TEXAS INSTRUMENTS

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GSM PROTOCOL STACK

MULTILAYER TEST SPECIFICATION

RR

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Important Notice

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Notes:

1. Initial version
2. Testcases updated
3. New Template
4. Introduce test case MRR410
5. Add IE CLIR Suppression
6. Classmarks adapted to new multiband code
7. Fit Classmarks to new rfcap file
8. Add Classmark interrogation tests for further frequency bands
9. Added some redirections/duplicates

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[ISO 9000:2000]   International Organization for Standardization. Quality management systems - Fundamentals and vocabulary. December 2000

1 Overview

This document describes the mulilayer tests ... as set out in GSM 11.10-1, §26.2.

2 Parameters

```
#include <tcs1.h>
#include <tcs1_gsm.h>
/*----------------------------------------------------------------*\
| Default settings for cell A and B (GSM 11.10, 26.6.14)
\*----------------------------------------------------------------*/
#define   DOWNLINK_INPUT_LEVEL_DBM   -73    /* 63 bBmuV/m=(63-136.5) dBm=-73.5 dBm (05.05, 5) */
#define   DOWNLINK_INPUT_LEVEL        38    /* -73+111 (GSM 05.08, 8.1.4) */
#define   ARFCN_BCCH_GSM              20
#define   ARFCN_TCH_GSM              30
#define   ARFCN_BCCH_DCS             540
#define   ARFCN_TCH_DCS             700
#define   ARFCN_BCCH_EGSM            999
#define   ARFCN_TCH_EGSM            1000
#define   ARFCN_BCCH_850             200
#define   ARFCN_TCH_850             220
#define   DOWNLINK_INPUT_LEVEL_DBM_CELL_B   -83    /* 53 bBmuV/m=(63-136.5) dBm=-83.5 dBm */
#define   DOWNLINK_INPUT_LEVEL_CELL_B        28    /* -83+111 (GSM 05.08, 8.1.4) */
#define   ARFCN_BCCH_GSM_CELL_B             10
#define   RXLEV_60                   -60
#define   RXLEV_85                   -85
#define   RXLEV_80                   -80
#define   RXLEV_75                   -75
#define   RXLEV_55                   -55
#define   RXLEV_50                   -50
#define   RXLEV_45                   -45
#define   RXLEV_40                   -40

/* contains value of std=6 */
#define   ARFCN_BCCH_GSM_MB_CELL_1         ((6<<11)|(ARFCN_BCCH_GSM))
#define   ARFCN_BCCH_GSM_MB_CELL_2         ((6<<11)|(ARFCN_BCCH_GSM_CELL_B))


/*----------------------------------------------------------------*\
| other system settings
\*----------------------------------------------------------------*/
#define NCC                 0x1  /* note : ncc_permitted (GSM 04.08, 10.5.2.27) */
#define BCC                 0x5  /* note : GSM 11.10, 26.6.14, IMMEDIATE ASSIGNMENT */
#define BSIC                ((NCC<<3)|(BCC))
#define RFN                 0
#define CKSN                3    /* ciphering key sequence number */
#define TIMESLOT_TCH        3

#define BSIC_1_1       ((1<<3)|(1))
#define BSIC_1_3       ((1<<3)|(3))
#define BSIC_1_5       ((1<<3)|(5))
#define BSIC_1_7       ((1<<3)|(7))
#define ARFCN_000      0
#define ARFCN_002      2
#define ARFCN_026      26
#define ARFCN_038      38
#define ARFCN_990      990
#define ARFCN_1003     1003
#define ARFCN_1005     1005
#define ARFCN_1020     1020


/*----------------------------------------------------------------*\
| System Information IEs (GSM 11.10, 26.6.14 and 26.1.1)
\*----------------------------------------------------------------*/
/*
** cell_channel_description
** definition : GSM 04.08, 10.5.2.1b
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_1 (cell A)
*/
IE_BEGIN(cell_channel_description)
   BF( 2,         0,ACT_CHECK,format_id          ,"bit map 0")
   BF( 2,         0,ACT_CHECK,spare              ,"")
```

```
        BF(28, 0x0000000,ACT_CHECK,chan_124_thru_097,"")
        BF(32,0x00000020,ACT_CHECK,chan_096_thru_065,"                70")
        BF(32,0x00020000,ACT_CHECK,chan_064_thru_033,"        50")
        BF(32,0x20080000,ACT_CHECK,chan_032_thru_001," 30    20")
IE_END(cell_channel_description)
IE_BEGIN(cell_channel_description_turkey)
        BF( 2,          0,ACT_CHECK,format_id       ,"bit map 0")
        BF( 2,          0,ACT_CHECK,spare           ,"")
        BF(28, 0x0004002,ACT_CHECK,chan_124_thru_097,"")
        BF(32,0x00004000,ACT_CHECK,chan_096_thru_065,"")
        BF(32,0x00000000,ACT_CHECK,chan_064_thru_033,"")
        BF(32,0x00000000,ACT_CHECK,chan_032_thru_001,"")
IE_END(cell_channel_description_turkey)
IE_BEGIN(cell_channel_description_300)
        BF( 2,          0,ACT_CHECK,format_id       ,"bit map 0")
        BF( 2,          0,ACT_CHECK,spare           ,"")
        BF(28,0x08000000,ACT_CHECK,chan_124_thru_097,"")
        BF(32,0x00080000,ACT_CHECK,chan_096_thru_065,"                70")
        BF(32,0x00000004,ACT_CHECK,chan_064_thru_033,"        50")
        BF(32,0x00020000,ACT_CHECK,chan_032_thru_001," 30    20")
IE_END(cell_channel_description_300)
IE_BEGIN(cell_channel_description_SDCCH8_HOP_S1)
        BF( 2,          2,ACT_CHECK,format_id       ,"range 1024")
        BF( 1,          0,ACT_CHECK,ext_ind         ,"")
        BF( 1,          0,ACT_CHECK,spare           ,"")
        BF( 1,          0,ACT_CHECK,format_id2      ,"")
        BF( 1,          1,ACT_CHECK,f0              ,"")
        BF( 2,          0,ACT_CHECK,w1              ,"")
        BF( 8,         30,ACT_CHECK,w2              ,"")
        BF( 8,        234,ACT_CHECK,w3              ,"")
        BF( 8,        137,ACT_CHECK,w4              ,"")
        BF( 8,         62,ACT_CHECK,w5              ,"")
        BF( 8,        249,ACT_CHECK,w6              ,"")
        BF( 8,        129,ACT_CHECK,w7              ,"")
        BF( 8,         67,ACT_CHECK,w8              ,"")
        BF( 8,        128,ACT_CHECK,w9              ,"")
        BF( 8,          0,ACT_CHECK,w10             ,"")
        BF( 8,          0,ACT_CHECK,w11             ,"")
        BF( 8,          0,ACT_CHECK,w12             ,"")
        BF( 8,          0,ACT_CHECK,w13             ,"")
        BF( 8,          0,ACT_CHECK,w14             ,"")
        BF( 8,          0,ACT_CHECK,w15             ,"")
        BF( 8,          0,ACT_CHECK,w16             ,"")
IE_END(cell_channel_description_SDCCH8_HOP_S1)
/*
** cell_channel_description_26_6_13
** definition : GSM 04.08, 10.5.2.1b
** values     : GSM 11.10, 26.6.13
** usage      : system_information_type_1_cell_a_gsm900_26_6_13
*/
IE_BEGIN(cell_channel_description_cell_a_gsm900_26_6_13)
        BF( 2,          0,ACT_CHECK,format_id       ,"bit map 0")
        BF( 2,          0,ACT_CHECK,spare           ,"")
        BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097,"            114 108")
        BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"    76 75 74 73 66")
        BF(32,0x04083202,ACT_CHECK,chan_064_thru_033," 59 52 46 45 42 34")
        BF(32,0x02090200,ACT_CHECK,chan_032_thru_001," 26   20   17  10")
IE_END(cell_channel_description_cell_a_gsm900_26_6_13)

/*
** cell_channel_description_cell_b
** definition : GSM 04.08, 10.5.2.1b
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_1 (cell B)
*/
IE_BEGIN(cell_channel_description_cell_b)
        BF( 2,          0,ACT_CHECK,format_id       ,"bit map 0")
        BF( 2,          0,ACT_CHECK,spare           ,"")
        BF(28, 0x0000000,ACT_CHECK,chan_124_thru_097,"")
        BF(32,0x00000000,ACT_CHECK,chan_096_thru_065,"")
        BF(32,0x00000000,ACT_CHECK,chan_064_thru_033,"")
        BF(32,0x00000200,ACT_CHECK,chan_032_thru_001,"channel number 10")
IE_END(cell_channel_description_cell_b)
/*
** cell_identity
```

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```
** definition : GSM 04.08, 10.5.1.1
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3 (cell A)
** usage      : system_information_type_6 (cell A)
*/
IE_BEGIN(cell_identity)
   BF(16,0x0001,ACT_CHECK,ci,"0001H")
IE_END(cell_identity)
IE_BEGIN(cell_identity_1)
   BF(16,0x0001,ACT_CHECK,ci,"0001H")
IE_END(cell_identity_1)
IE_BEGIN(cell_identity_2)
   BF(16,0x0002,ACT_CHECK,ci,"0002H")
IE_END(cell_identity_2)
IE_BEGIN(cell_identity_3)
   BF(16,0x0003,ACT_CHECK,ci,"0003H")
IE_END(cell_identity_3)
IE_BEGIN(cell_identity_4)
   BF(16,0x0004,ACT_CHECK,ci,"0004H")
IE_END(cell_identity_4)
IE_BEGIN(cell_identity_5)
   BF(16,0x0005,ACT_CHECK,ci,"0005H")
IE_END(cell_identity_5)
IE_BEGIN(cell_identity_6)
   BF(16,0x0006,ACT_CHECK,ci,"0006H")
IE_END(cell_identity_6)
IE_BEGIN(cell_identity_7)
   BF(16,0x0007,ACT_CHECK,ci,"0007H")
IE_END(cell_identity_7)
IE_BEGIN(cell_identity_8)
   BF(16,0x0008,ACT_CHECK,ci,"0008H")
IE_END(cell_identity_8)
IE_BEGIN( identity_type_imsi)                            /* Ref.: [1], §10.5.3.4 */
  BF( 1,   0,           ACT_CHECK, ANONYMOUS,            "spare")
  BF( 3,   TYPE_IMSI,   ACT_CHECK, type,                 "IMSI")
IE_END( identity_type_imsi)

/*
** cell_identity_cell_b
** definition : GSM 04.08, 10.5.1.1
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3 (cell B)
** usage      : system_information_type_6 (cell B)
*/
IE_BEGIN(cell_identity_cell_b)
   BF(16,0x0002,ACT_CHECK,ANONYMOUS,"0002H")
IE_END(cell_identity_cell_b)
/*
** cell_options_bcch
** definition : GSM 04.08, 10.5.2.3
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3
*/
IE_BEGIN(cell_options_bcch)
   BF(1,0,ACT_CHECK,ANONYMOUS          ,"spare")
   BF(1,0,ACT_CHECK,pwrc               ,"power control indicator is not set")
   BF(2,2,ACT_CHECK,dtx                ,"MS shall not use DTX")
   BF(4,1,ACT_CHECK,radio_link_timeout ,"8 SACCH blocks")
IE_END(cell_options_bcch)
/*
** cell_options_sacch
** definition : GSM 04.08, 10.5.2.3a
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3
*/
IE_BEGIN(cell_options_sacch)
   BF(1,0,ACT_CHECK,dtx0               ,"MS shall not use DTX")
   BF(1,0,ACT_CHECK,pwrc               ,"power control indicator is not set")
   BF(2,2,ACT_CHECK,dtx                ,"MS shall not use DTX")
   BF(4,1,ACT_CHECK,radio_link_timeout ,"8 SACCH blocks")
IE_END(cell_options_sacch)
/*
** cell_selection_parameter
** definition : GSM 04.08, 10.5.2.4
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3
```

```
** usage      : system_information_type_4
*/
IE_BEGIN(cell_selection_parameter)
   BF(3,M3(1,1,0),ACT_CHECK,cell_reselect_hysteresis,"12 dB")
   BF(5,        31,ACT_CHECK,ms_txpwr_max_cch        ,"minimum level (5 dBm)")
   BF(1,         0,ACT_CHECK,acs                     ,"no add cell params (SI4), 0 in SI3")
   BF(1,         0,ACT_CHECK,neci                    ,"New establishment cause not supported")
   BF(6,         0,ACT_CHECK,rxlev_access_min        ,"minimum level (less than -111 dBm)")
IE_END(cell_selection_parameter)


IE_BEGIN(cipher_mode_setting_a5_1)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,         1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(cipher_mode_setting_a5_1)


IE_BEGIN(cipher_mode_setting_a5_2)
   BF(3,M3(0,0,1),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,         1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(cipher_mode_setting_a5_2)


IE_BEGIN(cipher_mode_setting_none)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,         0,ACT_CHECK,     start_ciphering,"not start ciphering")
IE_END(cipher_mode_setting_none)


