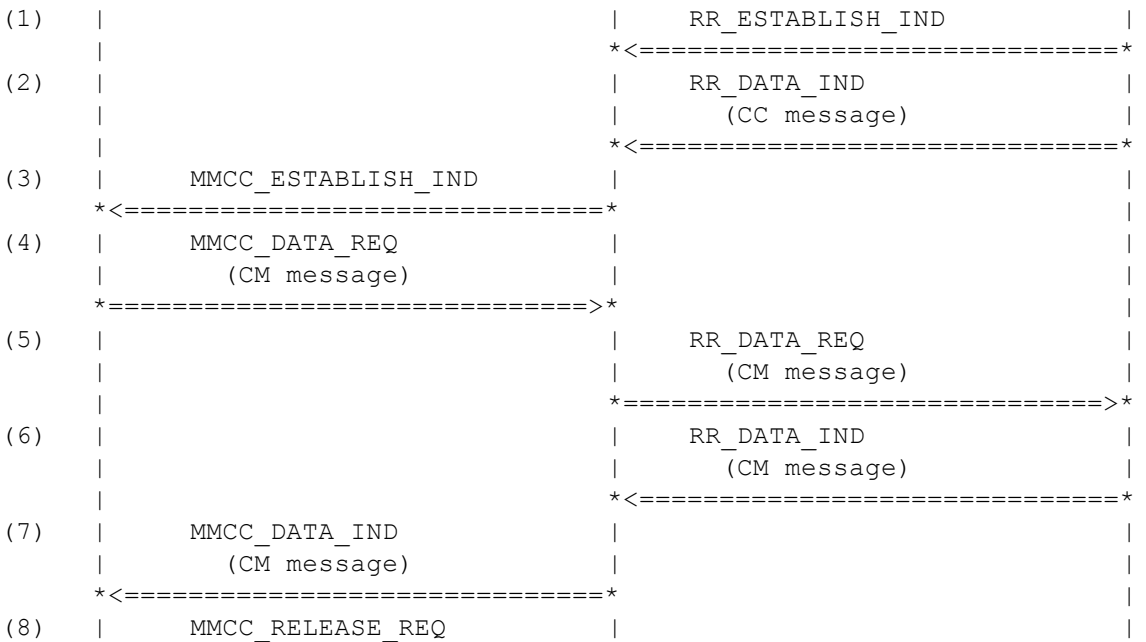
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_SMS
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(8)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(9)	MMSMS_ESTABLISH_CNF		
		ti	TI_2

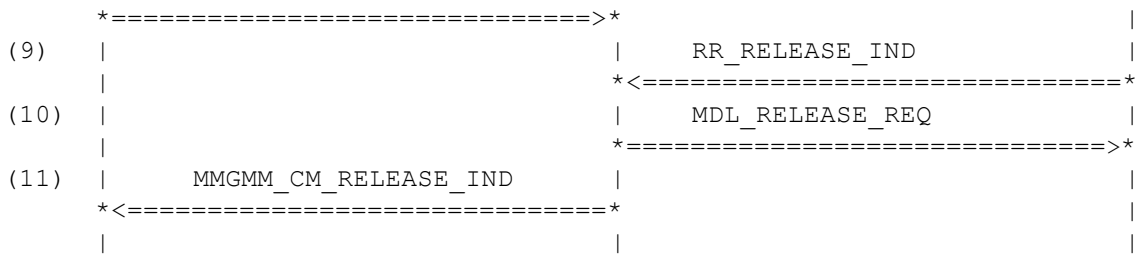
History: 24.04.03 HM Initial

3.32.10 MMG1210: MM receives MT in IDLE mode

Description: MM receives a RR_ESTABLISH_IND in IDLE mode. GPRS is present. GMM already knows there is an incoming call because it has already been informed by GRR about that fact, MM is allowed to accept the call and to establish calls until the last call has been released. After the last call has been released, a MMGMM_CM_RELEASE_IND is issued.

Preamble: MMG1004A





Parametrization

Primitive		Parameter	Value
(1)	RR_ESTABLISH_IND		
		param	NOT_USED
(2)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(3)	MMCC_ESTABLISH_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(4)	MMCC_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(5)	RR_DATA_REQ		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE_RESPONSE
(6)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(7)	MMCC_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	CC_MESSAGE
(8)	MMCC_RELEASE_REQ		
		ti	TI_10
(9)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_OK

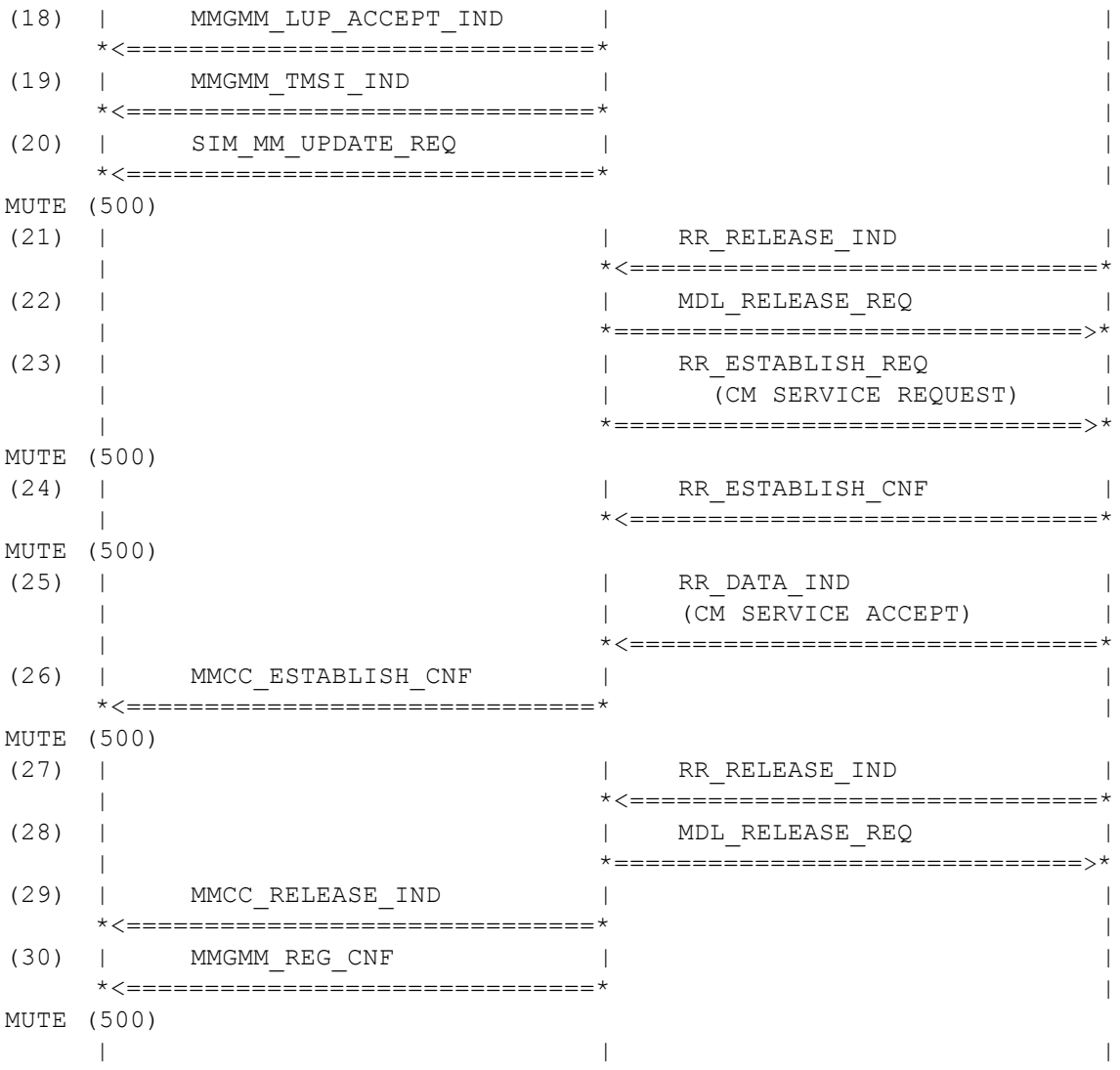
History: 07.12.00 HM Initial

3.32.11 MMG1211: Interworking of cell selection in new LA and MO call

Description: MM enters a new location area, network mode II. An update attempt is perfomed, this fails with radio link failure. While T3211 is running, the user tries to establish an MO call. It is expected that MM performs a remote controlled location updating procedure, subsequently the MO call establishment is performed and afterwards, at the end of the last circuit switched procedure, the MMGMM_REG_CNF is sent.