/*
** control_channel_description
** definition : GSM 04.08, 10.5.2.11
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3
*/
IE_BEGIN(control_channel_description)
   BF(1,         0,ACT_CHECK,ANONYMOUS     ,"spare")
   BF(1,         0,ACT_CHECK,att           ,"no attach/detach")
   BF(3,         0,ACT_CHECK,bs_ag_blks_res,"0 blocks reserved for access grant")
   BF(3,M3(0,0,1),ACT_CHECK,ccch_conf      ,"1 basic physical channel,combined with SDCCHs")
   BF(5,         0,ACT_CHECK,ANONYMOUS     ,"spare")
   BF(3,         3,ACT_CHECK,bs_pa_mfrms    ,"5 multiframes periods for transmission"
                                 "  of paging messages")
   BF(8,         0,ACT_CHECK,t3212         ,"Infinite")
IE_END(control_channel_description)
/*
** l2_pseudo_length_9
** definition : GSM 04.08, 10.5.2.16
** values     : GSM 04.08, 10.5.2.16
** usage      : paging_request_type_1
*/
IE_BEGIN(l2_pseudo_length_9)
   BF(6,9,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1,0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1,1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_9)
/*
** l2_pseudo_length_11
** definition : GSM 04.08, 10.5.2.16
** values     : GSM 04.08, 10.5.2.16
** usage      : immediate_assignment
*/
IE_BEGIN(l2_pseudo_length_11)
   BF(6,11,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_11)
/*
** l2_pseudo_length_12
** definition : GSM 04.08, 10.5.2.19
** values     : GSM 04.08, 10.5.2.19
** usage      : system_information_type_4
*/
IE_BEGIN(l2_pseudo_length_12)
   BF(6,12,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_12)
```

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```
/*
** l2_pseudo_length_14
** definition : GSM 04.08, 10.5.2.19
** values     : GSM 04.08, 10.5.2.19
** usage      : 26.6.5.2, M=7
*/
IE_BEGIN(l2_pseudo_length_14)
   BF(6,14,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_14)
/*
** l2_pseudo_length_18
** definition : GSM 04.08, 10.5.2.19
** values     : GSM 04.08, 10.5.2.19
** usage      : system_information_type_3
** usage      : immediate_assignment_extended
*/
IE_BEGIN(l2_pseudo_length_18)
   BF(6,18,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_18)
/*
** l2_pseudo_length_19
** definition : GSM 04.08, 10.5.2.19
** values     : GSM 04.08, 10.5.2.19
** usage      : immediate_assignment_reject
** usage      : paging_type_3
*/
IE_BEGIN(l2_pseudo_length_19)
   BF(6,19,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_19)
/*
** l2_pseudo_length_21
** definition : GSM 04.08, 10.5.2.19
** values     : GSM 04.08, 10.5.2.19
+** usage      : system_information_type_1
** usage      : immediate_assignment
*/
IE_BEGIN(l2_pseudo_length_21)
   BF(6,21,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_21)
/*
** l2_pseudo_length_22
** definition : GSM 04.08, 10.5.2.19
** values     : GSM 04.08, 10.5.2.19
** usage      : system_information_type_2
*/
IE_BEGIN(l2_pseudo_length_22)
   BF(6,22,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
   BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_22)
/*
** location_area_identification
** definition : GSM 04.08, 10.5.1.3
** values     : GSM 04.08, 26.6.14
** usage      : system_information_type_4
** usage      : system_information_type_6
** usage      : location_updating_request
*/
IE_BEGIN(location_area_identification)
   BF( 4,     6,ACT_CHECK,mcc_dig_2,"digit 2 of mobile country code")
   BF( 4,     2,ACT_CHECK,mcc_dig_1,"digit 1 of mobile country code")
   BF( 4,   0xF,ACT_CHECK,ANONYMOUS,"end of MCC")
   BF( 4,     2,ACT_CHECK,mcc_dig_3,"digit 3 of mobile country code")
   BF( 4,     1,ACT_CHECK,mnc_dig_2,"digit 2 of mobile network code")
   BF( 4,     0,ACT_CHECK,mnc_dig_1,"digit 1 of mobile network code")
   BF(16,0x0001,ACT_CHECK,lac      ,"Location area code")
IE_END(location_area_identification)
```

```
/*
** ncc_permitted
** definition : GSM 04.08, 10.5.2.27
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_2
*/
IE_BEGIN(ncc_permitted)
   BF(8,M8(0,0,0,0,0,0,1,0),ACT_CHECK,ncc_permit,"0000 0010 (NCC==1 only)")
IE_END(ncc_permitted)
/*
** neigbour_cell_description
** definition : GSM 04.08, 10.5.2.22
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_2
** usage      : system_information_type_5
*/
IE_BEGIN(neighbour_cell_description)
   BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
   BF( 1,          0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
   BF( 1,          0,ACT_CHECK,ba_ind   ,"BCCH allocation sequence")
   BF(28, 0x0802008,ACT_CHECK,ba_124_097,"channel numbers:  120  110  100")
   BF(32,0x02008000,ACT_CHECK,ba_096_065,"channel numbers:   90     80")
   BF(32,0x00000080,ACT_CHECK,ba_064_033,"channel numbers:            40")
   BF(32,0x00080200,ACT_CHECK,ba_032_001,"channel numbers:         20  10")
IE_END(neighbour_cell_description)
IE_BEGIN(neighbour_cell_description_E)
   BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
   BF( 1,          0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
   BF( 1,          0,ACT_CHECK,ba_ind   ,"BCCH allocation sequence")
   BF(28, 0x0802008,ACT_CHECK,ba_124_097,"channel numbers:  120  110  100")
   BF(32,0x02008000,ACT_CHECK,ba_096_065,"channel numbers:   90     80")
   BF(32,0x00000000,ACT_CHECK,ba_064_033,"channel numbers:")
   BF(32,0x00080200,ACT_CHECK,ba_032_001,"channel numbers:         20  10")
IE_END(neighbour_cell_description_E)
IE_BEGIN(neighbour_cell_description_E_N1)
   BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
   BF( 1,          0,ACT_CHECK,ext_ind  ,"extention indication")
   BF( 1,          0,ACT_CHECK,ba_ind   ,"band allocation indication")
   BF( 1,          0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
   BF( 1,          0,ACT_CHECK,f0       ,"frequency 0 indicator")
   BF(10,        990,ACT_CHECK,w1       ,"channel 990 belongs to the BA")
   BF( 9,          0,ACT_CHECK,w2       ,SILENT)
   BF( 9,          0,ACT_CHECK,w3       ,SILENT)
   BF( 8,          0,ACT_CHECK,w4       ,SILENT)
   BF( 8,          0,ACT_CHECK,w5       ,SILENT)
   BF( 8,          0,ACT_CHECK,w6       ,SILENT)
   BF( 8,          0,ACT_CHECK,w7       ,SILENT)
   BF( 7,          0,ACT_CHECK,w8       ,SILENT)
   BF( 7,          0,ACT_CHECK,w9       ,SILENT)
   BF( 7,          0,ACT_CHECK,w10      ,SILENT)
   BF( 7,          0,ACT_CHECK,w11      ,SILENT)
   BF( 7,          0,ACT_CHECK,w12      ,SILENT)
   BF( 7,          0,ACT_CHECK,w13      ,SILENT)
   BF( 7,          0,ACT_CHECK,w14      ,SILENT)
   BF( 7,          0,ACT_CHECK,w15      ,SILENT)
   BF( 6,          0,ACT_CHECK,w16      ,SILENT)
IE_END(neighbour_cell_description_E_N1)
IE_BEGIN(neighbour_cell_description_E_N2)
   BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
   BF( 1,          0,ACT_CHECK,ext_ind  ,"extention indication")
   BF( 1,          0,ACT_CHECK,ba_ind   ,"band allocation indication")
   BF( 1,          0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
   BF( 1,          0,ACT_CHECK,f0       ,"frequency 0 indicator")
   BF(10,       1005,ACT_CHECK,w1       ,"channel 1005 belongs to the BA")
   BF( 9,          0,ACT_CHECK,w2       ,SILENT)
   BF( 9,          0,ACT_CHECK,w3       ,SILENT)
   BF( 8,          0,ACT_CHECK,w4       ,SILENT)
   BF( 8,          0,ACT_CHECK,w5       ,SILENT)
   BF( 8,          0,ACT_CHECK,w6       ,SILENT)
   BF( 8,          0,ACT_CHECK,w7       ,SILENT)
   BF( 7,          0,ACT_CHECK,w8       ,SILENT)
   BF( 7,          0,ACT_CHECK,w9       ,SILENT)
   BF( 7,          0,ACT_CHECK,w10      ,SILENT)
   BF( 7,          0,ACT_CHECK,w11      ,SILENT)
   BF( 7,          0,ACT_CHECK,w12      ,SILENT)
```

TEXAS INSTRUMENTS

```
    BF( 7,          0,ACT_CHECK,w13        ,SILENT)
    BF( 7,          0,ACT_CHECK,w14        ,SILENT)
    BF( 7,          0,ACT_CHECK,w15        ,SILENT)
    BF( 6,          0,ACT_CHECK,w16        ,SILENT)
IE_END(neighbour_cell_description_E_N2)
IE_BEGIN(neighbour_cell_description_E_N3)
    BF( 2,    M2(1,0),ACT_CHECK,id_8_7     ,"format 1024 ID, part I")
    BF( 1,          0,ACT_CHECK,ext_ind    ,"extention indication")
    BF( 1,          0,ACT_CHECK,ba_ind     ,"band allocation indication")
    BF( 1,          0,ACT_CHECK,id_4       ,"format 1024 ID, part II")
    BF( 1,          1,ACT_CHECK,f0         ,"frequency 0 indicator")
    BF(10,          0,ACT_CHECK,w1         ,"no further channels")
    BF( 9,          0,ACT_CHECK,w2         ,SILENT)
    BF( 9,          0,ACT_CHECK,w3         ,SILENT)
    BF( 8,          0,ACT_CHECK,w4         ,SILENT)
    BF( 8,          0,ACT_CHECK,w5         ,SILENT)
    BF( 8,          0,ACT_CHECK,w6         ,SILENT)
    BF( 8,          0,ACT_CHECK,w7         ,SILENT)
    BF( 7,          0,ACT_CHECK,w8         ,SILENT)
    BF( 7,          0,ACT_CHECK,w9         ,SILENT)
    BF( 7,          0,ACT_CHECK,w10        ,SILENT)
    BF( 7,          0,ACT_CHECK,w11        ,SILENT)
    BF( 7,          0,ACT_CHECK,w12        ,SILENT)
    BF( 7,          0,ACT_CHECK,w13        ,SILENT)
    BF( 7,          0,ACT_CHECK,w14        ,SILENT)
    BF( 7,          0,ACT_CHECK,w15        ,SILENT)
    BF( 6,          0,ACT_CHECK,w16        ,SILENT)
IE_END(neighbour_cell_description_E_N3)
IE_BEGIN(neighbour_cell_description_E_N4)
    BF( 2,    M2(1,0),ACT_CHECK,id_8_7     ,"format 1024 ID, part I")
    BF( 1,          0,ACT_CHECK,ext_ind    ,"extention indication")
    BF( 1,          0,ACT_CHECK,ba_ind     ,"band allocation indication")
    BF( 1,          0,ACT_CHECK,id_4       ,"format 1024 ID, part II")
    BF( 1,          0,ACT_CHECK,f0         ,"frequency 0 indicator")
    BF(10,         26,ACT_CHECK,w1         ,"channel 26 belongs to the BA")
    BF( 9,          0,ACT_CHECK,w2         ,SILENT)
    BF( 9,          0,ACT_CHECK,w3         ,SILENT)
    BF( 8,          0,ACT_CHECK,w4         ,SILENT)
    BF( 8,          0,ACT_CHECK,w5         ,SILENT)
    BF( 8,          0,ACT_CHECK,w6         ,SILENT)
    BF( 8,          0,ACT_CHECK,w7         ,SILENT)
    BF( 7,          0,ACT_CHECK,w8         ,SILENT)
    BF( 7,          0,ACT_CHECK,w9         ,SILENT)
    BF( 7,          0,ACT_CHECK,w10        ,SILENT)
    BF( 7,          0,ACT_CHECK,w11        ,SILENT)
    BF( 7,          0,ACT_CHECK,w12        ,SILENT)
    BF( 7,          0,ACT_CHECK,w13        ,SILENT)
    BF( 7,          0,ACT_CHECK,w14        ,SILENT)
    BF( 7,          0,ACT_CHECK,w15        ,SILENT)
    BF( 6,          0,ACT_CHECK,w16        ,SILENT)
IE_END(neighbour_cell_description_E_N4)
IE_BEGIN(neighbour_cell_description_E_N5)
    BF( 2,    M2(1,0),ACT_CHECK,id_8_7     ,"format 1024 ID, part I")
    BF( 1,          0,ACT_CHECK,ext_ind    ,"extention indication")
    BF( 1,          0,ACT_CHECK,ba_ind     ,"band allocation indication")
    BF( 1,          0,ACT_CHECK,id_4       ,"format 1024 ID, part II")
    BF( 1,          0,ACT_CHECK,f0         ,"frequency 0 indicator")
    BF(10,       1020,ACT_CHECK,w1         ,"channel 1020 belongs to the BA")
    BF( 9,          0,ACT_CHECK,w2         ,SILENT)
    BF( 9,          0,ACT_CHECK,w3         ,SILENT)
    BF( 8,          0,ACT_CHECK,w4         ,SILENT)
    BF( 8,          0,ACT_CHECK,w5         ,SILENT)
    BF( 8,          0,ACT_CHECK,w6         ,SILENT)
    BF( 8,          0,ACT_CHECK,w7         ,SILENT)
    BF( 7,          0,ACT_CHECK,w8         ,SILENT)
    BF( 7,          0,ACT_CHECK,w9         ,SILENT)
    BF( 7,          0,ACT_CHECK,w10        ,SILENT)
    BF( 7,          0,ACT_CHECK,w11        ,SILENT)
    BF( 7,          0,ACT_CHECK,w12        ,SILENT)
    BF( 7,          0,ACT_CHECK,w13        ,SILENT)
    BF( 7,          0,ACT_CHECK,w14        ,SILENT)
    BF( 7,          0,ACT_CHECK,w15        ,SILENT)
    BF( 6,          0,ACT_CHECK,w16        ,SILENT)
IE_END(neighbour_cell_description_E_N5)
```

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```
IE_BEGIN(neighbour_cell_description_E_N6)
   BF( 2,    M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
   BF( 1,         0,ACT_CHECK,ext_ind   ,"extention indication")
   BF( 1,         0,ACT_CHECK,ba_ind    ,"band allocation indication")
   BF( 1,         0,ACT_CHECK,id_4      ,"format 1024 ID, part II")
   BF( 1,         0,ACT_CHECK,f0        ,"frequency 0 indicator")
   BF(10,        38,ACT_CHECK,w1        ,"channel 38 belongs to the BA")
   BF( 9,         0,ACT_CHECK,w2        ,SILENT)
   BF( 9,         0,ACT_CHECK,w3        ,SILENT)
   BF( 8,         0,ACT_CHECK,w4        ,SILENT)
   BF( 8,         0,ACT_CHECK,w5        ,SILENT)
   BF( 8,         0,ACT_CHECK,w6        ,SILENT)
   BF( 8,         0,ACT_CHECK,w7        ,SILENT)
   BF( 7,         0,ACT_CHECK,w8        ,SILENT)
   BF( 7,         0,ACT_CHECK,w9        ,SILENT)
   BF( 7,         0,ACT_CHECK,w10       ,SILENT)
   BF( 7,         0,ACT_CHECK,w11       ,SILENT)
   BF( 7,         0,ACT_CHECK,w12       ,SILENT)
   BF( 7,         0,ACT_CHECK,w13       ,SILENT)
   BF( 7,         0,ACT_CHECK,w14       ,SILENT)
   BF( 7,         0,ACT_CHECK,w15       ,SILENT)
   BF( 6,         0,ACT_CHECK,w16       ,SILENT)
IE_END(neighbour_cell_description_E_N6)
IE_BEGIN(neighbour_cell_description_E_N7)
   BF( 2,    M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
   BF( 1,         0,ACT_CHECK,ext_ind   ,"extention indication")
   BF( 1,         0,ACT_CHECK,ba_ind    ,"band allocation indication")
   BF( 1,         0,ACT_CHECK,id_4      ,"format 1024 ID, part II")
   BF( 1,         0,ACT_CHECK,f0        ,"frequency 0 indicator")
   BF(10,      1003,ACT_CHECK,w1        ,"channel 1003 belongs to the BA")
   BF( 9,         0,ACT_CHECK,w2        ,SILENT)
   BF( 9,         0,ACT_CHECK,w3        ,SILENT)
   BF( 8,         0,ACT_CHECK,w4        ,SILENT)
   BF( 8,         0,ACT_CHECK,w5        ,SILENT)
   BF( 8,         0,ACT_CHECK,w6        ,SILENT)
   BF( 8,         0,ACT_CHECK,w7        ,SILENT)
   BF( 7,         0,ACT_CHECK,w8        ,SILENT)
   BF( 7,         0,ACT_CHECK,w9        ,SILENT)
   BF( 7,         0,ACT_CHECK,w10       ,SILENT)
   BF( 7,         0,ACT_CHECK,w11       ,SILENT)
   BF( 7,         0,ACT_CHECK,w12       ,SILENT)
   BF( 7,         0,ACT_CHECK,w13       ,SILENT)
   BF( 7,         0,ACT_CHECK,w14       ,SILENT)
   BF( 7,         0,ACT_CHECK,w15       ,SILENT)
   BF( 6,         0,ACT_CHECK,w16       ,SILENT)
IE_END(neighbour_cell_description_E_N7)
/*
** rach_control_parameter
** definition : GSM 04.08, 10.5.2.29
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_1
** usage      : system_information_type_2
** usage      : system_information_type_3
** usage      : system_information_type_4
*/
IE_BEGIN(rach_control_parameter)
   BF( 2,         0,ACT_CHECK,max_retrans               ,"max 1 retrans")
   BF( 4,M4(0,0,1,0),ACT_CHECK,tx_integer               ,"5 slots used")
   BF( 1,         0,ACT_CHECK,cell_bar_access           ,"cell is not barred")
   BF( 1,         1,ACT_CHECK,call_re_establishment     ,"not Allowed")
   BF( 5,         0,ACT_CHECK,access_control_class_15_11 ,"access is not barred")
   BF( 1,         0,ACT_CHECK,emergency_call            ,"allowed")
   BF(10,         0,ACT_CHECK,access_control_class_09_00 ,"access is not barred")
IE_END(rach_control_parameter)
/*
** si_1_rest_octets
** definition : GSM 04.08, 10.5.2.32
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_1
*/
IE_BEGIN(si_1_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,spare,"not used (all bits are set to spare)")
IE_END(si_1_rest_octets)
/*
** si_3_rest_octets
```

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```
** definition : GSM 04.08, 10.5.2.34
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_3
*/
IE_BEGIN(si_3_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(si_3_rest_octets)
/*
** si_4_rest_octets
** definition : GSM 04.08, 10.5.2.35
** values     : GSM 11.10, 26.6.14
** usage      : system_information_type_4
*/
IE_BEGIN(si_4_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(si_4_rest_octets)
IE_BEGIN(si_6_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(si_6_rest_octets)
IE_BEGIN(mobile_identity_imsi)             /* has 8 octets */
   BF(8,         7,ACT_CHECK,  length,"seven octets to come")
   BF(4,         2,ACT_CHECK, digit_1,SILENT)
   BF(1,         1,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,0,1),ACT_CHECK,    type,"IMSI")
   BF(4,         2,ACT_CHECK, digit_3,SILENT)
   BF(4,         6,ACT_CHECK, digit_2,SILENT)
   BF(4,         1,ACT_CHECK, digit_5,SILENT)
   BF(4,         0,ACT_CHECK, digit_4,SILENT)
   BF(4,         7,ACT_CHECK, digit_7,SILENT)
   BF(4,         4,ACT_CHECK, digit_6,SILENT)
   BF(4,         1,ACT_CHECK, digit_9,SILENT)
   BF(4,         1,ACT_CHECK, digit_8,SILENT)
   BF(4,         9,ACT_CHECK, digit_11,SILENT)
   BF(4,         4,ACT_CHECK, digit_10,SILENT)
   BF(4,         2,ACT_CHECK, digit_13,SILENT)
   BF(4,         1,ACT_CHECK, digit_12,SILENT)
IE_END(mobile_identity_imsi)


IE_BEGIN(si_4_rest_octets_turkey)
   BF(8,0x80,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,0x00,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(si_4_rest_octets_turkey)
IE_BEGIN(cbch_channel_description_turkey)
   BF(8,0x64,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,0x52,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,0x70,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,0x36,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(cbch_channel_description_turkey)
IE_BEGIN(cbch_mobile_allocation_turkey)
   BF(8,0x72,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,0x01,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,0x03,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(cbch_mobile_allocation_turkey)
```

```
MSG3_BEGIN( identity_request)                    /* Ref.: [1], §9.2.10 */
    IE( skip_indicator)
    IE( mobility_management_protocol_discriminator)
    IE( identity_request_message_type)
    IE( spare_half_octet)
    IE( identity_type_imsi)
MSG3_END( identity_request)

MSG3_BEGIN( identity_response)                   /* Ref.: [1], §9.2.11 */
    IE( skip_indicator)
    IE( mobility_management_protocol_discriminator)
    IE( identity_response_message_type)
    IE( mobile_identity_imsi)
MSG3_END( identity_response)

/*----------------------------------------------------------------*\
| System Information Messages (GSM 11.10, 26.6.14 and 26.1.1)
\*----------------------------------------------------------------*/
/*
** system_information_type_1
** definition : GSM 04.08, 9.1.31
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_1)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1)

MSG3_BEGIN(system_information_type_1_cell_a_gsm900_26_6_13)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description_cell_a_gsm900_26_6_13)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_cell_a_gsm900_26_6_13)

MSG3_BEGIN(system_information_type_1_turkey)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description_turkey)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_turkey)
/*
** system_information_type_1_cell_b
** definition : GSM 04.08, 9.1.31
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_1_cell_b)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description_cell_b)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_cell_b)

/*
** system_information_type_2
** definition : GSM 04.08, 9.1.32
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_2)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
```

```
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2)
/*
** system_information_type_3
** definition : GSM 04.08, 9.1.35
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_3)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3)
/*
** system_information_type_3_cell_b
** definition : GSM 04.08, 9.1.35
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_3_cell_b)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_cell_b)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_cell_b)
/*
** system_information_type_4
** definition : GSM 04.08, 9.1.36
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_4)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4)

MSG3_BEGIN(system_information_type_4_turkey)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(cbch_channel_description_turkey)
    IE(cbch_mobile_allocation_turkey)
    IE(si_4_rest_octets_turkey)
MSG3_END(system_information_type_4_turkey)
/*
** system_information_type_5
** definition : GSM 04.08, 9.1.37
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_5)
```

```
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description)
MSG3_END(system_information_type_5)
/*
** system_information_type_6
** definition : GSM 04.08, 9.1.40
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_6)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_6_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(cell_options_sacch)
    IE(ncc_permitted)
    IE(si_6_rest_octets)
MSG3_END(system_information_type_6)
/*
** system_information_type_6_cell_b
** definition : GSM 04.08, 9.1.40
** values     : GSM 11.10, 26.6.14
*/
MSG3_BEGIN(system_information_type_6_cell_b)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_6_message_type)
    IE(cell_identity_cell_b)
    IE(location_area_identification)
    IE(cell_options_sacch)
    IE(ncc_permitted)
    IE(si_6_rest_octets)
MSG3_END(system_information_type_6_cell_b)
/*-------------------------------------------------------------------*\
| Information Elements (GSM 11.10, 26.6.14)
\*-------------------------------------------------------------------*/
IE_BEGIN(mobile_identity_tmsi)                /* has 8 octets */
    BF(8,           5,ACT_CHECK,  length,"seven octets to come")
    BF(4,        0x0F,ACT_CHECK, digit_1,SILENT)
    BF(1,           0,ACT_CHECK,odd_even,SILENT)
    BF(3,  M3(1,0,0),ACT_CHECK,    type,"TMSI")
    BF(8,        0x12,ACT_CHECK, digit_3,SILENT)
    BF(8,        0x34,ACT_CHECK, digit_2,SILENT)
    BF(8,        0x56,ACT_CHECK, digit_5,SILENT)
    BF(8,        0x78,ACT_CHECK, digit_4,SILENT)
IE_END(mobile_identity_tmsi)
MSG3_BEGIN( tmsi_reallocation_command_tmsi)    /* Ref.: [1], §9.2.17 */
    IE( skip_indicator)
    IE( mobility_management_protocol_discriminator)
    IE( tmsi_reallocation_command_message_type)
    IE( location_area_identification)
    IE( mobile_identity_tmsi)
MSG3_END( tmsi_reallocation_command_tmsi)
MSG3_BEGIN( tmsi_reallocation_complete)        /* Ref.: [1], §9.2.18 */
    IE( skip_indicator)
    IE( mobility_management_protocol_discriminator)
    IE( tmsi_reallocation_complete_message_type)
MSG3_END( tmsi_reallocation_complete)
/*
** authentication_parameter_rand
** definition : GSM 04.08, 10.5.3.1 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : authentication_request
*/
IE_BEGIN(authentication_parameter_rand)
    BF(32,0x80000000,ACT_CHECK,rand_127_096,"chosen")
    BF(32,0x00000012,ACT_CHECK,rand_095_064,"arbitrarily")
    BF(32,0x34000000,ACT_CHECK,rand_063_032,"by the")
    BF(32,0x0000000F,ACT_CHECK,rand_031_000,"test house")
IE_END(authentication_parameter_rand)

/*
** authentication_parameter_sres
** definition : GSM 04.08, 10.5.3.2 (MM)
```

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```
** values     : GSM 11.10, 26.6.14
** usage      : authentication_response
*/
IE_BEGIN(authentication_parameter_sres)
   BF(32,0x0000000F,ACT_SHOW,sres_031_000,"not checked")
IE_END(authentication_parameter_sres)
/*
** bearer_capability
** definition : GSM 04.08, 10.5.4.5 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : setup
*/
IE_BEGIN(bearer_capability)
   BF(8,4,ACT_CHECK,length,                      SILENT)
   BF(1,0,ACT_CHECK,ext3,                        SILENT)
   BF(2,1,ACT_CHECK,radio_channel_requirement,"full rate channel")
   BF(1,0,ACT_CHECK,coding_standard,       "  GSM standardized coding")
   BF(1,0,ACT_CHECK,transfer_mode,         "  circuit mode")
   BF(3,0,ACT_CHECK,info_transfer_capability," speech")
   BF(1,0,ACT_CHECK,ext3a,                       SILENT)
   BF(7,4,ACT_CHECK,speech_version_indication_1,SILENT)
   BF(1,0,ACT_CHECK,ext3b,                       SILENT)
   BF(7,5,ACT_CHECK,speech_version_indication_2,SILENT)
   BF(1,1,ACT_CHECK,ext3c,                       SILENT)
   BF(7,0,ACT_CHECK,speech_version_indication_3,SILENT)
IE_END(bearer_capability)
IE_BEGIN(bearer_capability_1800_DUAL)
   BF(8,0x03,ACT_CHECK,length,  SILENT)
   BF(8,0x20,ACT_CHECK,rcr,     SILENT)
   BF(8,0x02,ACT_CHECK,hr_fr,   SILENT)
   BF(8,0x80,ACT_CHECK,efr,     SILENT)
IE_END(bearer_capability_1800_DUAL)
/*
** called_party_bcd_number
** definition : GSM 04.08, 10.5.4.7 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : setup
*/
IE_BEGIN(called_party_bcd_number)
   BF(8,9,ACT_CHECK,length,        SILENT)
   BF(1,1,ACT_CHECK,ext1,          SILENT)
   BF(3,0,ACT_CHECK,type_of_number,"unknown")
   BF(4,1,ACT_CHECK,numbering_plan,"unknown")
   BF(16,0x2143,ACT_CHECK,ANONYMOUS,"digits")
   BF(16,0x6587,ACT_CHECK,ANONYMOUS,SILENT)
   BF(16,0x0921,ACT_CHECK,ANONYMOUS,SILENT)
   BF(16,0x4365,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(called_party_bcd_number)
/*
** cell_description
** definition : GSM 04.08, 10.5.2.2 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : handover_command
*/
IE_BEGIN(cell_description)
   BF( 2,ARFCN_BCCH_GSM_CELL_B>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,                1,ACT_CHECK,ncc, "   network colour code")
   BF( 3,                5,ACT_CHECK,bcc, "   base station colour code")
   BF( 8,ARFCN_BCCH_GSM_CELL_B   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)
IE_BEGIN(cell_description_20)
   BF( 2,                0,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,                1,ACT_CHECK,ncc, "   network colour code")
   BF( 3,                5,ACT_CHECK,bcc, "   base station colour code")
   BF( 8,               20,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description_20)
/*
** channel_description
** definition : GSM 04.08, 10.5.2.5 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : assignment_command
** usage      : channel_mode_modify
** usage      : handover_command
** usage      : immediate_assignment_extended
```