Preamble: MMG1011A

```
(1)   |                                |    RR_ACTIVATE_IND            |
      |                                *<==============================*
(2)   |     MMGMM_ACTIVATE_IND         |                               |
      *<================================*                               |
MUTE (500)
(3)   |     MMGMM_REG_REQ              |                               |
      *================================>*                               |
(4)   |                                |    RR_ESTABLISH_REQ           |
      |                                |      (LOCATION UPDATING REQ)     |
      |                                *==============================>*
(5)   |                                |    RR_ESTABLISH_CNF           |
      |                                *<==============================*
MUTE (500)
(6)   |                                |    RR_ABORT_IND               |
      |                                *<==============================*
(7)   |                                |    MDL_RELEASE_REQ            |
      |                                *==============================>*
(8)   |                                |    RR_SYNC_REQ                |
      |                                *==============================>*
(9)   |     MMGMM_TMSI_IND              |                               |
      *<================================*                               |
(10)  |     SIM_MM_UPDATE_REQ           |                               |
      *<================================*                               |
MUTE (500)
(11)  |     MMCC_ESTABLISH_REQ          |                               |
      *================================>*                               |
MUTE (500)
TIMEOUT (10000)
(12)  |                                |    RR_ESTABLISH_REQ           |
      |                                |      (LOCATION UPDATING REQ)     |
      |                                *==============================>*
(13)  |                                |    RR_ESTABLISH_CNF           |
      |                                *<==============================*
MUTE (500)
(14)  |                                |    RR_DATA_IND                |
      |                                |      (LOCTION UPDATING ACC)   |
      |                                *<==============================*
(15)  |                                |    RR_DATA_REQ                |
      |                                |      (TMSI REALLOC COMPLETE)     |
      |                                *==============================>*
(16)  |                                |    RR_SYNC_REQ                |
      |                                *==============================>*
(17)  |                                |    RR_SYNC_REQ                |
      |                                *==============================>*
```



Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(2) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT

		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES
(3)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_TMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM
		cause	RRCS_ABORT_RAD_LNK_FAIL
		plmn_avail	NOT_USED
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	RF_CLASS_2
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	NOT_USED
		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(9)	MMGMM_TMSI_IND		
		tmsi	TMSI_INVALID_ULONG
(10)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	NOT_USED
		forb_plmn	NOT_USED
		cksn	CKSN_RES

	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(11) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_MOB_ORIG_SPCH
(12) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL_FOL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	
(13) RR_ESTABLISH_CNF		
	param	NOT_USED
(14) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_ACCEPT
	ti	TI_0
	loc_area_ident	LOC_AREA_ID_123_33_2
	mob_id	MOB_IDENT_NEW_TMSI
	follow_proceed	NOT_USED
	}	
(15) RR_DATA_REQ		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_TMSI_REALLOC_COMP
	ti	TI_0
	}	
(16) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	MOB_ID_NEW_TMSI
	plmn	NOT_USED
	lac	NOT_USED

	synccs	NOT_USED
	accc	NOT_USED
	thplmn	NOT_USED
(17) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	PLMN_123_33
	lac	LAC_0002
	synccs	SYNCCS_LAI_ALLOW
	accc	NOT_USED
	thplmn	NOT_USED
(18) MMGMM_LUP_ACCEPT_IND		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
(19) MMGMM_TMSI_IND		
	tmsi	TMSI_34125708_ULONG
(20) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_0002_34125708
	bcch_inf	BCCH_INF_1
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_1122
(21) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(22) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(23) RR_ESTABLISH_REQ		
	estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_MOC
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_TMSI
	}	
(24) RR_ESTABLISH_CNF		
	param	NOT_USED

(25) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(26) MMCC_ESTABLISH_CNF		
	ti	TI_2
(27) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_ACK
(28) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(29) MMCC_RELEASE_IND		
	ti	TI_2
	cause	RRCS_NORM
(30) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
	resumption	MMGMM_RESUMPTION_OK

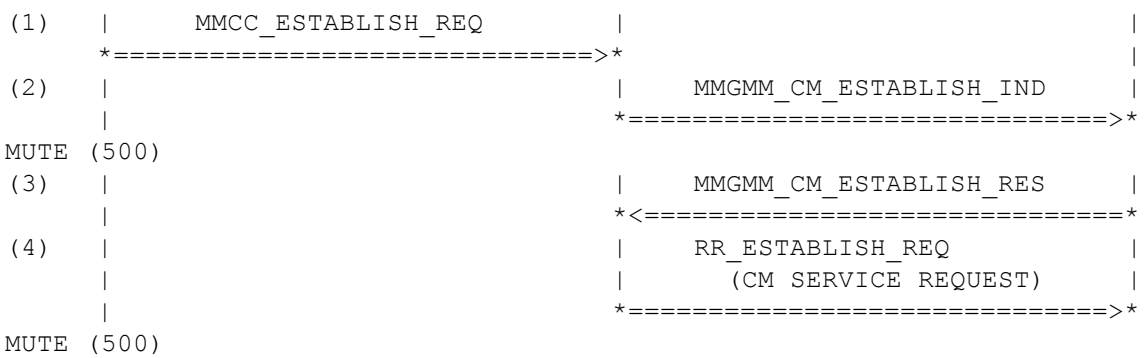
History:	11.06.02	HM	Initial
	27.09.02	HM	RC update => all CM services OK
	10.02.03	LOL	added lac_list

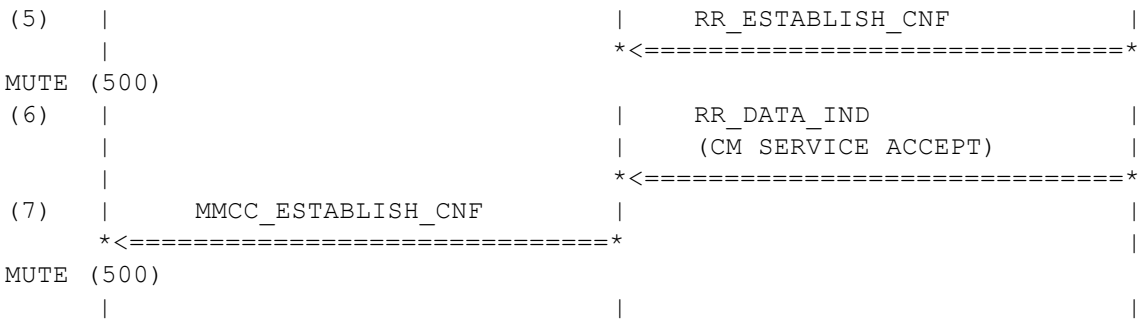
3.32.12 MMG1212: MM performs a MOC and enters MM_CONN_ACTIVE

Description: MM performs a MOC, entering MM connected stated. No IMSI ATTACH / DETACH.
<A> No ATTACH, no periodic
<B> ATTACH, no periodic

Variants: <A>....<B>

Preamble: <A> MMG1010A
<B> MMG1011A





Parametrization

Primitive		Parameter	Value
(1)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(2)	MMGMM_CM_ESTABLISH_IND		
(3)	MMGMM_CM_ESTABLISH_RES		
		cm_establish_res	MMGMM_ESTABLISH_OK
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
<A>		mob_id	MOB_IDENT_IMSI
<B>		mob_id	MOB_IDENT_TMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(7)	MMCC_ESTABLISH_CNF		
		ti	TI_2

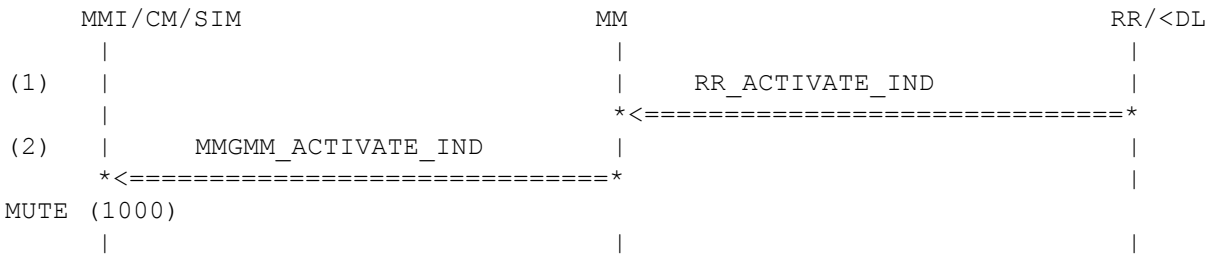
History: 06.01.03 HM Initial

3.33 Cell selection/reselection in RR, normal updating

3.33.1 MMG1300: New location area in full service condition

Description: MM receives a new cell from RR in full service conditon. This cell is located in a new location area. A normal updating procedure is necessary, this is signalled to GMM. MM than waits for the update decision from GMM (either update by MM's own procedure, no update at all or combined attach by GMM procedures).