```
*/
IE_BEGIN(channel_description_GSM)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,   channel_type,"Bm + ACCHs (TCH/F+ACCHs)")
   BF( 3, TIMESLOT_TCH,ACT_CHECK,   time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,           BCC,ACT_CHECK,   training_sequence_code,"")
   BF( 1,             0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,             0,ACT_CHECK,   spare,SILENT)
   BF(10,   ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"GSM channel number")
IE_END(channel_description_GSM)
IE_BEGIN(channel_description_DCS)
   BF( 5,   M5(0,0,0,0,1),ACT_CHECK,   channel_type,"Bm + ACCHs (TCH/F+ACCHs)")
   BF( 3,    TIMESLOT_TCH,ACT_CHECK,   time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,             BCC,ACT_CHECK,   training_sequence_code,"")
   BF( 1,               0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,               0,ACT_CHECK,   spare,SILENT)
   BF(10,   ARFCN_TCH_DCS,ACT_CHECK,   arfcn,"DCS channel number")
IE_END(channel_description_DCS)
IE_BEGIN(channel_description_EGSM)
   BF( 5,   M5(0,0,0,0,1),ACT_CHECK,   channel_type,"Bm + ACCHs (TCH/F+ACCHs)")
   BF( 3,    TIMESLOT_TCH,ACT_CHECK,   time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,             BCC,ACT_CHECK,   training_sequence_code,"")
   BF( 1,               0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,               0,ACT_CHECK,   spare,SILENT)
   BF(10, ARFCN_TCH_EGSM,ACT_CHECK,   arfcn,"E-GSM channel number")
IE_END(channel_description_EGSM)
IE_BEGIN(channel_description_850)
   BF( 5,   M5(0,0,0,0,1),ACT_CHECK,   channel_type,"Bm + ACCHs (TCH/F+ACCHs)")
   BF( 3,    TIMESLOT_TCH,ACT_CHECK,   time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,             BCC,ACT_CHECK,   training_sequence_code,"")
   BF( 1,               0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,               0,ACT_CHECK,   spare,SILENT)
   BF(10,   ARFCN_TCH_850,ACT_CHECK,   arfcn,"GSM 850 channel number")
IE_END(channel_description_850)
IE_BEGIN(channel_description_HOP_TCHF4)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,             channel_type,"TCH")
   BF( 3,           4,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           7,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,             hopping,"yes")
   BF( 6,           1,ACT_CHECK,                maio,SILENT)
   BF( 6,          34,ACT_CHECK,                 hsn,SILENT)
IE_END(channel_description_HOP_TCHF4)
IE_BEGIN(channel_description_HOP_TCHH4)
   BF( 5,M5(0,0,0,1,1),ACT_CHECK,             channel_type,"TCH/H")
   BF( 3,           4,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           7,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,             hopping,"yes")
   BF( 6,           1,ACT_CHECK,                maio,SILENT)
   BF( 6,          34,ACT_CHECK,                 hsn,SILENT)
IE_END(channel_description_HOP_TCHH4)
IE_BEGIN(channel_description_HOP_TCHF1)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,             channel_type,"TCH")
   BF( 3,           1,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           0,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,             hopping,"yes")
   BF( 6,           1,ACT_CHECK,                maio,SILENT)
   BF( 6,           0,ACT_CHECK,                 hsn,SILENT)
IE_END(channel_description_HOP_TCHF1)
IE_BEGIN(channel_description_HOP_TCHF6)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,             channel_type,"TCH")
   BF( 3,           6,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           6,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,             hopping,"yes")
   BF( 6,           1,ACT_CHECK,                maio,SILENT)
   BF( 6,           0,ACT_CHECK,                 hsn,SILENT)
IE_END(channel_description_HOP_TCHF6)
IE_BEGIN(channel_description_HOP_SDCCH8)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,             channel_type,"SDCCH/8")
   BF( 3,           2,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           5,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,             hopping,"yes")
   BF( 6,           0,ACT_CHECK,                maio,SILENT)
   BF( 6,           1,ACT_CHECK,                 hsn,SILENT)
IE_END(channel_description_HOP_SDCCH8)
/*
** channel_description_non_comb
```

```
** definition : GSM 04.08, 10.5.2.5 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
*/
IE_BEGIN(channel_description_non_comb)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,  channel_type,"SDCCH/8")
   BF( 3, TIMESLOT_TCH,ACT_CHECK,  time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,          BCC,ACT_CHECK,  training_sequence_code,"")
   BF( 1,            0,ACT_CHECK,  hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,  spare,SILENT)
   BF(10,  ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"channel number 30")
IE_END(channel_description_non_comb)
/*
** channel_description_comb
** definition : GSM 04.08, 10.5.2.5 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
*/
IE_BEGIN(channel_description_comb)
   BF( 5,M5(0,0,1,0,0),ACT_CHECK,  channel_type,"SDCCH/4")
   BF( 3,            0,ACT_CHECK,  time_slot_number,"for combind CCCH/SDCCH timeslot 0")
   BF( 3,          BCC,ACT_CHECK,  training_sequence_code,"TSC=5")
   BF( 1,            0,ACT_CHECK,  hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,  spare,SILENT)
   BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,  arfcn,"channel number 20")
IE_END(channel_description_comb)
/*
** channel_mode
** definition : GSM 04.08, 10.5.2.6 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : channel_mode_modify
*/
IE_BEGIN(channel_mode)
   BF(8,0,ACT_CHECK,mode_value,"depending on test")
IE_END(channel_mode)
/*
** channel_needed
** definition : GSM 04.08, 10.5.2.8 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : paging_request_type_1
*/
IE_BEGIN(channel_needed)
   BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
   BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channel_needed)
/*
** ciphering_mode_setting
** definition : GSM 04.08, 10.5.2.9 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : ciphering_mode_command
*/
IE_BEGIN(ciphering_mode_setting)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,        1,ACT_CHECK,    start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)
/*
** cipher_response
** definition : GSM 04.08, 10.5.2.10 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : ciphering_mode_command
*/
IE_BEGIN(cipher_response)
   BF(3,0,ACT_CHECK,            spare,SILENT)
   BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)
/*
** ciphering_key_sequence_number
** definition : GSM 04.08, 10.5.1.2 (common)
** values     : GSM 11.10, 26.6.14
** usage      : authentication_request
** usage      : cm_service_request
*/
IE_BEGIN(ciphering_key_sequence_number)
   BF(1,    0,ACT_CHECK,            spare,SILENT)
   BF(3,CKSN,ACT_CHECK,key_sequence,"chosen arbitrarily by the test house")
```

```
        IE_END(ciphering_key_sequence_number)
/*
** cm_service_type
** definition : GSM 04.08, 10.5.3.3 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : authentication_request
** usage      : cm_service_request
*/
IE_BEGIN(cm_service_type)
        BF(4, 1,ACT_CHECK,type_value,"mobile originated call")
IE_END(cm_service_type)

/*
 * frequency list
 */
IE_BEGIN(frequency_list_1800_H)
    BF( 8,      0x04,ACT_CHECK,length,"length of information element")
    BF( 8,      0x89,ACT_CHECK,format,"format 512")
    BF( 8,      0x12,ACT_CHECK,orig_arfcn,"ARFCN = 548")
    BF( 8,      0x01,ACT_CHECK,w1," w1 = 5")
    BF( 8,      0x40,ACT_CHECK,w2," w2 = 0")
IE_END(frequency_list_1800_H)
/*
** handover_reference
** definition : GSM 04.08, 10.5.2.15 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : handover_access
** usage      : handover_command
*/
IE_BEGIN(handover_reference)
    BF(8,98,ACT_CHECK,reference_value,"equal in handover_command and handover_access")
IE_END(handover_reference)
/*
** ia_rest_octets
** definition : GSM 04.08, 10.5.2.16 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
*/
IE_BEGIN(ia_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(ia_rest_octets)
/*
** iar_rest_octets
** definition : GSM 04.08, 10.5.2.17 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(iar_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
IE_END(iar_rest_octets)
/*
** iax_rest_octets
** definition : GSM 04.08, 10.5.2.18 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_extended
*/
IE_BEGIN(iax_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
IE_END(iax_rest_octets)
```

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```
IE_BEGIN(iei_04)
   BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)
IE_BEGIN(iei_05)
   BF(8,0x05,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_05)
IE_BEGIN(iei_09)
   BF(4,0x09,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_09)
IE_BEGIN(iei_17)
   BF(8,0x17,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_17)
IE_BEGIN(iei_5e)
   BF(8,0x5e,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5e)
IE_BEGIN(iei_62)
   BF(8,0x62,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_62)
IE_BEGIN(iei_63)
   BF(8,0x63,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_63)
IE_BEGIN(iei_69)
   BF(8,0x69,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_69)
IE_BEGIN(iei_72)
   BF(8,0x72,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_72)
IE_BEGIN(iei_77)
   BF(8,0x77,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_77)
IE_BEGIN(iei_7c)
   BF(8,0x7c,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7c)
IE_BEGIN(iei_7b)
   BF(8,0x7b,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7b)
IE_BEGIN(iei_7d)
   BF(8,0x7d,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7d)
IE_BEGIN(iei_a1)
   BF(8,0xa1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_a1)
/*
** location_updating_type
** definition : GSM 04.08, 10.5.3.5 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : location_updating_request
*/
IE_BEGIN(location_updating_type)
   BF(1,0,ACT_CHECK,for  ,"no follow-on request pending")
   BF(1,0,ACT_CHECK,spare,SILENT)
   BF(2,0,ACT_CHECK,lut  ,"normal location updating")
IE_END(location_updating_type)
IE_BEGIN(location_updating_type_att)
   BF(1,0,ACT_CHECK,for  ,"no follow-on request pending")
   BF(1,0,ACT_CHECK,spare,SILENT)
   BF(2,2,ACT_CHECK,lut  ,"IMSI attach")
IE_END(location_updating_type_att)
/*
** mobile_allocation
** definition : GSM 04.08, 10.5.2.21 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
*/
IE_BEGIN(mobile_allocation)
   BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
IE_END(mobile_allocation)
IE_BEGIN(mobile_allocation_28)
   BF(8,1,ACT_CHECK,length,SILENT)
   BF(8,M8(0,0,0,0,0,0,0,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobile_allocation_28)
IE_BEGIN(mobile_allocation_300)
   BF(8,1,ACT_CHECK,length,SILENT)
   BF(8,M8(0,0,0,0,1,1,1,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobile_allocation_300)
```

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```
IE_BEGIN(mobile_allocation_E)
   BF(8,1,ACT_CHECK,length,SILENT)
   BF(8,184,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobile_allocation_E)
/*
** mobile_identity
** definition : GSM 04.08, 10.5.1.4 (common)
** values     : GSM 11.10, 26.6.14
** length     : 6 octets
** usage      : classmark_change
** usage      : cm_service_request
** usage      : paging_request_type_1
*/
IE_BEGIN(mobile_identity_fill)
   BF(8,           1,ACT_CHECK,length,"   one octet to come")
   BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,"bits 5-8 of octet 3 ='0000'")
   BF(1,           0,ACT_CHECK,odd_even,"")
   BF(3,  M3(0,0,0),ACT_CHECK,type,  "   no identity")
IE_END(mobile_identity_fill)
/*
** mobile_identity_tmsi
** definition : GSM 04.08, 10.5.2.42 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : paging_request_type_2
*/
IE_BEGIN(tmsi)
   BF(8,        0x12,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0x34,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0x56,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0x78,ACT_CHECK,ANONYMOUS, SILENT)
IE_END(tmsi)
/*
** mobile_identity_tmsi_2
** definition : GSM 04.08, 10.5.2.42 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : paging_request_type_2
*/
IE_BEGIN(tmsi_2)
   BF(8,        0xAA,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0xBB,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0xCC,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0xDD,ACT_CHECK,ANONYMOUS, SILENT)
IE_END(tmsi_2)
IE_BEGIN(mobile_identity_imeisv)               /* has 8 octets */
   BF(8,           9,ACT_CHECK,  length,"nine octets to come")
   BF(4,           1,ACT_CHECK , digit_1,SILENT)
   BF(1,           0,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,1,1),ACT_CHECK,    type,"IMEISV")
   BF(4,           5,ACT_CHECK , digit_3,SILENT)
   BF(4,           3,ACT_CHECK , digit_2,SILENT)
   BF(4,           9,ACT_CHECK , digit_5,SILENT)
   BF(4,           7,ACT_CHECK , digit_4,SILENT)
   BF(4,           2,ACT_CHECK , digit_7,SILENT)
   BF(4,           0,ACT_CHECK , digit_6,SILENT)
   BF(4,           6,ACT_CHECK , digit_9,SILENT)
   BF(4,           4,ACT_CHECK , digit_8,SILENT)
   BF(4,           1,ACT_CHECK , digit_11,SILENT)
   BF(4,           8,ACT_CHECK , digit_10,SILENT)
   BF(4,           2,ACT_CHECK , digit_13,SILENT)
   BF(4,           1,ACT_CHECK , digit_12,SILENT)
   BF(4,           7,ACT_CHECK , digit_15,SILENT)
   BF(4,           2,ACT_CHECK , digit_14,SILENT)
   BF(4,         0xF,ACT_CHECK, eoi     ,SILENT)
   BF(4,           8,ACT_CHECK , digit_16,SILENT)
IE_END(mobile_identity_imeisv)
/*
** mobile_station_classmark_1
** definition : GSM 04.08, 10.5.1.5 (common)
** values     : GSM 11.10, 26.6.14 (??? values of this IE : see PICS/PIXIT)
** usage      : classmark_change
** usage      : cm_service_request
*/
IE_BEGIN(mobile_station_classmark_1_GSM)
   BF(1,           0,ACT_CHECK, spare,                     SILENT)
   BF(2,    M2(0,1),ACT_CHECK, revision_level,     "   phase 2 MS")
```