Preamble: MMG1011A



Parametrization

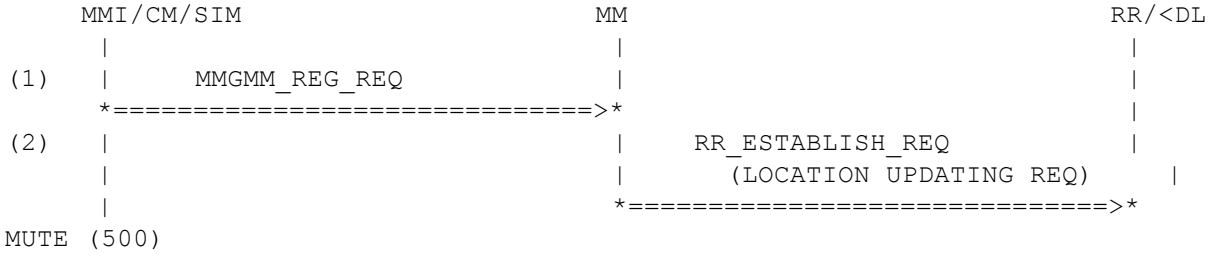
Primitive		Parameter	Value
(1)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0002
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(2)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_0002
		cid	CELL_ID_1122
		t3212_val	T3212_NO_PRD_UPDAT
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

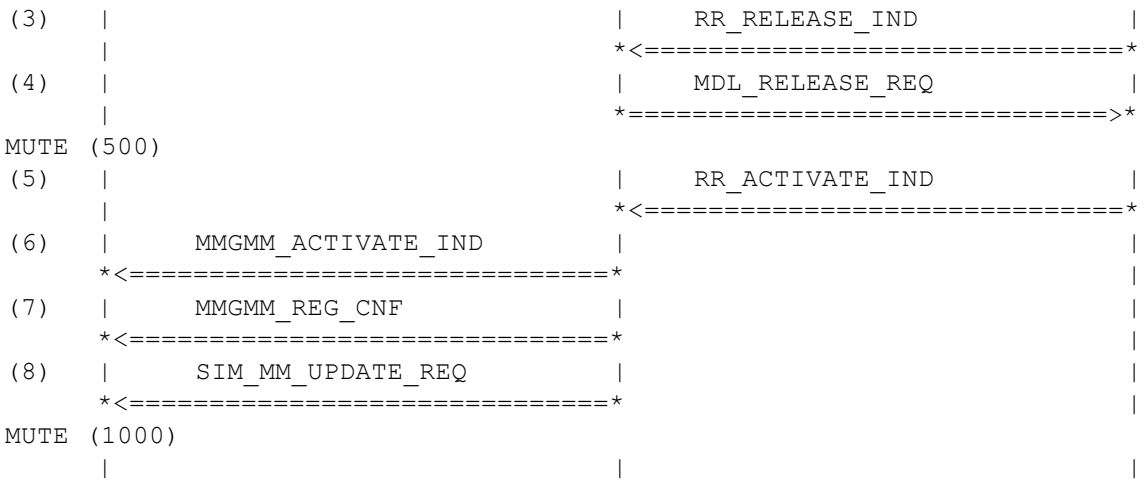
History: 31.07.01 HM Initial

3.33.2 MMG1301: Back to old updated area after random access failure

Description: During remote controlled GPRS updating procedure, MM comes back to the old updated location area after random access failure. No new update attempt is expected.

Preamble: MMG1300





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES

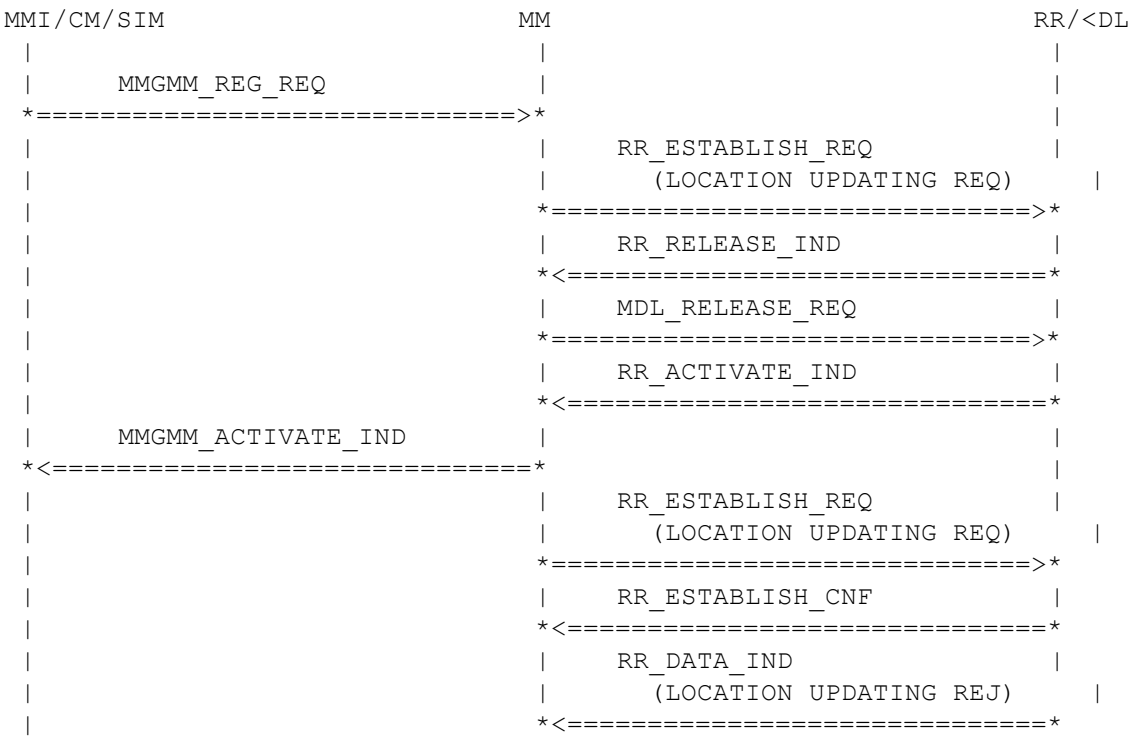
(6)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		t3212_val	T3212_NO_PRD_UPDAT
		status	MMGMM_FULL_SERVICE
		gprs_indicator	MMGMM_GPRS_SUPP_YES
(7)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_2147_34125708
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_RES
		kc	KC_VALUE_EMPTY
		cell_identity	CELL_ID_1122

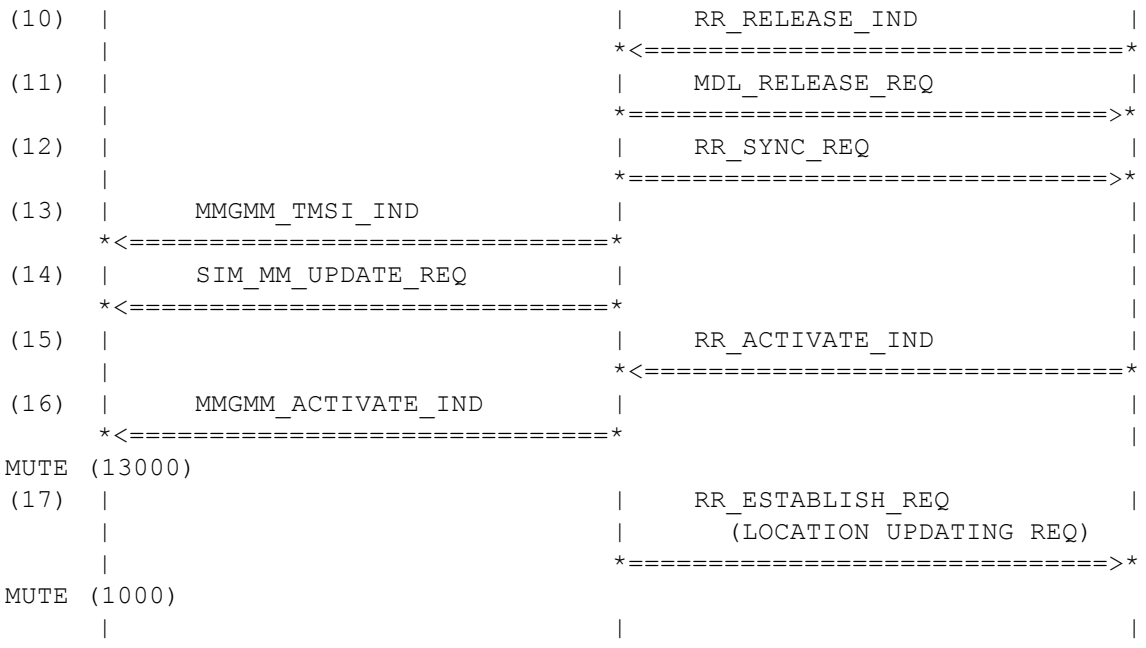
History:	31.07.01	HM	Initial
	05.11.02	HM	Revised

3.33.3 MMG1302: RR reselects another cell in same location area during update

Description: During remote controlled GPRS updating procedure, MM receives a new cell in the same (new) location area after random access failure and network failure, it is expected that the remote controlled location updating continues after timeout of the respective controlling timers T3213 and T3211.

Preamble: MMG1300





Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_NORMAL
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_NEW_TMSI
		}	
(3)	RR_RELEASE_IND		
		cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT

	cid	CELL_ID_0002
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(6) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_0002
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_CELL_SELECTED
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(7) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(8) RR_ESTABLISH_CNF		
	param	NOT_USED
(9) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(10) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(12) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED

	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(13) MMGMM_TMSI_IND		
	tmsi	TMSI_INVALID_ULONG
(14) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	NOT_USED
	forb_plmn	NOT_USED
	cksn	CKSN_RES
	kc	KC_VALUE_EMPTY
	cell_identity	CELL_ID_0002
(15) RR_ACTIVATE_IND		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_ATT
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(16) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_CELL_SELECTED
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(17) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_FEFF
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_IMSI
	}	

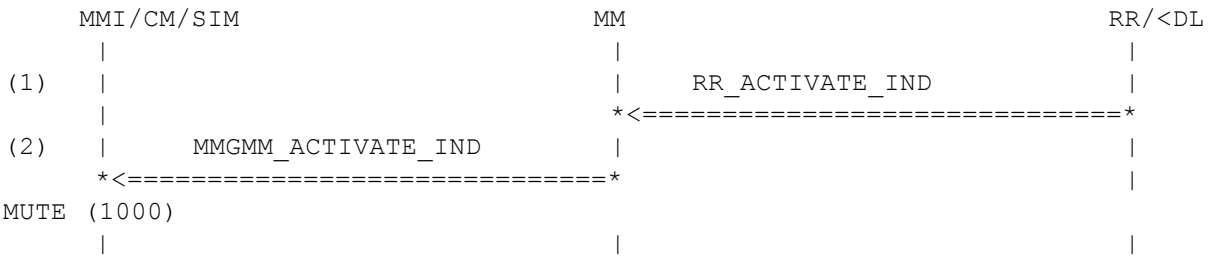
History:			
	31.07.01	HM	Initial
	02.01.02	HM	Revised
	18.01.02	HM	Revised

3.33.4 MMG1303: Third location area in the middle of the procedure

Description: During remote controlled GPRS updating procedure, the mobile station enters a third location area different from the old location area and the location area a updating attempt has already

been performed. It is expected that MM stops updating by using its own procedures and informs GMM about the cell selection, indicating the need for an updating decision by GMM.

Preamble: MMG1300



Parametrization

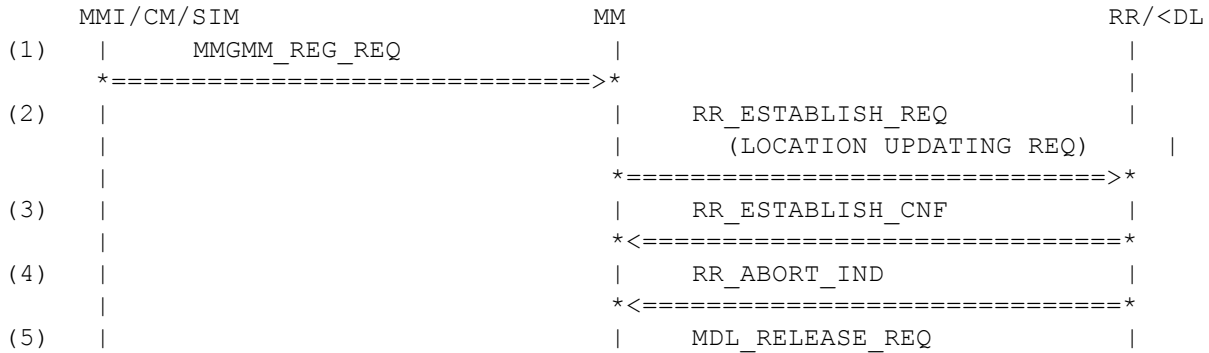
Primitive		Parameter	Value
(3)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT_PER
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_0001
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(4)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_0001
		cid	CELL_ID_1122
		t3212_val	NOT_USED
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

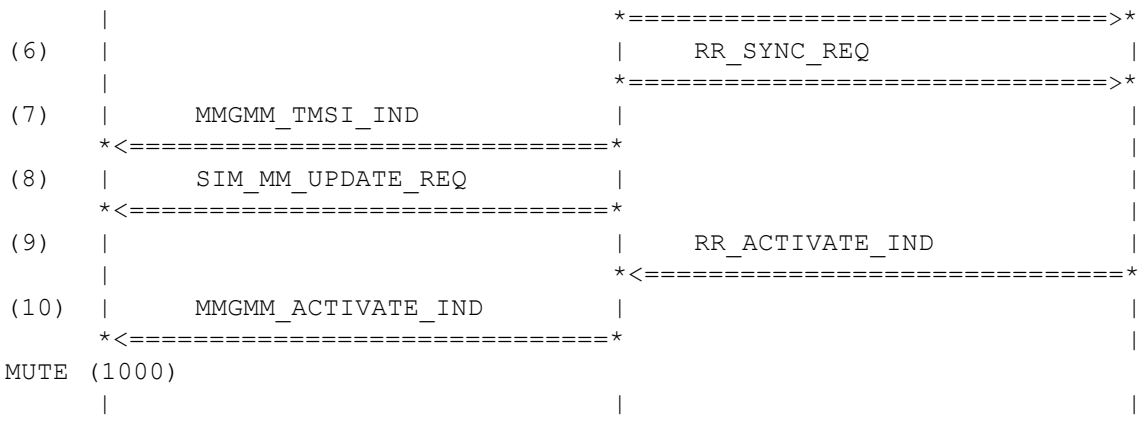
History: 31.07.01 HM Initial

3.33.5 MMG1304: Back to old updated area after T3211 started

Description: During remote controlled GPRS updating procedure, MM comes back to the old updated location area after some other failure than random access failure. The LOCATION UPDATING REQUEST message has left the mobile station. It may have been accepted by the network, so MM has to continue updating until a location updating accept is received in the old location area.

Preamble: MMG1300





Parametrization

Primitive	Parameter	Value
(1) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(2) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_NEW_TMSI
	}	
(3) RR_ESTABLISH_CNF		
	param	NOT_USED
(4) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM
	cause	RRCS_ABORT_RAD_LNK_FAIL
	plmn_avail	NOT_USED
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	RF_CLASS_2
(5) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(6) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED

		kcv	NOT_USED
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVAL
		accc	NOT_USED
		thplmn	NOT_USED
(7)	MMGMM_TMSI_IND		
		tmsi	TMSI_INVALID_ULONG
(8)	SIM_MM_UPDATE_REQ		
		loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
		bcch_inf	BCCH_INF_1
		forb_plmn	NOT_USED
		cksn	CKSN_NO_KEY
		kc	KC_DELETED_SIM
		cell_identity	CELL_ID_1122
(9)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_ATT
		cid	CELL_ID_1122
		plmn	PLMN_123_33
		lac	LAC_2147
		power	RF_CLASS_2
		gprs_indication	GPRS_YES
(10)	MMGMM_ACTIVATE_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
		t3212_val	T3212_NO_PRD_UPDAT
		status	MMGMM_WAIT_FOR_UPDATE
		gprs_indicator	MMGMM_GPRS_SUPP_YES

History:	31.07.01	HM	Initial
	18.01.02	HM	Revised
	10.02.03	LOL	added lac_list

3.34 SIM removal while GPRS active

3.34.1 MMG1400: SIM removal while CM connected requested / CM connected

Description: MM receives a SIM_REMOVE_IND while a call is requested/ongoing (MM_WAIT_FOR_RR_CONNECTION / MM_CONN_ACTIVE). The call is released for the CM layer and the RR connection is aborted. A MMGMM_NREG_REQ (CS_SIM_REM) is expected to be received to finish the deregistration procedure. No IMSI ATTACH / DETACH.

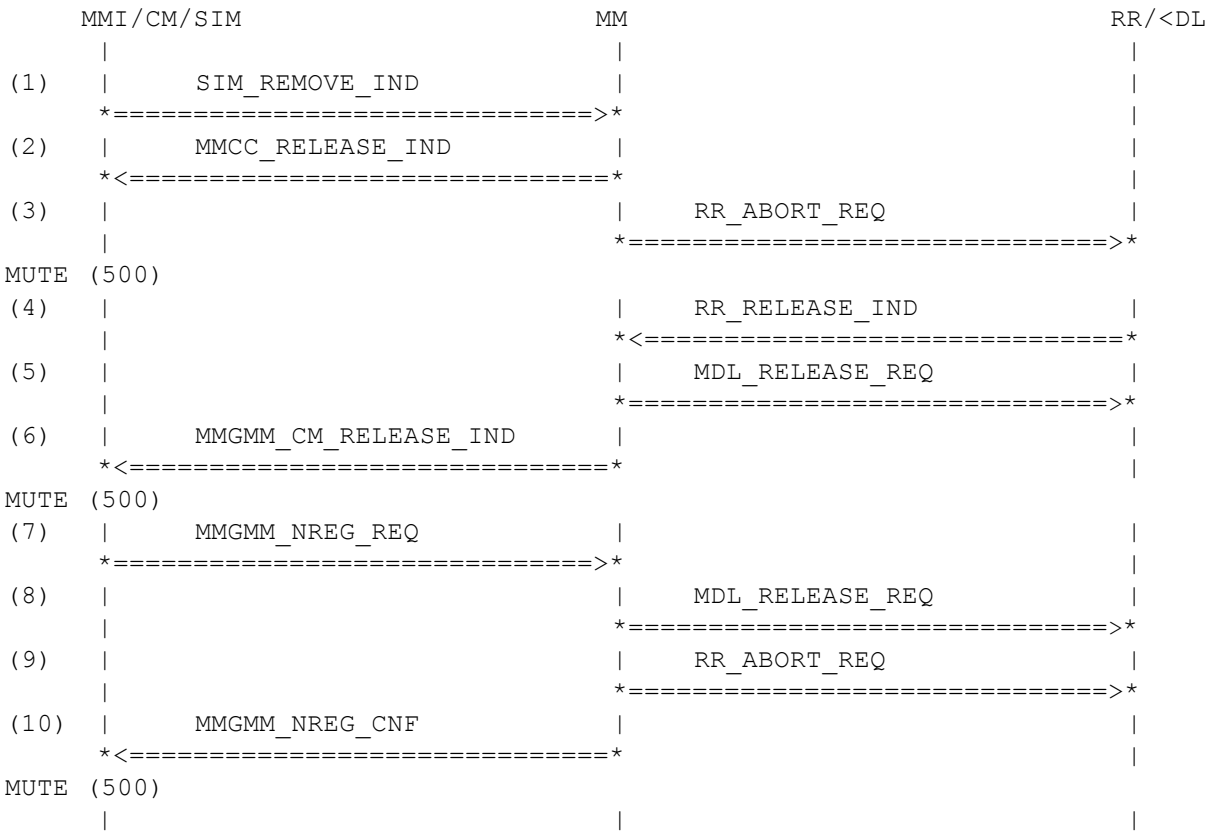
<A> The call has been requested

<B> The call is ongoing

Variants: <A>....<B>

Preamble: <A> MMG1200

<B> MMG1212A



Parametrization

Primitive	Parameter	Value
(1) SIM_REMOVE_IND		
	cause	SIM_CAUSE_CARD_REMOVED
(2) MMCC_RELEASE_IND		
	ti	TI_2
	cause	MMCS_NO_REGISTRATION
(3) RR_ABORT_REQ		
	abcs	ABCS_NORM
(4) RR_RELEASE_IND		
	cause	RRCS_MM_ABORTED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(6) MMGMM_CM_RELEASE_IND		
	resumption	MMGMM_RESUMPTION_FAILURE
(7) MMGMM_NREG_REQ		
	detach_cause	CS_SIM_REM
	detach_done	MMGMM_PERFORM_DETACH
	cause	GMMCS_INT_NOT_PRESENT