```
   BF(1,         1,ACT_CHECK, es_ind,               "   Contr. Early Classmark Send.")
   BF(1,         0,ACT_CHECK, a5_1,                 "   encryption algorithm A5/1 available")
   BF(3,M3(0,1,1),ACT_CHECK, rf_power_capability,"    class 4")
IE_END(mobile_station_classmark_1_GSM)
IE_BEGIN(mobile_station_classmark_1_DCS)
   BF(1,         0,ACT_CHECK, spare,                   SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,       "   phase 2 MS")
   BF(1,         1,ACT_CHECK, es_ind,               "   Contr. Early Classmark Send.")
   BF(1,         0,ACT_CHECK, a5_1,                 "   encryption algorithm A5/1 available")
   BF(3,M3(0,0,0),ACT_CHECK, rf_power_capability,"    class 1")
IE_END(mobile_station_classmark_1_DCS)
/*
** mobile_station_classmark_2
** definition : GSM 04.08, 10.5.1.6 (common)
** values     : GSM 11.10, 26.6.14 (??? values of this IE : see PICS/PIXIT)
** usage      : classmark_change
** usage      : cm_service_request
*/
IE_BEGIN(mobile_station_classmark_2_GSM)
   BF(8,         3,ACT_CHECK, length,                  SILENT)
   BF(1,         0,ACT_CHECK, spare,                   SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,       "   phase 2 MS")
   BF(1,         1,ACT_CHECK, es_ind,               "   Contr. Early Classmark Send.")
   BF(1,         0,ACT_CHECK, a5_1,                 "   encryption algorithm A5/1 available")
   BF(3,M3(0,1,1),ACT_CHECK, rf_power_capability,"    class 4")
   BF(1,         0,ACT_CHECK, spare2,                  SILENT)
   BF(1,         0,ACT_CHECK, ps_capability,        "   no pseudo-synch capability")
   BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,"phase 2 handling")
   BF(1,         1,ACT_CHECK, sm_capability,        "   point to point SMS")
   BF(1,         0,ACT_CHECK, vbs,                  "   no VBS cap. or no notific. wanted")
   BF(1,         0,ACT_CHECK, vgcs,                 "   no VGCS cap. or no notific. wanted")
   BF(1,         0,ACT_CHECK, frequency_capability,"   no extention band G1")
   BF(1,         1,ACT_CHECK, class3,               "   add. MS cap. information")
   BF(1,         0,ACT_CHECK, spare,                   SILENT)
   BF(1,         0,ACT_CHECK, lcsva,                "   LCS value added location")
   BF(1,         1,ACT_CHECK, ucs2_treat,           "   UCS2 encoded")
   BF(1,         0,ACT_CHECK, solsa,                "   SoLSA")
   BF(1,         1,ACT_CHECK, cmsp,                 "   CM service prompt")
   BF(1,         0,ACT_CHECK, a5_3,                 "   A5/3 not available")
   BF(1,         1,ACT_CHECK, a5_2,                 "   A5/2 available")
IE_END(mobile_station_classmark_2_GSM)
IE_BEGIN(mobile_station_classmark_2_GSM_pseudo_sync)
   BF(8,         3,ACT_CHECK, length,                  SILENT)
   BF(1,         0,ACT_CHECK, spare,                   SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,       "   phase 2 MS")
   BF(1,         1,ACT_CHECK, es_ind,               "   Contr. Early Classmark Send.")
   BF(1,         0,ACT_CHECK, a5_1,                 "   encryption algorithm A5/1 available")
   BF(3,M3(0,1,1),ACT_CHECK, rf_power_capability,"    class 4")
   BF(1,         0,ACT_CHECK, spare2,                  SILENT)
   BF(1,         1,ACT_CHECK, ps_capability,        "   supports pseudo-sync capability")
   BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,"phase 2 handling")
   BF(1,         1,ACT_CHECK, sm_capability,        "   point to point SMS")
   BF(1,         0,ACT_CHECK, vbs,                  "   no VBS cap. or no notific. wanted")
   BF(1,         0,ACT_CHECK, vgcs,                 "   no VGCS cap. or no notific. wanted")
   BF(1,         0,ACT_CHECK, frequency_capability,"   no extention band G1")
   BF(1,         1,ACT_CHECK, class3,               "   add. MS cap. information")
   BF(1,         0,ACT_CHECK, spare,                   SILENT)
   BF(1,         0,ACT_CHECK, lcsva,                "   LCS value added location")
   BF(1,         1,ACT_CHECK, ucs2_treat,           "   UCS2 encoded")
   BF(1,         0,ACT_CHECK, solsa,                "   SoLSA")
   BF(1,         1,ACT_CHECK, cmsp,                 "   CM service prompt")
   BF(1,         0,ACT_CHECK, a5_3,                 "   A5/3 not available")
   BF(1,         1,ACT_CHECK, a5_2,                 "   A5/2 available")
IE_END(mobile_station_classmark_2_GSM_pseudo_sync)
IE_BEGIN(mobile_station_classmark_2_EGSM)
   BF(8,         3,ACT_CHECK, length,                  SILENT)
   BF(1,         0,ACT_CHECK, spare,                   SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,       "   phase 2 MS")
   BF(1,         1,ACT_CHECK, es_ind,               "   Contr. Early Classmark Send.")
   BF(1,         0,ACT_CHECK, a5_1,                 "   encryption algorithm A5/1 available")
   BF(3,M3(0,1,1),ACT_CHECK, rf_power_capability,"    class 4")
   BF(1,         0,ACT_CHECK, spare2,                  SILENT)
   BF(1,         0,ACT_CHECK, ps_capability,        "   no pseudo-synch capability")
   BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,"phase 2 handling")
   BF(1,         1,ACT_CHECK, sm_capability,        "   point to point SMS")
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    BF(1,        0,ACT_CHECK, vbs,                 "   no VBS cap. or no notific. wanted")
    BF(1,        0,ACT_CHECK, vgcs,                "   no VGCS cap. or no notific. wanted")
    BF(1,        1,ACT_CHECK, frequency_capability," extention band G1")
    BF(1,        1,ACT_CHECK, class3,              "   add. MS cap. information")
    BF(1,        0,ACT_CHECK, spare,                   SILENT)
    BF(1,        0,ACT_CHECK, lcsva,               "   LCS value added location")
    BF(1,        1,ACT_CHECK, ucs2_treat,          "   UCS2 encoded")
    BF(1,        0,ACT_CHECK, solsa,               "   SoLSA")
    BF(1,        1,ACT_CHECK, cmsp,                "   CM service prompt")
    BF(1,        0,ACT_CHECK, a5_3,                "   A5/3 not available")
    BF(1,        1,ACT_CHECK, a5_2,                "   A5/2 available")
IE_END(mobile_station_classmark_2_EGSM)
IE_BEGIN(mobile_station_classmark_2_DCS)
    BF(8,        3,ACT_CHECK, length,                  SILENT)
    BF(1,        0,ACT_CHECK, spare,                   SILENT)
    BF(2,  M2(0,1),ACT_CHECK, revision_level,      "   phase 2 MS")
    BF(1,        1,ACT_CHECK, es_ind,              "   Contr. Early Classmark Send.")
    BF(1,        0,ACT_CHECK, a5_1,                "   encryption algorithm A5/1 available")
    BF(3,M3(0,0,0),ACT_CHECK, rf_power_capability," class 1")
    BF(1,        0,ACT_CHECK, spare2,                  SILENT)
    BF(1,        0,ACT_CHECK, ps_capability,       "   no pseudo-synch capability")
    BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,"phase 2 handling")
    BF(1,        1,ACT_CHECK, sm_capability,       "   point to point SMS")
    BF(1,        0,ACT_CHECK, vbs,                 "   no VBS cap. or no notific. wanted")
    BF(1,        0,ACT_CHECK, vgcs,                "   no VGCS cap. or no notific. wanted")
    BF(1,        0,ACT_CHECK, frequency_capability," no extention band G1")
    BF(1,        1,ACT_CHECK, class3,              "   add. MS cap. information")
    BF(1,        0,ACT_CHECK, spare,                   SILENT)
    BF(1,        0,ACT_CHECK, lcsva,               "   LCS value added location")
    BF(1,        1,ACT_CHECK, ucs2_treat,          "   UCS2 encoded")
    BF(1,        0,ACT_CHECK, solsa,               "   SoLSA")
    BF(1,        1,ACT_CHECK, cmsp,                "   CM service prompt")
    BF(1,        0,ACT_CHECK, a5_3,                "   A5/3 not available")
    BF(1,        1,ACT_CHECK, a5_2,                "   A5/2 available")
IE_END(mobile_station_classmark_2_DCS)
/*
** mobile_station_classmark_3
** definition : GSM 04.08, 10.5.1.7 (common)
** usage      : classmark_change
** usage      : cm_service_request
*/
IE_BEGIN(mobile_station_classmark_3_900)
    BF(8,     0x20,ACT_CHECK, iei,                 "   information element identifier")
    BF(8,        4,ACT_CHECK, length,                  SILENT)
    BF(1,        0,ACT_CHECK, e_bit,               "   no extension")
    BF(1,        0,ACT_CHECK, band_3,              "   no DCS 1800 support")
    BF(1,        0,ACT_CHECK, band_2,              "   no E-GSM support")
    BF(1,        1,ACT_CHECK, band_1,              "   GSM 900 support")
    BF(1,        0,ACT_CHECK, a5_7,                "   A5/7 not available")
    BF(1,        0,ACT_CHECK, a5_6,                "   A5/6 not available")
    BF(1,        0,ACT_CHECK, a5_5,                "   A5/5 not available")
    BF(1,        0,ACT_CHECK, a5_4,                "   A5/4 not available")
    BF(4,        0,ACT_CHECK, spare_padding,       "   no class")
    BF(4,        4,ACT_CHECK, rf_power_capability_1,"  class 4 for gsm 900")
    BF(1,        0,ACT_CHECK, r_support,           "   no support of R-GSM")
    BF(1,        0,ACT_CHECK, multi_slot_cap,      "   no multislot capability of GSM")
    BF(1,        1,ACT_CHECK, ucs2_treat,          "   UCS2 treatment")
    BF(1,        0,ACT_CHECK, ext_measurement,     "   no extended measurement capability")
    BF(1,        0,ACT_CHECK, measurement,         "   no switch times")
    BF(1,        0,ACT_CHECK, positioning,         "   no positioning capabilities")
    BF(1,        0,ACT_CHECK, edge_multislot,      "   no support of EDGE")
    BF(1,        0,ACT_CHECK, edge_struct,         "   no support of EDGE")
    BF(1,        0,ACT_CHECK, gsm400,              "   no support of GSM 450 or 480")
    BF(1,        0,ACT_CHECK, gsm850,              "   no support of GSM 850")
    BF(1,        0,ACT_CHECK, pcs1900,             "   no support of PCS 1900")
    BF(1,        0,ACT_CHECK, umts_fdd,            "   no support of UMTS")
    BF(1,        0,ACT_CHECK, umts_tdd,            "   no support of UMTS")
    BF(1,        0,ACT_CHECK, cdma,                "   no support of CDMA 2000")
    BF(1,        0,ACT_CHECK, dtm,                 "   no support of DTM")
    BF(1,        0,ACT_CHECK, single_band,         "   no support of UMTS")
IE_END(mobile_station_classmark_3_900)
IE_BEGIN(mobile_station_classmark_3_1800)
    BF(8,     0x20,ACT_CHECK, iei,                 "   information element identifier")
    BF(8,        4,ACT_CHECK, length,                  SILENT)
    BF(1,        0,ACT_CHECK, e_bit,               "   no extension")
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    BF(1,       1,ACT_CHECK, band_3,              "   DCS 1800 support")
    BF(1,       0,ACT_CHECK, band_2,              "   no E-GSM support")
    BF(1,       0,ACT_CHECK, band_1,              "   no GSM 900 support")
    BF(1,       0,ACT_CHECK, a5_7,                "   A5/7 not available")
    BF(1,       0,ACT_CHECK, a5_6,                "   A5/6 not available")
    BF(1,       0,ACT_CHECK, a5_5,                "   A5/5 not available")
    BF(1,       0,ACT_CHECK, a5_4,                "   A5/4 not available")
    BF(4,       0,ACT_CHECK, spare_padding,       "   no class")
    BF(4,       1,ACT_CHECK, rf_power_capability_1,"   class 1 for 1800")
    BF(1,       0,ACT_CHECK, r_support,           "   no support of R-GSM")
    BF(1,       0,ACT_CHECK, multi_slot_cap,      "   no multislot capability of GSM")
    BF(1,       1,ACT_CHECK, ucs2_treat,          "   UCS2 treatment")
    BF(1,       0,ACT_CHECK, ext_measurement,     "   no extended measurement capability")
    BF(1,       0,ACT_CHECK, measurement,         "   no switch times")
    BF(1,       0,ACT_CHECK, positioning,         "   no positioning capabilities")
    BF(1,       0,ACT_CHECK, edge_multislot,      "   no support of EDGE")
    BF(1,       0,ACT_CHECK, edge_struct,         "   no support of EDGE")
    BF(1,       0,ACT_CHECK, gsm400,              "   no support of GSM 450 or 480")
    BF(1,       0,ACT_CHECK, gsm850,              "   no support of GSM 850")
    BF(1,       0,ACT_CHECK, pcs1900,             "   no support of PCS 1900")
    BF(1,       0,ACT_CHECK, umts_fdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, umts_tdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, cdma,                "   no support of CDMA 2000")
    BF(1,       0,ACT_CHECK, dtm,                 "   no support of DTM")
    BF(1,       0,ACT_CHECK, single_band,         "   no support of UMTS")
IE_END(mobile_station_classmark_3_1800)
IE_BEGIN(mobile_station_classmark_3_DUAL)
    BF(8,     0x20,ACT_CHECK, iei,                "   information element identifier")
    BF(8,       4,ACT_CHECK, length,             SILENT)
    BF(1,       0,ACT_CHECK, e_bit,               "   no extension")
    BF(1,       1,ACT_CHECK, band_3,              "   DCS 1800 support")
    BF(1,       0,ACT_CHECK, band_2,              "   no E-GSM support")
    BF(1,       1,ACT_CHECK, band_1,              "   GSM 900 support")
    BF(1,       0,ACT_CHECK, a5_7,                "   A5/7 not available")
    BF(1,       0,ACT_CHECK, a5_6,                "   A5/6 not available")
    BF(1,       0,ACT_CHECK, a5_5,                "   A5/5 not available")
    BF(1,       0,ACT_CHECK, a5_4,                "   A5/4 not available")
    BF(4,       1,ACT_CHECK, rf_power_capability_2,"   class 1 for dcs 1800")
    BF(4,       4,ACT_CHECK, rf_power_capability_1,"   class 4 for gsm 900")
    BF(1,       0,ACT_CHECK, r_support,           "   no support of R-GSM")
    BF(1,       0,ACT_CHECK, multi_slot_cap,      "   no multislot capability of GSM")
    BF(1,       1,ACT_CHECK, ucs2_treat,          "   UCS2 treatment")
    BF(1,       0,ACT_CHECK, ext_measurement,     "   no extended measurement capability")
    BF(1,       0,ACT_CHECK, measurement,         "   no switch times")
    BF(1,       0,ACT_CHECK, positioning,         "   no positioning capabilities")
    BF(1,       0,ACT_CHECK, edge_multislot,      "   no support of EDGE")
    BF(1,       0,ACT_CHECK, edge_struct,         "   no support of EDGE")
    BF(1,       0,ACT_CHECK, gsm400,              "   no support of GSM 450 or 480")
    BF(1,       0,ACT_CHECK, gsm850,              "   no support of GSM 850")
    BF(1,       0,ACT_CHECK, pcs1900,             "   no support of PCS 1900")
    BF(1,       0,ACT_CHECK, umts_fdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, umts_tdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, cdma,                "   no support of CDMA 2000")
    BF(1,       0,ACT_CHECK, dtm,                 "   no support of DTM")
    BF(1,       0,ACT_CHECK, single_band,         "   no support of UMTS")
IE_END(mobile_station_classmark_3_DUAL)
IE_BEGIN(mobile_station_classmark_3_DUAL_EXT)
    BF(8,     0x20,ACT_CHECK, iei,                "   information element identifier")
    BF(8,       4,ACT_CHECK, length,             SILENT)
    BF(1,       0,ACT_CHECK, e_bit,               "   no extension")
    BF(1,       1,ACT_CHECK, band_3,              "   DCS 1800 support")
    BF(1,       1,ACT_CHECK, band_2,              "   E-GSM support and GSM 900 support")
    BF(1,       0,ACT_CHECK, band_1,              "   (band_2 and band_3 are mutually exclusive)")
    BF(1,       0,ACT_CHECK, a5_7,                "   A5/7 not available")
    BF(1,       0,ACT_CHECK, a5_6,                "   A5/6 not available")
    BF(1,       0,ACT_CHECK, a5_5,                "   A5/5 not available")
    BF(1,       0,ACT_CHECK, a5_4,                "   A5/4 not available")
    BF(4,       1,ACT_CHECK, rf_power_capability_2,"   class 1 for dcs 1800")
    BF(4,       4,ACT_CHECK, rf_power_capability_1,"   class 4 for gsm 900")
    BF(1,       0,ACT_CHECK, r_support,           "   no support of R-GSM")
    BF(1,       0,ACT_CHECK, multi_slot_cap,      "   no multislot capability of GSM")
    BF(1,       1,ACT_CHECK, ucs2_treat,          "   UCS2 treatment")
    BF(1,       0,ACT_CHECK, ext_measurement,     "   no extended measurement capability")
    BF(1,       0,ACT_CHECK, measurement,         "   no switch times")
    BF(1,       0,ACT_CHECK, positioning,         "   no positioning capabilities")
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    BF(1,       0,ACT_CHECK, edge_multislot,      "   no support of EDGE")
    BF(1,       0,ACT_CHECK, edge_struct,         "   no support of EDGE")
    BF(1,       0,ACT_CHECK, gsm400,              "   no support of GSM 450 or 480")
    BF(1,       0,ACT_CHECK, gsm850,              "   no support of GSM 850")
    BF(1,       0,ACT_CHECK, pcs1900,             "   no support of PCS 1900")
    BF(1,       0,ACT_CHECK, umts_fdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, umts_tdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, cdma,                "   no support of CDMA 2000")
    BF(1,       0,ACT_CHECK, dtm,                 "   no support of DTM")
    BF(1,       0,ACT_CHECK, single_band,         "   no support of UMTS")
IE_END(mobile_station_classmark_3_DUAL_EXT)
IE_BEGIN(mobile_station_classmark_3_1900)
    BF(8,    0x20,ACT_CHECK, iei,                 "   information element identifier")
    BF(8,       4,ACT_CHECK, length,              SILENT)
    BF(1,       0,ACT_CHECK, e_bit,               "   no extension")
    BF(1,       0,ACT_CHECK, band_3,              "   no DCS 1800 support")
    BF(1,       0,ACT_CHECK, band_2,              "   no E-GSM support")
    BF(1,       0,ACT_CHECK, band_1,              "   no GSM 900 support")
    BF(1,       0,ACT_CHECK, a5_7,                "   A5/7 not available")
    BF(1,       0,ACT_CHECK, a5_6,                "   A5/6 not available")
    BF(1,       0,ACT_CHECK, a5_5,                "   A5/5 not available")
    BF(1,       0,ACT_CHECK, a5_4,                "   A5/4 not available")
    BF(1,       0,ACT_CHECK, r_support,           "   no support of R-GSM")
    BF(1,       0,ACT_CHECK, multi_slot_cap,      "   no multislot capability of GSM")
    BF(1,       1,ACT_CHECK, ucs2_treat,          "   UCS2 treatment")
    BF(1,       0,ACT_CHECK, ext_measurement,     "   no extended measurement capability")
    BF(1,       0,ACT_CHECK, measurement,         "   no switch times")
    BF(1,       0,ACT_CHECK, positioning,         "   no positioning capabilities")
    BF(1,       0,ACT_CHECK, edge_multislot,      "   no support of EDGE")
    BF(1,       0,ACT_CHECK, edge_struct,         "   no support of EDGE")
    BF(1,       0,ACT_CHECK, gsm400,              "   no support of GSM 450 or 480")
    BF(1,       0,ACT_CHECK, gsm850,              "   no support of GSM 850")
    BF(1,       1,ACT_CHECK, pcs1900,             "   support of PCS 1900")
    BF(4,       1,ACT_CHECK, pcs1900_cap,         "   class 1 for 1900")
    BF(1,       0,ACT_CHECK, umts_fdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, umts_tdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, cdma,                "   no support of CDMA 2000")
    BF(1,       0,ACT_CHECK, dtm,                 "   no support of DTM")
    BF(1,       0,ACT_CHECK, single_band,         "   no support of UMTS")
IE_END(mobile_station_classmark_3_1900)
IE_BEGIN(mobile_station_classmark_3_850)
    BF(8,    0x20,ACT_CHECK, iei,                 "   information element identifier")
    BF(8,       4,ACT_CHECK, length,              SILENT)
    BF(1,       0,ACT_CHECK, e_bit,               "   no extension")
    BF(1,       0,ACT_CHECK, band_3,              "   no DCS 1800 support")
    BF(1,       0,ACT_CHECK, band_2,              "   no E-GSM support")
    BF(1,       0,ACT_CHECK, band_1,              "   no GSM 900 support")
    BF(1,       0,ACT_CHECK, a5_7,                "   A5/7 not available")
    BF(1,       0,ACT_CHECK, a5_6,                "   A5/6 not available")
    BF(1,       0,ACT_CHECK, a5_5,                "   A5/5 not available")
    BF(1,       0,ACT_CHECK, a5_4,                "   A5/4 not available")
    BF(1,       0,ACT_CHECK, r_support,           "   no support of R-GSM")
    BF(1,       0,ACT_CHECK, multi_slot_cap,      "   no multislot capability of GSM")
    BF(1,       1,ACT_CHECK, ucs2_treat,          "   UCS2 treatment")
    BF(1,       0,ACT_CHECK, ext_measurement,     "   no extended measurement capability")
    BF(1,       0,ACT_CHECK, measurement,         "   no switch times")
    BF(1,       0,ACT_CHECK, positioning,         "   no positioning capabilities")
    BF(1,       0,ACT_CHECK, edge_multislot,      "   no support of EDGE")
    BF(1,       0,ACT_CHECK, edge_struct,         "   no support of EDGE")
    BF(1,       0,ACT_CHECK, gsm400,              "   no support of GSM 450 or 480")
    BF(1,       1,ACT_CHECK, gsm850,              "   support of GSM 850")
    BF(4,       4,ACT_CHECK, gsm850_cap,          "   class 4 for 850")
    BF(1,       0,ACT_CHECK, pcs1900,             "   no support of PCS 1900")
    BF(1,       0,ACT_CHECK, umts_fdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, umts_tdd,            "   no support of UMTS")
    BF(1,       0,ACT_CHECK, cdma,                "   no support of CDMA 2000")
    BF(1,       0,ACT_CHECK, dtm,                 "   no support of DTM")
    BF(1,       0,ACT_CHECK, single_band,         "   no support of UMTS")
IE_END(mobile_station_classmark_3_850)
IE_BEGIN(mobile_station_classmark_3_DUAL_US)
    BF(8,    0x20,ACT_CHECK, iei,                 "   information element identifier")
    BF(8,       4,ACT_CHECK, length,              SILENT)
    BF(1,       0,ACT_CHECK, e_bit,               "   no extension")
    BF(1,       0,ACT_CHECK, band_3,              "   no DCS 1800 support")
    BF(1,       0,ACT_CHECK, band_2,              "   no E-GSM support")
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        BF(1,        0,ACT_CHECK, band_1,              "  no GSM 900 support")
        BF(1,        0,ACT_CHECK, a5_7,                "  A5/7 not available")
        BF(1,        0,ACT_CHECK, a5_6,                "  A5/6 not available")
        BF(1,        0,ACT_CHECK, a5_5,                "  A5/5 not available")
        BF(1,        0,ACT_CHECK, a5_4,                "  A5/4 not available")
        BF(1,        0,ACT_CHECK, r_support,           "  no support of R-GSM")
        BF(1,        0,ACT_CHECK, multi_slot_cap,      "  no multislot capability of GSM")
        BF(1,        1,ACT_CHECK, ucs2_treat,          "  UCS2 treatment")
        BF(1,        0,ACT_CHECK, ext_measurement,     "  no extended measurement capability")
        BF(1,        0,ACT_CHECK, measurement,         "  no switch times")
        BF(1,        0,ACT_CHECK, positioning,         "  no positioning capabilities")
        BF(1,        0,ACT_CHECK, edge_multislot,      "  no support of EDGE")
        BF(1,        0,ACT_CHECK, edge_struct,         "  no support of EDGE")
        BF(1,        0,ACT_CHECK, gsm400,              "  no support of GSM 450 or 480")
        BF(1,        1,ACT_CHECK, gsm850,              "  support of GSM 850")
        BF(4,        4,ACT_CHECK, gsm850_cap,          "  class 4 for 850")
        BF(1,        1,ACT_CHECK, pcs1900,             "  support of PCS 1900")
        BF(4,        1,ACT_CHECK, pcs1900_cap,         "  class 1 for 1900")
        BF(1,        0,ACT_CHECK, umts_fdd,            "  no support of UMTS")
        BF(1,        0,ACT_CHECK, umts_tdd,            "  no support of UMTS")
        BF(1,        0,ACT_CHECK, cdma,                "  no support of CDMA 2000")
        BF(1,        0,ACT_CHECK, dtm,                 "  no support of DTM")
        BF(1,        0,ACT_CHECK, single_band,         "  no support of UMTS")
IE_END(mobile_station_classmark_3_DUAL_US)
/*
** mode_of_the_first_channel
** definition : GSM 04.08, 10.5.2.6 (RR)
** usage      : MRR135, MRR203
*/
IE_BEGIN(mode_of_the_first_channel)
   BF(8,1,ACT_CHECK,mode,"Speech full rate")
IE_END(mode_of_the_first_channel)
/*
** p1_rest_octets
** definition : GSM 04.08, 10.5.2.23 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : paging_request_type_1
*/
IE_BEGIN(p1_rest_octets)
                /* pag. req. type1 : 22 - 9 (L2 pseud. len) = 13 bytes */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 11 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 12 */
IE_END(p1_rest_octets)
IE_BEGIN(p1_rest_octets_11)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets_11)
IE_BEGIN(p1_rest_octets_fill)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
```

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```
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 11 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 12 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 13 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 14 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 15 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 16 */
IE_END(p1_rest_octets_fill)
/*
** p2_rest_octets
** definition : GSM 04.08, 10.5.2.24 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : paging_request_type_2
*/
IE_BEGIN(p2_rest_octets)
                   /* pag. req. type2 : 22 - 11  (L2 pseud. len) = 11 bytes */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p2_rest_octets)
IE_BEGIN(p2_rest_octets_2)
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
IE_END(p2_rest_octets_2)
/*
** p3_rest_octets
** definition : GSM 04.08, 10.5.2.25 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : paging_request_type_3
*/
IE_BEGIN(p3_rest_octets)
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
      BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
IE_END(p3_rest_octets)
/*
** page_mode
** definition : GSM 04.08, 10.5.2.26 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
** usage      : immediate_assignment_extended
** usage      : immediate_assignment_reject
** usage      : paging_request_type_1
** usage      : paging_request_type_2
** usage      : paging_request_type_3
*/
IE_BEGIN(page_mode)
      BF(2,0,ACT_CHECK,spare,"two spare bits")
      BF(2,0,ACT_CHECK,pm   ,"Normal Paging")
IE_END(page_mode)
/*
** power_command
** definition : GSM 04.08, 10.5.2.28 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : assignment_command
** usage      : handover_command
*/
IE_BEGIN(power_command)
      BF(3,                 0,ACT_CHECK,spare,SILENT)
      BF(5,DOWNLINK_INPUT_LEVEL,ACT_CHECK,power,SILENT) /* ??? is value OK ? */
IE_END(power_command)
IE_BEGIN(power_command_28)
      BF(3,0,ACT_CHECK,spare,SILENT)
      BF(5,23,ACT_CHECK,power,SILENT)
```

```
IE_END(power_command_28)
/*
** rach
** definition : GSM 04.08, 9.1.8
** values     : GSM 11.10, 26.6.14
** usage      : assignment_complete
** usage      : channel_request
*/
IE_BEGIN(rach)
   BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any channel")
   BF(5,         0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)
/*
** request_reference
** definition : GSM 04.08, 10.5.2.30
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
*/
IE_BEGIN(request_reference)
   BF(3,     M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,ref,SILENT)
   BF(5,             0,ACT_SHOW,t1_,SILENT)
   BF(6,             0,ACT_SHOW,t3 ,SILENT)
   BF(5,             0,ACT_SHOW,t2 ,SILENT)
IE_END(request_reference)
/*
** request_reference_2
** definition : GSM 04.08, 10.5.2.30
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_extended
** usage      : immediate_assignment_reject
*/
IE_BEGIN(request_reference_2)
   BF(3,     M3(1,0,0),ACT_SHOW,random_access_info,SILENT)
   BF(5,M5(1,1,1,1,1),ACT_SHOW,ref,"as in non of the CHAN REQ sent by the MS!")
   BF(5,             0,ACT_SHOW,t1_,SILENT)
   BF(6,             0,ACT_SHOW,t3 ,SILENT)
   BF(5,             0,ACT_SHOW,t2 ,SILENT)
IE_END(request_reference_2)
/*
** request_reference_3
** definition : GSM 04.08, 10.5.2.30
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(request_reference_3)
   BF(3,     M3(1,0,0),ACT_SHOW,random_access_info,SILENT)
   BF(5,M5(1,1,1,1,1),ACT_SHOW,ref,SILENT)
   BF(5,             0,ACT_SHOW,t1_,SILENT)
   BF(6,             0,ACT_SHOW,t3 ,SILENT)
   BF(5,             0,ACT_SHOW,t2 ,SILENT)
IE_END(request_reference_3)
/*
** request_reference_4
** definition : GSM 04.08, 10.5.2.30
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(request_reference_4)
   BF(3,     M3(1,0,0),ACT_SHOW,random_access_info,SILENT)
   BF(5,M5(1,1,1,1,1),ACT_SHOW,ref,SILENT)
   BF(5,             0,ACT_SHOW,t1_,SILENT)
   BF(6,             0,ACT_SHOW,t3 ,SILENT)
   BF(5,             0,ACT_SHOW,t2 ,SILENT)
IE_END(request_reference_4)
/*
** rr_cause
** definition : GSM 04.08, 10.5.2.31 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : assignment_complete
*/
IE_BEGIN(rr_cause)
   BF(8,M8(0,0,0,0,0,0,0,0),ACT_CHECK,cause,"normal event")
IE_END(rr_cause)
```