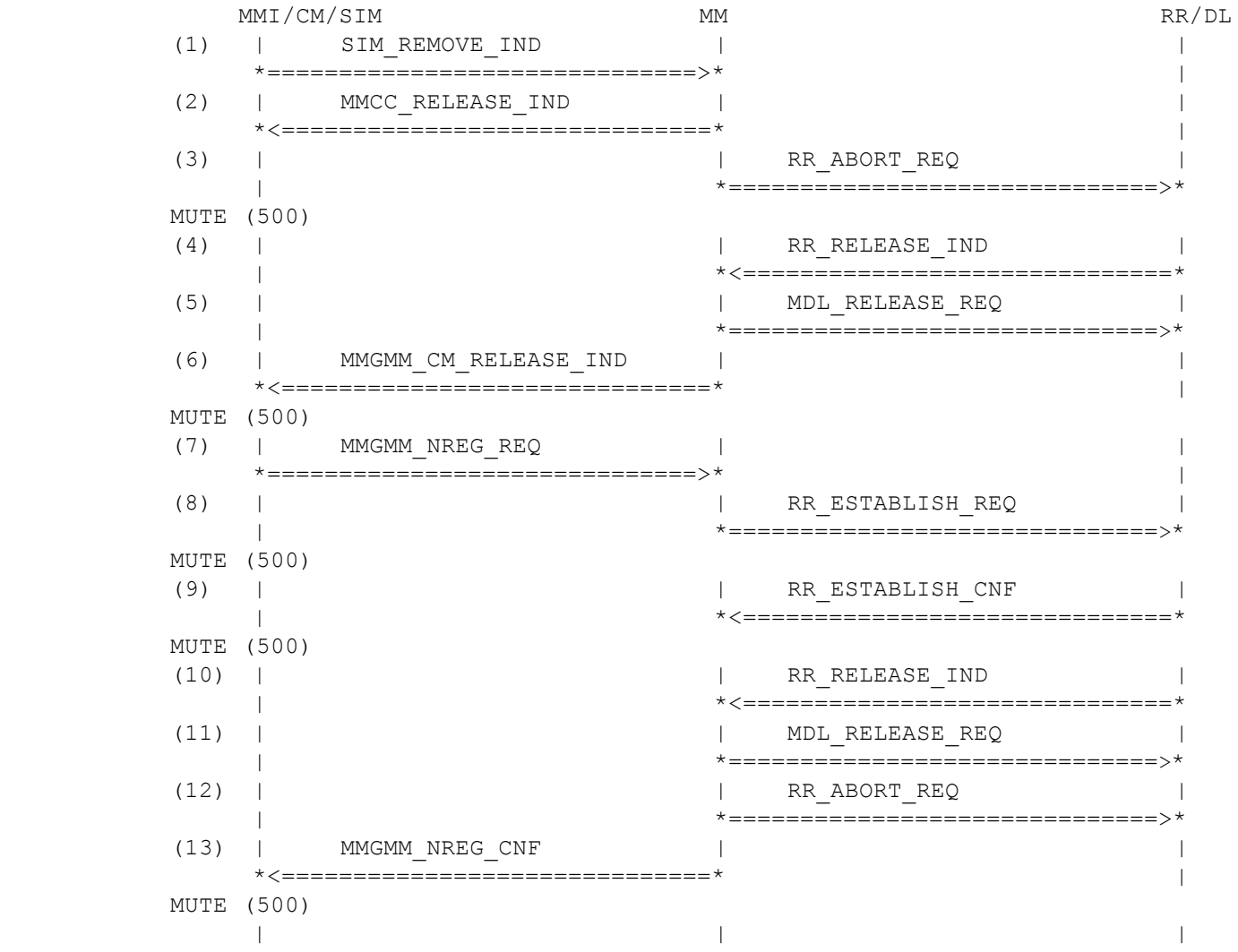
(8)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(9)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(10)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History: 06.01.03 HM Initial

3.34.2 MMG1401: SIM removal while CM connected, IMSI DETACH

Description: MM receives a SIM_REMOVE_IND while a call ongoing (MM_CONN_ACTIVE). The call is released for the CM layer and the RR connection is aborted. A MMGMM_NREG_REQ (CS_SIM_REM) is expected to be received to finish the deregistration procedure. IMSI ATTACH / DETACH.

Preamble: MMG1212B



Parametrization

	Primitive	Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION
(3)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(4)	RR_RELEASE_IND		
		cause	RRCS_MM_ABORTED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(5)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(6)	MMGMM_CM_RELEASE_IND		
		resumption	MMGMM_RESUMPTION_FAILURE
(7)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(8)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_TMSI
		}	
(9)	RR_ESTABLISH_CNF		
		param	NOT_USED
(10)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(11)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(12)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(13)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

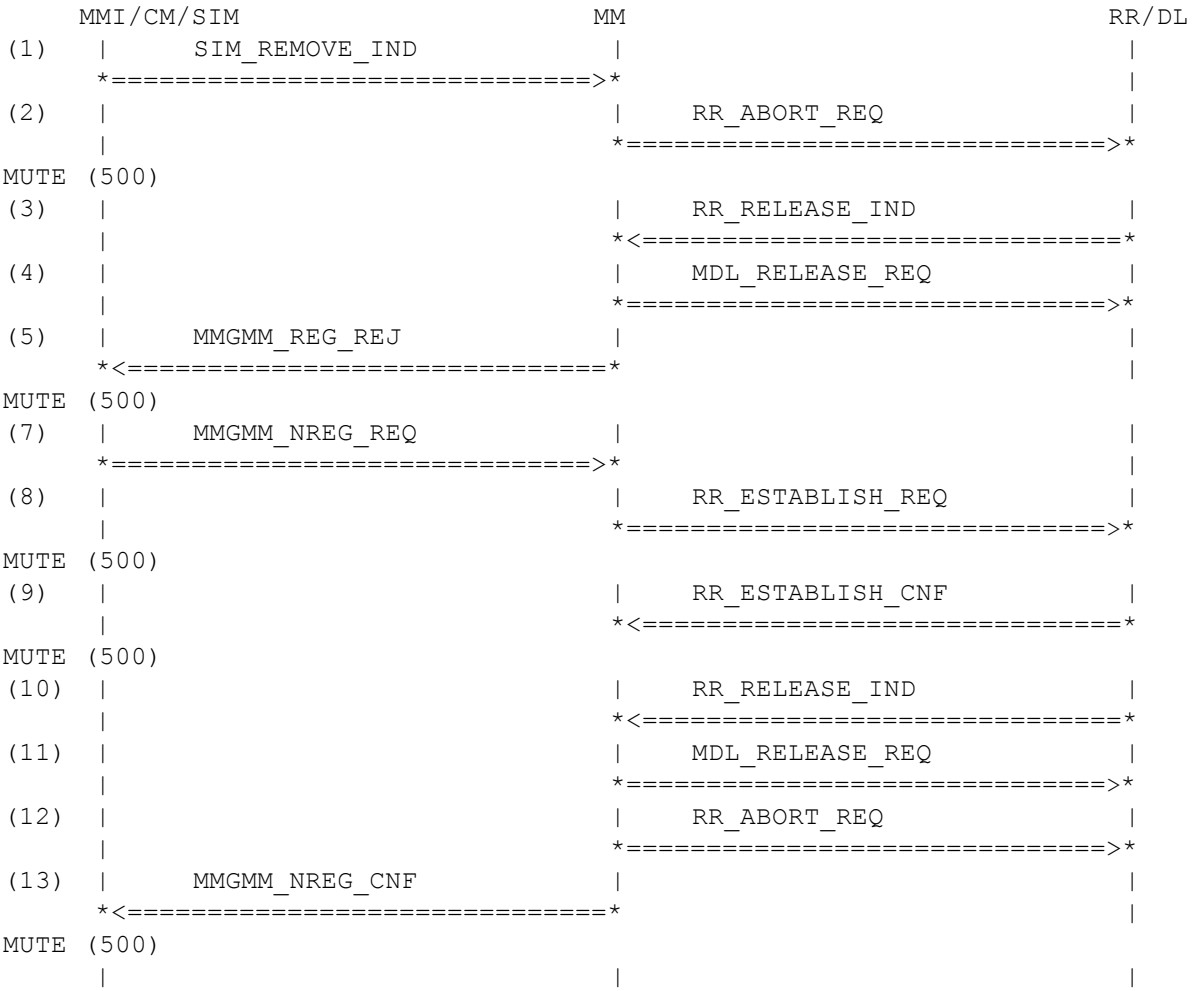
History: 06.01.03 HM Initial

3.34.3 MMG1410: SIM removal IMSI ATTACH, non-Idle

Description: MM receives a SIM_REMOVE_IND while a IMSI ATTACH is ongoing (MM_WAIT_FOR_RR_CONN_LUP, MM_LUP_INITIATED, MM_LUP_REJECTED). The requested connection is aborted, all updating attempts are stopped and a MMGMM_REG_REJ indicated to GMM as soon as possible.