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```
IE_BEGIN(rr_cause_abnormal_release)
   BF(8,M8(0,0,0,0,0,0,0,1),ACT_CHECK,cause,"abnormal release")
IE_END(rr_cause_abnormal_release)


IE_BEGIN(rr_cause_incorrect_msg)
   BF(8,M8(0,1,0,1,1,1,1,1),ACT_CHECK,cause," Semantically incorrect message")
IE_END(rr_cause_incorrect_msg)
/*
** rr_cause_failure
** definition : GSM 04.08, 10.5.2.31 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : assignment_failure
*/
IE_BEGIN(rr_cause_failure)
   BF(8,M8(0,0,0,0,0,0,0,1),ACT_CHECK,cause,"depending on test")
IE_END(rr_cause_failure)
/*
** timing_advance
** definition : GSM 04.08, 10.5.2.40 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment
*/
IE_BEGIN(timing_advance)
   BF(2, 0,ACT_CHECK,          spare,SILENT)
   BF(6,30,ACT_CHECK,timing_advance,"30 bit periods")
IE_END(timing_advance)
/*
** timing_advance_20
** definition : GSM 04.08, 10.5.2.40 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : physical_information
*/
IE_BEGIN(timing_advance_20)
   BF(2, 0,ACT_CHECK,          spare,SILENT)
   BF(6,20,ACT_CHECK,timing_advance,"20 bit periods")
IE_END(timing_advance_20)
/*
** timing_advance_0
** definition : GSM 04.08, 10.5.2.40 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_extended
*/
IE_BEGIN(timing_advance_0)
   BF(2,0,ACT_CHECK,          spare,SILENT)
   BF(6,0,ACT_CHECK,timing_advance,"chosen arbitrarily by the test house")
IE_END(timing_advance_0)
/*
** transaction_identifier_dest
** definition : GSM 04.08, 10.3.2 (very common)
** values     : GSM 11.10, 26.6.14
** usage      : alerting
** usage      : connect
*/
IE_BEGIN(transaction_identifier_dest)
   BF(1,    M1(1),ACT_CHECK,ti_flag ,"1 (destination side)")
   BF(3,M3(0,0,0),ACT_CHECK,ti_value,"as used in the setup message")
IE_END(transaction_identifier_dest)
/*
** transaction_identifier_source
** definition : GSM 04.08, 10.3.2 (very common)
** values     : GSM 11.10, 26.6.14
** usage      : connect_acknowledge
*/
IE_BEGIN(transaction_identifier_source)
   BF(1,    M1(0),ACT_CHECK,ti_flag ,"0 (source side)")
   BF(3,M3(0,0,0),ACT_CHECK,ti_value,"as used in the setup message")
IE_END(transaction_identifier_source)
/*
** wait_indication
** definition : GSM 04.08, 10.5.2.43 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(wait_indication)
   BF(8,0,ACT_CHECK,t3122,"0 seconds")
```

```
IE_END(wait_indication)
/*
** wait_indication_2
** definition : GSM 04.08, 10.5.2.43 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(wait_indication_2)
   BF(8,0,ACT_CHECK,t3122,"0 seconds")
IE_END(wait_indication_2)
/*
** wait_indication_3
** definition : GSM 04.08, 10.5.2.43 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(wait_indication_3)
   BF(8,0,ACT_CHECK,t3122,"0 seconds")
IE_END(wait_indication_3)
/*
** wait_indication_4
** definition : GSM 04.08, 10.5.2.43 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : immediate_assignment_reject
*/
IE_BEGIN(wait_indication_4)
   BF(8,0,ACT_CHECK,t3122,"0 seconds")
IE_END(wait_indication_4)
IE_BEGIN(channels_needed_for_mobiles_1_and_2)
   BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
   BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)
IE_BEGIN(cc_capabilities)
   BF(8,              1,ACT_CHECK,                  length,SILENT)
   BF(6,              0,ACT_CHECK,                   spare,SILENT)
   BF(1,              1,ACT_CHECK,              pcp,"same value as classmark2:cmsp")
   BF(1,              1,ACT_CHECK,             dtmf,"MS supports DTMF")
IE_END(cc_capabilities)
IE_BEGIN(description_of_the_first_channel_after_time)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,           channel_type,"TCH")
   BF( 3,              3,ACT_CHECK,      time_slot_number,"three")
   BF( 3,            BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,              0,ACT_CHECK,                hopping,"No")
   BF( 2,              0,ACT_CHECK,                  spare,SILENT)
   BF(10,   ARFCN_BCCH_GSM,ACT_CHECK,             arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time)
IE_BEGIN(iei_5E)
   BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5E)
IE_BEGIN(iei_15)
   BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)
IE_BEGIN(iei_34)
   BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_34)
IE_BEGIN(mobile_identity)            /* has 8 octets */
   BF(8,          7,ACT_CHECK,  length,"seven octets to come")
   BF(4,          2,ACT_CHECK, digit_1,SILENT)
   BF(1,          1,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,0,1),ACT_CHECK,    type,"IMSI")
   BF(4,          2,ACT_CHECK, digit_3,SILENT)
   BF(4,          6,ACT_CHECK, digit_2,SILENT)
   BF(4,          1,ACT_CHECK, digit_4,SILENT)
   BF(4,          0,ACT_CHECK, digit_3,SILENT)
   BF(4,          7,ACT_CHECK, digit_6,SILENT)
   BF(4,          4,ACT_CHECK, digit_5,SILENT)
   BF(4,          1,ACT_CHECK, digit_8,SILENT)
   BF(4,          1,ACT_CHECK, digit_7,SILENT)
   BF(4,          9,ACT_CHECK, digit_10,SILENT)
   BF(4,          4,ACT_CHECK, digit_9,SILENT)
   BF(4,          2,ACT_CHECK, digit_12,SILENT)
   BF(4,          1,ACT_CHECK, digit_11,SILENT)
IE_END(mobile_identity)
IE_BEGIN(ms_classmark)
   BF(8,          3,ACT_CHECK, length,SILENT)
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        BF(1,          0,ACT_CHECK, spare,SILENT)
        BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
        BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
        BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
        BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
        BF(1,          0,ACT_CHECK, spare2,SILENT)
        BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
        BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
        BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
        BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
        BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
        BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
        BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
        BF(5,          1,ACT_CHECK, ccbs,SILENT)
        BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
        BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
    IE_END(ms_classmark)
    IE_BEGIN(neighbour_cell_description_26_6_3_1_3)
        BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
        BF( 1,          0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
        BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
        BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
        BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
        BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
        BF(32,0x00000000,ACT_CHECK,ba_032_001,"no neigbours")
    IE_END(neighbour_cell_description_26_6_3_1_3)
    IE_BEGIN(rach_moc)
        BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
        BF(5,M5(1,1,1,1,1),ACT_SHOW,  random_reference,"ignore Random Ref.")
    IE_END(rach_moc)
    IE_BEGIN(signal_call_waiting)
        BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
    IE_END(signal_call_waiting)
/*------------------------------------------------------------------*\
| Messages
\*------------------------------------------------------------------*/
/*
** alerting (SS to MS)
** definition : GSM 04.08, 9.3.1.1 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(alerting)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(alerting_message_type)
MSG3_END(alerting)
/*
** assignment_command
** definition : GSM 04.08, 9.1.2 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(assignment_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_GSM)
    IE(power_command)
MSG3_END(assignment_command)
MSG3_BEGIN(assignment_command_no_ciph)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_GSM)
    IE(power_command)
    IE(iei_09)
    IE(cipher_mode_setting_none)
MSG3_END(assignment_command_no_ciph)
MSG3_BEGIN(assignment_command_ciph)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_GSM)
    IE(power_command)
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```
    IE(iei_09)
    IE(cipher_mode_setting_a5_1)
MSG3_END(assignment_command_ciph)
MSG3_BEGIN(assignment_command_ciph_a2)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_GSM)
    IE(power_command)
    IE(iei_09)
    IE(cipher_mode_setting_a5_2)
MSG3_END(assignment_command_ciph_a2)
MSG3_BEGIN(assignment_command_19)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel)
MSG3_END(assignment_command_19)
MSG3_BEGIN(assignment_command_28)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_HOP_TCHF4)
    IE(power_command_28)
    IE(iei_72)
    IE(mobile_allocation_28)
MSG3_END(assignment_command_28)
MSG3_BEGIN(assignment_command_28_H)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_HOP_TCHH4)
    IE(power_command_28)
    IE(iei_72)
    IE(mobile_allocation_28)
MSG3_END(assignment_command_28_H)
MSG3_BEGIN(assignment_command_300)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_HOP_TCHF1)
    IE(power_command)
    IE(iei_62)
    IE(cell_channel_description_300)
    IE(iei_63)
    IE(mode_of_the_first_channel)
    IE(iei_72)
    IE(mobile_allocation_300)
MSG3_END(assignment_command_300)
MSG3_BEGIN(assignment_command_1800_H)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_HOP_TCHF6)
    IE(power_command_28)
    IE(iei_05)
    IE(frequency_list_1800_H)
MSG3_END(assignment_command_1800_H)
/*
** assignment_complete
** definition : GSM 04.08, 9.1.3 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(assignment_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_complete_message_type)
    IE(rr_cause)
MSG3_END(assignment_complete)
/*
** assignment_failure
```

```
** definition : GSM 04.08, 9.1.3 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(assignment_failure)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_failure_message_type)
    IE(rr_cause_failure)
MSG3_END(assignment_failure)
/*
** authentication_request
** definition : GSM 04.08, 9.2.2 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(authentication_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_request_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(authentication_parameter_rand)
MSG3_END(authentication_request)
/*
** authentication_response
** definition : GSM 04.08, 9.2.3 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(authentication_response)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_response_message_type)
    IE(authentication_parameter_sres)
MSG3_END(authentication_response)
/*
** call_proceeding
** definition : GSM 04.08, 9.2.3 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(call_proceeding)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_proceeding_message_type)
MSG3_END(call_proceeding)
/*
** channel_mode_modify
** definition : GSM 04.08, 9.1.5 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(channel_mode_modify)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_mode_modify_message_type)
    IE(channel_description_GSM)
    IE(channel_mode)
MSG3_END(channel_mode_modify)
/*
** channel_mode_modify_acknowledge
** definition : GSM 04.08, 9.1.6 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(channel_mode_modify_acknowledge)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_mode_modify_acknowledge_message_type)
    IE(channel_description_GSM) /* should equal to what have been sent in channel_mode_modify
*/
    IE(channel_mode)        /* should equal to what have been sent in channel_mode_modify */
MSG3_END(channel_mode_modify_acknowledge)
```

```
/*
** channel_release
** definition : GSM 04.08, 9.1.7 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(channel_release)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_release_message_type)
    IE(rr_cause)
MSG3_END(channel_release)
/*
** channel_request
** definition : GSM 04.08, 9.1.8 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(channel_request)
    IE(rach)
MSG3_END(channel_request)
/*
** ciphering_mode_command
** definition : GSM 04.08, 9.1.9 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(ciphering_mode_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_command_message_type)
    IE(cipher_response)
    IE(ciphering_mode_setting)
MSG3_END(ciphering_mode_command)

MSG3_BEGIN(ciphering_mode_command_no_ciph)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_command_message_type)
    IE(cipher_response)
    IE(cipher_mode_setting_none)
MSG3_END(ciphering_mode_command_no_ciph)
/*
** ciphering_mode_complete
** definition : GSM 04.08, 9.1.10 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(ciphering_mode_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_complete_message_type)
MSG3_END(ciphering_mode_complete)
/*
** classmark_change
** definition : GSM 04.08, 9.1.11 (RR)
** values     : GSM 11.10, 26.6.14 (??? classmark_3 may be nec. if required by PICS/PIXIT)
** usage      : mrr*
*/
MSG3_BEGIN(classmark_change)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(classmark_change_message_type)
    IE(mobile_station_classmark_2_GSM)
    IE(mobile_station_classmark_3_900)
MSG3_END(classmark_change)
MSG3_BEGIN(classmark_change_1800)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(classmark_change_message_type)
    IE(mobile_station_classmark_2_DCS)
    IE(mobile_station_classmark_3_1800)
MSG3_END(classmark_change_1800)
MSG3_BEGIN(classmark_change_GSM_DUAL)
    IE(skip_indicator)
```

```
      IE(rr_management_protocol_discriminator)
      IE(classmark_change_message_type)
      IE(mobile_station_classmark_2_GSM)
      IE(mobile_station_classmark_3_DUAL)
MSG3_END(classmark_change_GSM_DUAL)
MSG3_BEGIN(classmark_change_GSM_DUAL_EXT)
      IE(skip_indicator)
      IE(rr_management_protocol_discriminator)
      IE(classmark_change_message_type)
      IE(mobile_station_classmark_2_EGSM)
      IE(mobile_station_classmark_3_DUAL_EXT)
MSG3_END(classmark_change_GSM_DUAL_EXT)
MSG3_BEGIN(classmark_change_DCS_DUAL)
      IE(skip_indicator)
      IE(rr_management_protocol_discriminator)
      IE(classmark_change_message_type)
      IE(mobile_station_classmark_2_DCS)
      IE(mobile_station_classmark_3_DUAL)
MSG3_END(classmark_change_DCS_DUAL)
MSG3_BEGIN(classmark_change_1900)
      IE(skip_indicator)
      IE(rr_management_protocol_discriminator)
      IE(classmark_change_message_type)
      IE(mobile_station_classmark_2_DCS)
      IE(mobile_station_classmark_3_1900)
MSG3_END(classmark_change_1900)
MSG3_BEGIN(classmark_change_850)
      IE(skip_indicator)
      IE(rr_management_protocol_discriminator)
      IE(classmark_change_message_type)
      IE(mobile_station_classmark_2_GSM)
      IE(mobile_station_classmark_3_850)
MSG3_END(classmark_change_850)
MSG3_BEGIN(classmark_change_DUAL_US)
      IE(skip_indicator)
      IE(rr_management_protocol_discriminator)
      IE(classmark_change_message_type)
      IE(mobile_station_classmark_2_DCS)
      IE(mobile_station_classmark_3_DUAL_US)
MSG3_END(classmark_change_DUAL_US)
/*
** cm_service_accept
** definition : GSM 04.08, 9.2.5 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(cm_service_accept)
      IE(skip_indicator)
      IE(mobility_management_protocol_discriminator)
      IE(cm_service_accept_message_type)
MSG3_END(cm_service_accept)
/*
** cm_service_request
** definition : GSM 04.08, 9.2.9 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(cm_service_request)
      IE(skip_indicator)
      IE(mobility_management_protocol_discriminator)
      IE(cm_service_request_message_type)
      IE(ciphering_key_sequence_number)
      IE(cm_service_type)
      IE(mobile_station_classmark_2_GSM)
      IE(mobile_identity_imsi)
MSG3_END(cm_service_request)
MSG3_BEGIN(cm_service_request_pseudo_sync)
      IE(skip_indicator)
      IE(mobility_management_protocol_discriminator)
      IE(cm_service_request_message_type)
      IE(ciphering_key_sequence_number)
      IE(cm_service_type)
      IE(mobile_station_classmark_2_GSM_pseudo_sync)
      IE(mobile_identity_imsi)
MSG3_END(cm_service_request_pseudo_sync)
```