Variants: <A>....<C>

Preamble: <A> MMG1060
<B> MMG1061
<C> MMG1062



Parametrization

Primitive	Parameter	Value
(1) SIM_REMOVE_IND	cause	SIM_CAUSE_CARD_REMOVED
(2) RR_ABORT_REQ	abcs	ABCS_NORM

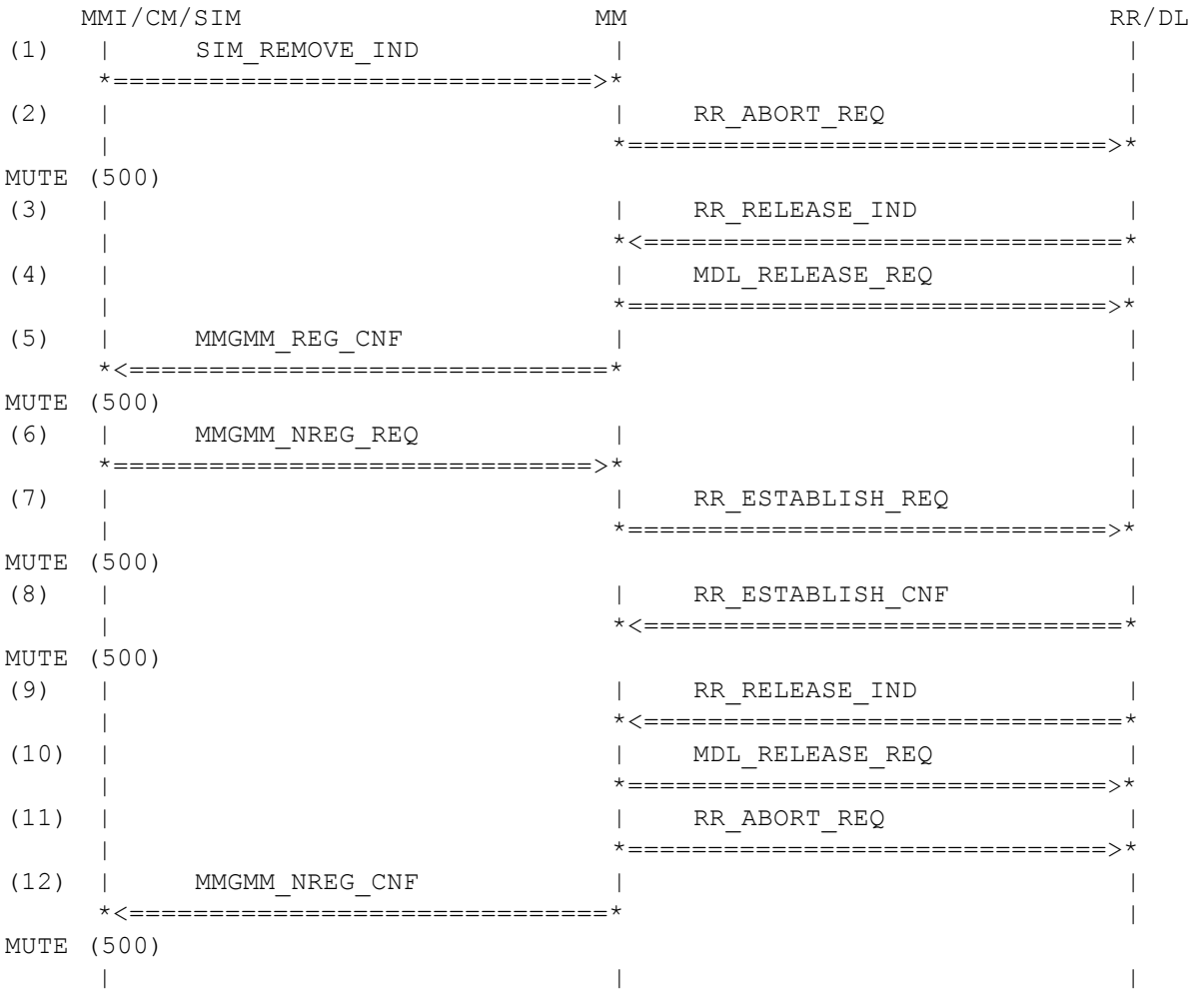
(3)	RR_RELEASE_IND		
		cause	RRCS_MM_ABORTED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_REG_REJ		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
		resumption	MMGMM_RESUMPTION_FAILURE
(6)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_TMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(12)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History: 11.01.03 HM Initial

3.34.4 MMG1411: SIM removal IMSI ATTACH, MM_WAIT_FOR_NW_CMD

Description: MM receives a SIM_REMOVE_IND after IMSI ATTACH in state MM_WAIT_FOR_NW_CMD.

Preamble: MMG1063



Parametrization

Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(3)	RR_RELEASE_IND		
		cause	RRCS_MM_ABORTED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(4)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(5)	MMGMM_REG_CNF		
		plmn	PLMN_123_33
		lac	LAC_2147

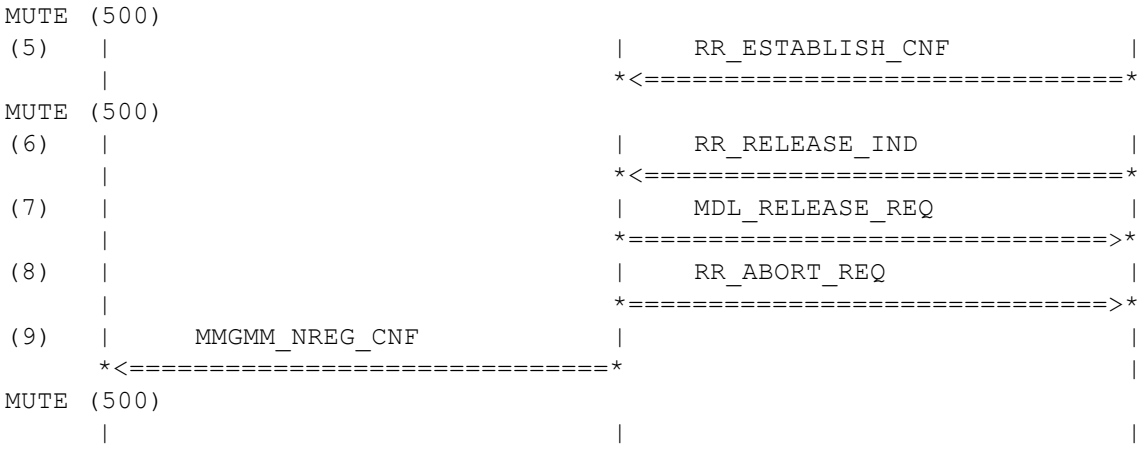
		cid	CELL_ID_1122
		resumption	MMGMM_RESUMPTION_FAILURE
(6)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(7)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_TMSI
		}	
(8)	RR_ESTABLISH_CNF		
		param	NOT_USED
(9)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(10)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(11)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(12)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History: 11.01.03 HM Initial

3.34.5 MMG1412: SIM removal IMSI ATTACH, MM_IDLE_NORMAL_SERVICE

Description: MM receives a SIM_REMOVE_IND after non-successful IMSI ATTACH in state MM_IDLE_NORMAL_SERVICE, T3211 running. The end of update (non-success) is indicated to GMM immediately, it is checked that T3211 was stopped.

Preamble: MMG1064



Parametrization

Primitive		Parameter	Value
(1)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(2)	MMGMM_REG_REJ		
		service	NREG_LIMITED_SERVICE
		search_running	SEARCH_NOT_RUNNING
		new_forb_plmn	PLMN_NO_ID
		cause	MMCS_SIM_REMOVED
		resumption	MMGMM_RESUMPTION_FAILURE
(3)	MMGMM_NREG_REQ		
		detach_cause	CS_SIM_REM
		detach_done	MMGMM_PERFORM_DETACH
		cause	GMMCS_INT_NOT_PRESENT
(4)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_CAL_BY_SS_SMS
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_IMSI_DETACH_IND
		ti	TI_0
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_TMSI
		}	
(5)	RR_ESTABLISH_CNF		
		param	NOT_USED
(6)	RR_RELEASE_IND		
		cause	RRCS_ABNORM_UNSPEC
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0

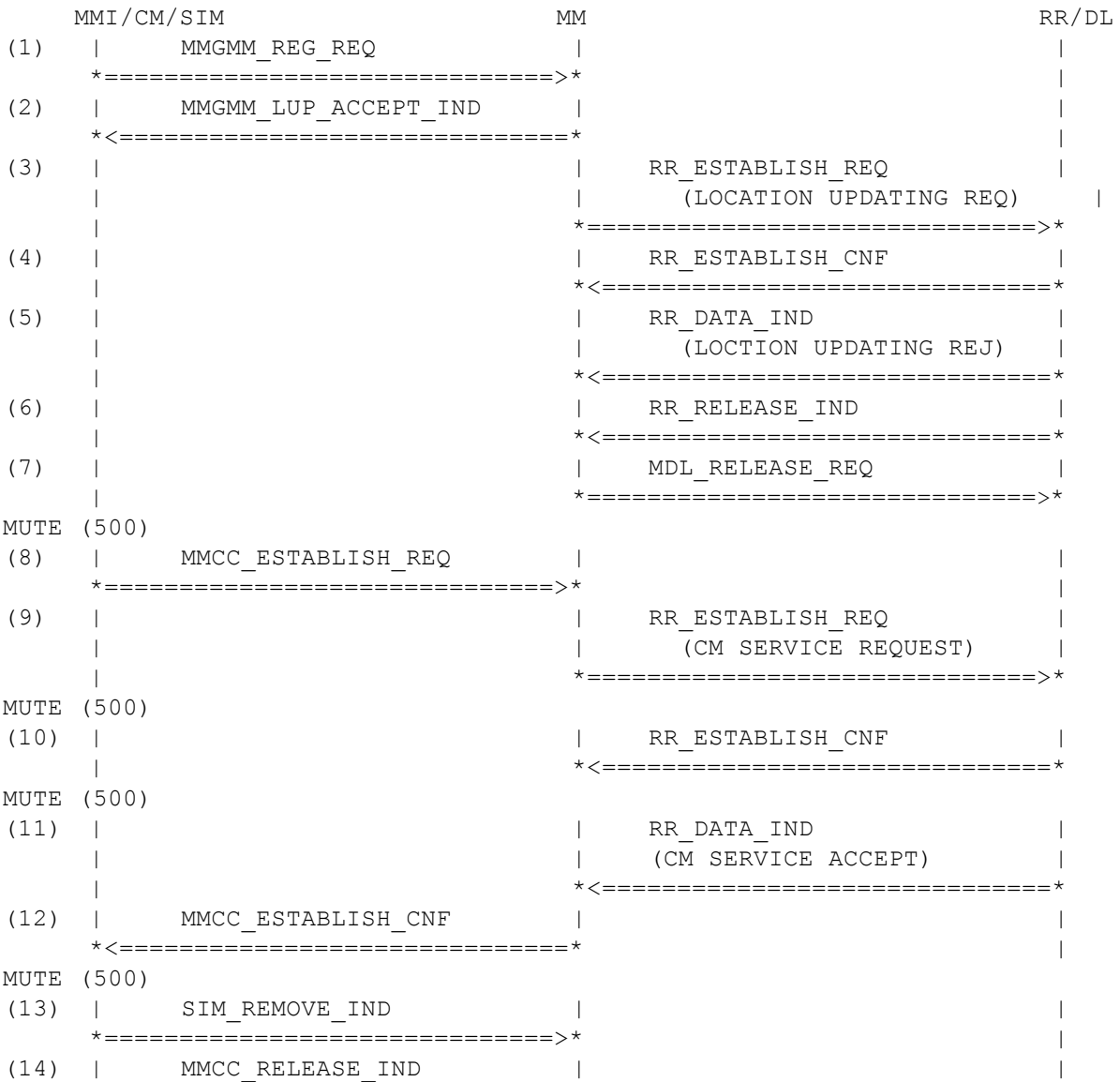
(8)	RR_ABORT_REQ		
		abcs	ABCS_SIM_REM
(9)	MMGMM_NREG_CNF		
		detach_cause	CS_SIM_REM

History: 11.01.03 HM Initial

3.34.6 MMG1413: Interworking of IMSI ATTACH, Call and SIM removal

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary.
In this testcase the GSM location updating attempt will not be successfull immediately. Then the User makes a mobile originated call. During this the SIM is removed. As the acceptance of the call is equivalent with a LUP ACCEPT we are after the call IMSI ATTACHED, even if the SIM has been removed we need an IMSI DETACH now.

Preamble: MMG1005A



Parametrization

Primitive		Parameter	Value
(1)	MMGMM_REG_REQ		
		service_mode	SERVICE_MODE_FULL
		reg_type	REG_REMOTE_CONTROLLED
		mobile_class	MMGMM_CLASS_BC
(2)	MMGMM_LUP_ACCEPT_IND		
		plmn	PLMN_123_33
		lac	LAC_2147
		cid	CELL_ID_1122
(3)	RR_ESTABLISH_REQ		
		estcs	ESTCS_SERV_REQ_BY_MM
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_LOC_UPD_REQ
		ti	TI_0
		loc_upd_type	LOC_UPD_TYPE_ATTACH
		ciph_key_num	CIPH_KEY_NUM_RES
		loc_area_ident	LOC_AREA_ID_123_33_2147
		mob_class_1	MOB_CLASS_1
		mob_id	MOB_IDENT_IMSI
		}	
(4)	RR_ESTABLISH_CNF		
		param	NOT_USED
(5)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_LOC_UPD_REJ
		ti	TI_0
		rej_cause	RC_NETWORK_FAILURE
		}	

(6)	RR_RELEASE_IND		
		cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(7)	MDL_RELEASE_REQ		
		ch_type	NOT_PRESENT_8BIT
		sapi	SAPI_0
(8)	MMCC_ESTABLISH_REQ		
		ti	TI_2
		estcs	ESTCS_MOB_ORIG_SPCH
(9)	RR_ESTABLISH_REQ		
		estcs	ESTCS_MOB_ORIG_SPCH_CAL_BY_CC
		sdu	
		{	
		component	MM
		direction	UPLINK
		pd	U_CM_SERV_REQ
		ti	TI_0
		cm_serv_type	ST_MOC
		ciph_key_num	CIPH_KEY_NUM_RES
		mob_class_2	MOB_CLASS_2
		mob_id	MOB_IDENT_IMSI
		}	
(10)	RR_ESTABLISH_CNF		
		param	NOT_USED
(11)	RR_DATA_IND		
		d1	NOT_USED
		d2	NOT_USED
		sdu	
		{	
		component	MM
		direction	DOWNLINK
		pd	D_CM_SERV_ACCEPT
		ti	TI_0
		}	
(12)	MMCC_ESTABLISH_CNF		
		ti	TI_2
(13)	SIM_REMOVE_IND		
		cause	SIM_CAUSE_CARD_REMOVED
(14)	MMCC_RELEASE_IND		
		ti	TI_2
		cause	MMCS_NO_REGISTRATION
(15)	RR_ABORT_REQ		
		abcs	ABCS_NORM
(16)	RR_RELEASE_IND		
		cause	RRCS_MM_ABORTED
		sapi	SAPI_0
		gprs_resumption	GPRS_RESUMPTION_ACK

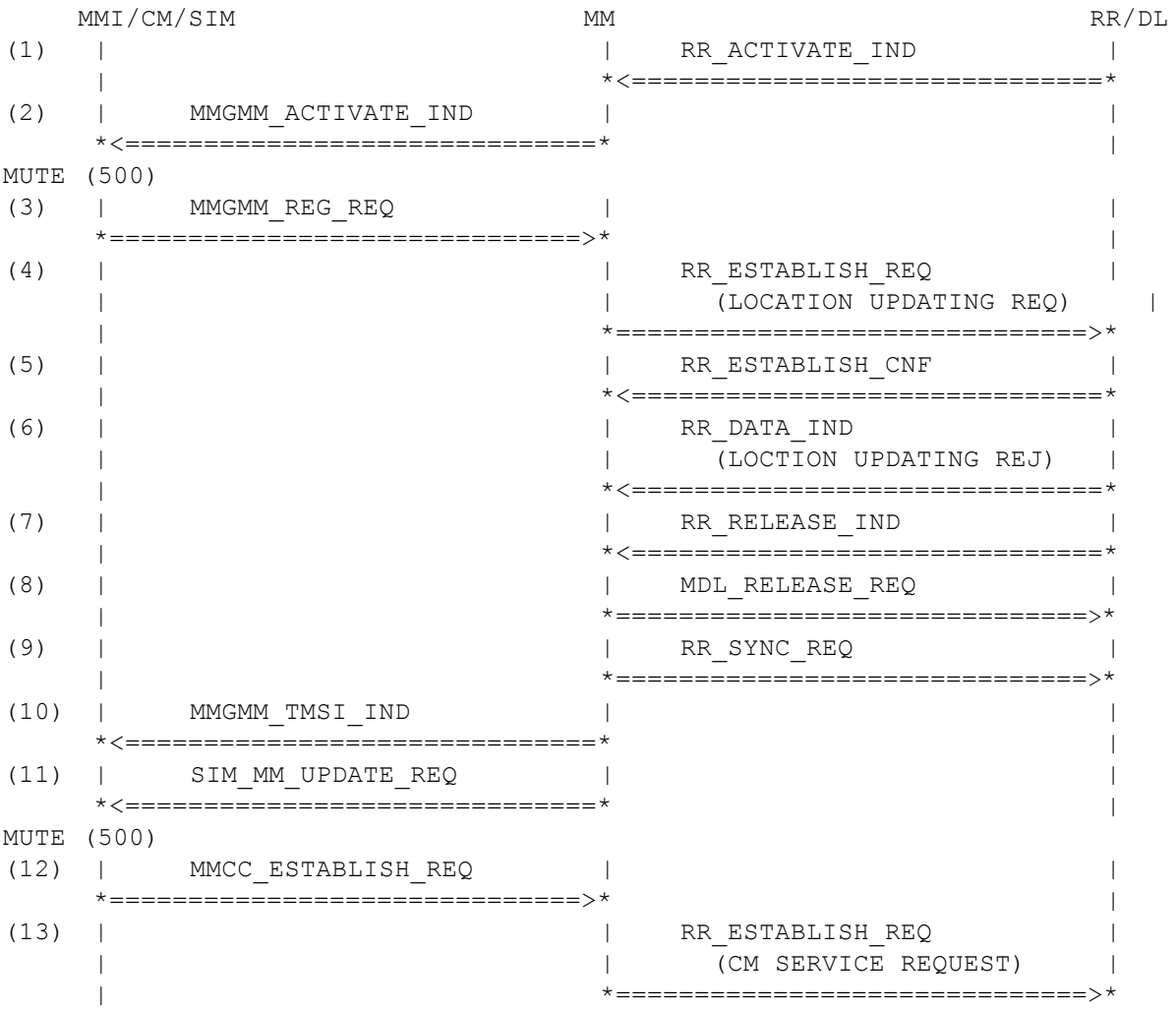
(17) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(18) MMGMM_REG_CNF		
	plmn	PLMN_123_33
	lac	LAC_2147
	cid	CELL_ID_1122
	resumption	MMGMM_RESUMPTION_OK

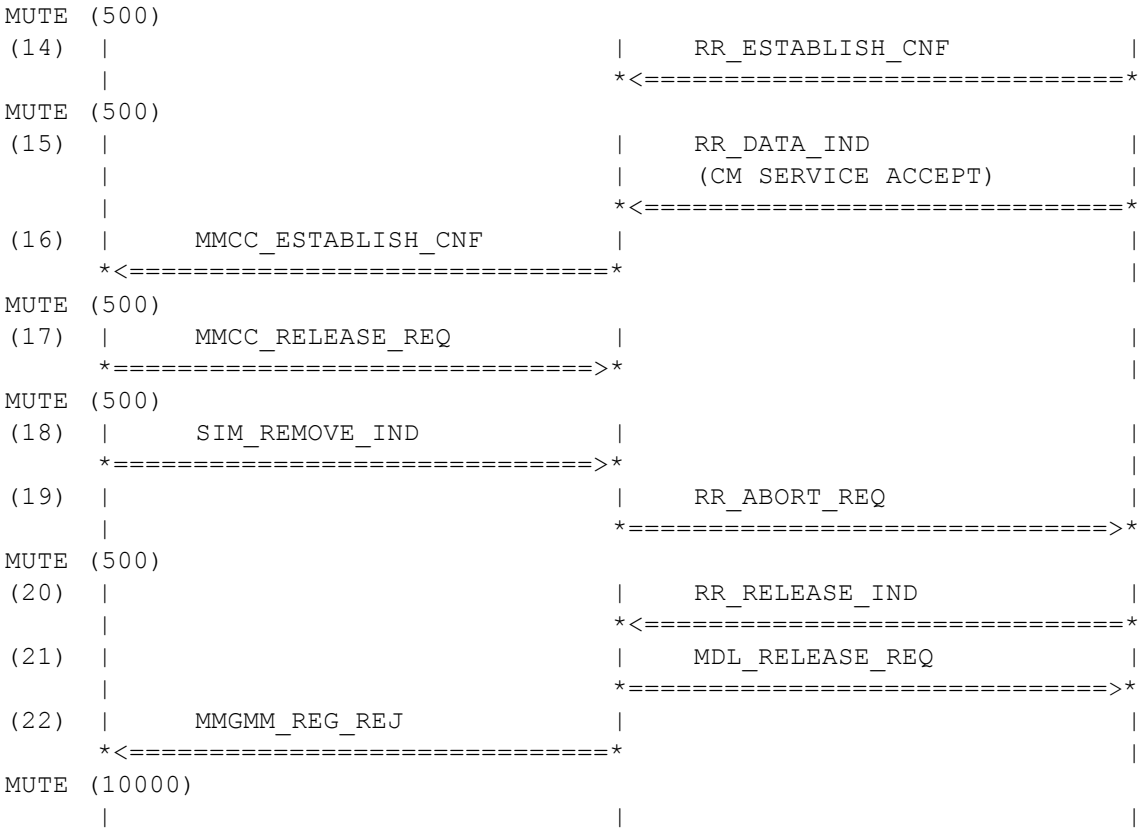
History:	14.01.03	HM	Initial
	27.01.03	HM	Revised for 1.4.0 protocol change

3.34.7 MMG1414: Interworking of Normal Update, Emergency Call and SIM removal

Description: If receiving an MMR_REG_REQ primive with parameter REG_REMOTE_CONTROLLED the appropriate location updating procedure will be started, if necessary.
In this testcase the GSM location updating attempt will not be successfull immediately. Then the User makes an emergency call. During this the SIM is removed. As the normal update has not been accepted the normal update ends after RR release with MMGMM_REG_REJ.

Preamble: MMG1011A





Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_IND		
	op	OP_SIM_AUTO_PLMNSRCH_FS
	mm_info	MM_INFO
	cid	CELL_ID_1122
	plmn	PLMN_123_33
	lac	LAC_0002
	power	RF_CLASS_2
	gprs_indication	GPRS_YES
(2) MMGMM_ACTIVATE_IND		
	plmn	PLMN_123_33
	lac	LAC_0002
	cid	CELL_ID_1122
	t3212_val	T3212_NO_PRD_UPDAT
	status	MMGMM_WAIT_FOR_UPDATE
	gprs_indicator	MMGMM_GPRS_SUPP_YES
(3) MMGMM_REG_REQ		
	service_mode	SERVICE_MODE_FULL
	reg_type	REG_REMOTE_CONTROLLED
	mobile_class	MMGMM_CLASS_BC
(4) RR_ESTABLISH_REQ		
	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	
	{	

	component	MM
	direction	UPLINK
	pd	U_LOC_UPD_REQ
	ti	TI_0
	loc_upd_type	LOC_UPD_TYPE_NORMAL
	ciph_key_num	CIPH_KEY_NUM_RES
	loc_area_ident	LOC_AREA_ID_123_33_2147
	mob_class_1	MOB_CLASS_1
	mob_id	MOB_IDENT_TMSI
	}	
(5) RR_ESTABLISH_CNF		
	param	NOT_USED
(6) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_LOC_UPD_REJ
	ti	TI_0
	rej_cause	RC_NETWORK_FAILURE
	}	
(7) RR_RELEASE_IND		
	cause	RRCS_NORM
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_NOT_ACK
(8) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(9) RR_SYNC_REQ		
	op	NOT_USED
	cksn	NOT_USED
	kcv	NOT_USED
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	accc	NOT_USED
	thplmn	NOT_USED
(10) MMGMM_TMSI_IND		
	tmsi	TMSI_INVALID_ULONG
(11) SIM_MM_UPDATE_REQ		
	loc_info	LOC_INFO_123_33_FFFE_FFFFFFFF
	bcch_inf	BCCH_INF_2
	forb_plmn	NOT_USED
	cksn	CKSN_NO_KEY
	kc	KC_DELETED_SIM
	cell_identity	CELL_ID_1122

(12) MMCC_ESTABLISH_REQ		
	ti	TI_2
	estcs	ESTCS_EMERGE
(13) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	
	{	
	component	MM
	direction	UPLINK
	pd	U_CM_SERV_REQ
	ti	TI_0
	cm_serv_type	ST_EMERGENCY
	ciph_key_num	CIPH_KEY_NUM_RES
	mob_class_2	MOB_CLASS_2
	mob_id	MOB_IDENT_IMSI
	}	
(14) RR_ESTABLISH_CNF		
	param	NOT_USED
(15) RR_DATA_IND		
	d1	NOT_USED
	d2	NOT_USED
	sdu	
	{	
	component	MM
	direction	DOWNLINK
	pd	D_CM_SERV_ACCEPT
	ti	TI_0
	}	
(16) MMCC_ESTABLISH_CNF		
	ti	TI_2
(17) MMCC_RELEASE_REQ		
	ti	TI_2
(18) SIM_REMOVE_IND		
	cause	SIM_CAUSE_CARD_REMOVED
(19) RR_ABORT_REQ		
	abcs	ABCS_NORM
(20) RR_RELEASE_IND		
	cause	RRCS_MM_ABORTED
	sapi	SAPI_0
	gprs_resumption	GPRS_RESUMPTION_ACK
(21) MDL_RELEASE_REQ		
	ch_type	NOT_PRESENT_8BIT
	sapi	SAPI_0
(22) MMGMM_REG_REJ		
	service	NREG_LIMITED_SERVICE
	search_running	SEARCH_NOT_RUNNING
	new_forb_plmn	PLMN_NO_ID
	cause	MMCS_SIM_REMOVED
	resumption	MMGMM_RESUMPTION_OK

History:	14.01.03	HM	Initial
	27.01.03	HM	Revised for 1.4.0 protocol change