```
/*
** connect (SS to MS)
** definition : GSM 04.08, 9.3.5.1 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(connect)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(connect_message_type)
MSG3_END(connect)
/*
** connect_acknowledge
** definition : GSM 04.08, 9.3.6 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(connect_acknowledge)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(connect_acknowledge_message_type)
MSG3_END(connect_acknowledge)
/*
** handover_access
** definition : GSM 04.08, 9.1.14 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(handover_access)
    IE(handover_reference)
MSG3_END(handover_access)
/*
** handover_command
** definition : GSM 04.08, 9.1.15 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(handover_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
    IE(cell_description)
    IE(channel_description_GSM)
    IE(handover_reference)
    IE(power_command)
MSG3_END(handover_command)

MSG3_BEGIN(handover_command_ciph)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
    IE(cell_description_20)
    IE(channel_description_GSM)
    IE(handover_reference)
    IE(power_command)
    IE(iei_09)
    IE(cipher_mode_setting_a5_1)
MSG3_END(handover_command_ciph)

MSG3_BEGIN(handover_command_ciph_a2)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
    IE(cell_description_20)
    IE(channel_description_GSM)
    IE(handover_reference)
    IE(power_command)
    IE(iei_09)
    IE(cipher_mode_setting_a5_2)
MSG3_END(handover_command_ciph_a2)

MSG3_BEGIN(handover_command_no_ciph)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
```

TEXAS INSTRUMENTS

```
    IE(cell_description_20)
    IE(channel_description_GSM)
    IE(handover_reference)
    IE(power_command)
    IE(iei_09)
    IE(cipher_mode_setting_none)
MSG3_END(handover_command_no_ciph)


/*
** handover_complete
** definition : GSM 04.08, 9.1.16 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(handover_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_complete_message_type)
    IE(rr_cause)
MSG3_END(handover_complete)
/*
** handover_failure
** definition : GSM 04.08, 9.1.17 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(handover_failure_incorrect_msg)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_failure_message_type)
    IE(rr_cause_incorrect_msg)
MSG3_END(handover_failure_incorrect_msg)
/*
** handover_failure
** definition : GSM 04.08, 9.1.17 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(handover_failure_abnormal_release)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_failure_message_type)
    IE(rr_cause_abnormal_release)
MSG3_END(handover_failure_abnormal_release)
/*
** immediate_assignment
** definition : GSM 04.08, 9.1.18 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(immediate_assignment_GSM)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_GSM)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_GSM)
MSG3_BEGIN(immediate_assignment_DCS)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_DCS)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
```

```
MSG3_END(immediate_assignment_DCS)
MSG3_BEGIN(immediate_assignment_EGSM)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_EGSM)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_EGSM)
MSG3_BEGIN(immediate_assignment_850)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_850)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_850)
MSG3_BEGIN(immediate_assignment_HOP_SDCCH8)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_HOP_SDCCH8)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation_E)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_HOP_SDCCH8)
/*
** immediate_assignment_extended
** definition : GSM 04.08, 9.1.19 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(immediate_assignment_extended)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_extended_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_GSM)
    IE(request_reference)
    IE(timing_advance_0)
    IE(channel_description_GSM) /* not filled out yet !!! */
    IE(request_reference_2)
    IE(timing_advance_0)
    IE(mobile_allocation)
    IE(iax_rest_octets)
MSG3_END(immediate_assignment_extended)
/*
** immediate_assignment_reject
** definition : GSM 04.08, 9.1.19 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(immediate_assignment_reject)
    IE(l2_pseudo_length_19)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_reject_message_type)
    IE(page_mode)
    IE(spare_half_octet)
```

TEXAS
INSTRUMENTS

```
        IE(request_reference)
        IE(wait_indication)
        IE(request_reference_2)
        IE(wait_indication_2)
        IE(request_reference_3)
        IE(wait_indication_3)
        IE(request_reference_4)
        IE(wait_indication_4)
        IE(iar_rest_octets)
MSG3_END(immediate_assignment_reject)
/*
** location_updating_request
** definition : GSM 04.08, 9.2.15 (MM)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(location_updating_request)
        IE(skip_indicator)
        IE(mobility_management_protocol_discriminator)
        IE(location_updating_request_message_type)
        IE(ciphering_key_sequence_number)
        IE(location_updating_type)
        IE(location_area_identification)
        IE(mobile_station_classmark_1_GSM)
        IE(mobile_identity_imsi)
MSG3_END(location_updating_request)
/*
** paging_request_type_1
** definition : GSM 04.08, 9.1.22 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(paging_request_type_1)
        IE(l2_pseudo_length_9)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(paging_request_type_1_message_type)
        IE(channel_needed)
        IE(page_mode)
        IE(mobile_identity_imsi)
        IE(p1_rest_octets)
MSG3_END(paging_request_type_1)
MSG3_BEGIN(paging_request_type_1_imsi_none)
        IE(l2_pseudo_length_9)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(paging_request_type_1_message_type)
        IE(channel_needed)
        IE(page_mode)
        IE(mobile_identity_imsi)
        IE(p1_rest_octets_11)
MSG3_END(paging_request_type_1_imsi_none)
MSG3_BEGIN(paging_request_type_1_fill)
        IE(l2_pseudo_length_9)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(paging_request_type_1_message_type)
        IE(channel_needed)
        IE(page_mode)
        IE(mobile_identity_fill)
        IE(p1_rest_octets_fill)
MSG3_END(paging_request_type_1_fill)
/*
** paging_request_type_2
** definition : GSM 04.08, 9.1.23 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(paging_request_type_2)
        IE(l2_pseudo_length_11)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(paging_request_type_2_message_type)
        IE(channel_needed)
        IE(page_mode)
```

TEXAS
INSTRUMENTS

```
    IE(tmsi)
    IE(tmsi_2)
    IE(p2_rest_octets)
MSG3_END(paging_request_type_2)
MSG3_BEGIN(paging_request_type_2_other_other_imsi)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_request_type_2_message_type)
    IE(channel_needed)
    IE(page_mode)
    IE(tmsi_2)
    IE(tmsi_2)
    IE(iei_17)
    IE(mobile_identity_imsi)
    IE(p2_rest_octets_2)
MSG3_END(paging_request_type_2_other_other_imsi)
/*
** paging_request_type_3
** definition : GSM 04.08, 9.1.24 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(paging_request_type_3)
    IE(l2_pseudo_length_19)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_request_type_3_message_type)
    IE(channel_needed)
    IE(page_mode)
    IE(tmsi)
    IE(tmsi_2)
    IE(tmsi_2)
    IE(tmsi_2)
    IE(p3_rest_octets)
MSG3_END(paging_request_type_3)
/*
** paging_response
** definition : GSM 04.08, 9.1.25 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(paging_response_imsi)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(mobile_station_classmark_2_GSM)
    IE(mobile_identity_imsi)
MSG3_END(paging_response_imsi)
MSG3_BEGIN(paging_response_imsi_egsm)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(mobile_station_classmark_2_EGSM)
    IE(mobile_identity_imsi)
MSG3_END(paging_response_imsi_egsm)
MSG3_BEGIN(paging_response_imsi_1800)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(mobile_station_classmark_2_DCS)
    IE(mobile_identity_imsi)
MSG3_END(paging_response_imsi_1800)
MSG3_BEGIN(paging_response_imsi_900_dual)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
```

```
        IE(mobile_station_classmark_2_GSM)
        IE(mobile_identity_imsi)
MSG3_END(paging_response_imsi_900_dual)
MSG3_BEGIN(paging_response_imsi_dual)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(paging_response_message_type)
        IE(spare_half_octet)
        IE(ciphering_key_sequence_number)
        IE(mobile_station_classmark_2_DCS)
        IE(mobile_identity_imsi)
MSG3_END(paging_response_imsi_dual)
MSG3_BEGIN(paging_response_tmsi)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(paging_response_message_type)
        IE(spare_half_octet)
        IE(ciphering_key_sequence_number)
        IE(mobile_station_classmark_2_GSM)
        IE(mobile_identity_tmsi)
MSG3_END(paging_response_tmsi)
/*
** physical_information
** definition : GSM 04.08, 9.1.25 (RR)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(physical_information)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(physical_information_message_type)
        IE(timing_advance_20)
MSG3_END(physical_information)
/*
** setup (MS to SS)
** definition : GSM 04.08, 9.3.23.1 (CC)
** values     : GSM 11.10, 26.6.14
** usage      : mrr*
*/
MSG3_BEGIN(setup)
        IE(transaction_identifier_source)
        IE(call_control_protocol_discriminator)
        IE(setup_message_type)
        IE(iei_04)
        IE(bearer_capability)
        IE(iei_5e)
        IE(called_party_bcd_number)
        IE(iei_15)
        IE(cc_capabilities)
MSG3_END(setup)
MSG3_BEGIN(setup_19)
        IE(transaction_identifier_source)
        IE(call_control_protocol_discriminator)
        IE(setup_message_type)
        IE(iei_34)
        IE(signal_call_waiting)
MSG3_END(setup_19)
MSG3_BEGIN(call_confirmed)
        IE(transaction_identifier_dest)
        IE(call_control_protocol_discriminator)
        IE(call_confirmed_message_type)
        IE(iei_04)
        IE(bearer_capability)
MSG3_END(call_confirmed)
MSG3_BEGIN(call_confirmed_1800_DUAL)              /* contains bearer capability */
        IE(transaction_identifier_dest)
        IE(call_control_protocol_discriminator)
        IE(call_confirmed_message_type)
        IE(iei_04)
        IE(bearer_capability_1800_DUAL)
MSG3_END(call_confirmed_1800_DUAL)


/* ----- Extended GSM ------- */

MSG3_BEGIN(system_information_type_1_E_S1)
```

```
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description_SDCCH8_HOP_S1)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_S1)

MSG3_BEGIN(system_information_type_1_E_N1)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N1)

MSG3_BEGIN(system_information_type_1_E_N2)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N2)

MSG3_BEGIN(system_information_type_1_E_N3)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N3)

MSG3_BEGIN(system_information_type_1_E_N4)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N4)

MSG3_BEGIN(system_information_type_1_E_N5)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N5)

MSG3_BEGIN(system_information_type_1_E_N6)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N6)

MSG3_BEGIN(system_information_type_1_E_N7)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
```

```
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_E_N7)

MSG3_BEGIN(system_information_type_2_E_S1)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_S1)

MSG3_BEGIN(system_information_type_2_E_N1)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N1)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N1)

MSG3_BEGIN(system_information_type_2_E_N2)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N2)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N2)

MSG3_BEGIN(system_information_type_2_E_N3)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N3)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N3)

MSG3_BEGIN(system_information_type_2_E_N4)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N4)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N4)

MSG3_BEGIN(system_information_type_2_E_N5)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N5)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N5)

MSG3_BEGIN(system_information_type_2_E_N6)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N6)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N6)

MSG3_BEGIN(system_information_type_2_E_N7)
```

```
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_E_N7)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_E_N7)

MSG3_BEGIN(system_information_type_3_E_S1)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_1)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_S1)

MSG3_BEGIN(system_information_type_3_E_N1)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_2)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N1)

MSG3_BEGIN(system_information_type_3_E_N2)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_3)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N2)

MSG3_BEGIN(system_information_type_3_E_N3)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_4)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N3)

MSG3_BEGIN(system_information_type_3_E_N4)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_5)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
```

```
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N4)

MSG3_BEGIN(system_information_type_3_E_N5)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_6)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N5)

MSG3_BEGIN(system_information_type_3_E_N6)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_6)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N6)

MSG3_BEGIN(system_information_type_3_E_N7)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_8)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options_bcch)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_E_N7)

MSG3_BEGIN(system_information_type_4_E_S1)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_S1)

MSG3_BEGIN(system_information_type_4_E_N1)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N1)

MSG3_BEGIN(system_information_type_4_E_N2)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
```

```
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N2)


MSG3_BEGIN(system_information_type_4_E_N3)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N3)


MSG3_BEGIN(system_information_type_4_E_N4)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N4)


MSG3_BEGIN(system_information_type_4_E_N5)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N5)


MSG3_BEGIN(system_information_type_4_E_N6)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N6)


MSG3_BEGIN(system_information_type_4_E_N7)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_E_N7)
```

3 TEST CASES

3.1 Initialization of the IUT

3.1.1 MRR000: Initialization (One cell)

Description: (Ref.: GSM 11.10-1, §26.6)
Preamble: None
Script:

```
ISS_INIT              ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")
ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */
```

History: 15.12.97   VK   Initial

TEXAS INSTRUMENTS

3.1.2 MRR001: Initialization (Two cells)

Description: (Ref.: GSM 11.10-1, §26.6)
Preamble: None
Script:

```
ISS_INIT            ( 2)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SYS_INFO       ( 1, system_information_type_1_cell_b)
BS_SET_SYS_INFO       ( 1, system_information_type_2)
BS_SET_SYS_INFO       ( 1, system_information_type_3_cell_b)
BS_SET_SYS_INFO       ( 1, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 1, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 1, system_information_type_6_cell_b)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

BS_SET_SCH            ( 1,BSIC , RFN)
BS_SET_ARFCN          ( 1,ARFCN_BCCH_GSM_CELL_B              )
BS_SET_POWER          ( 1,DOWNLINK_INPUT_LEVEL_DBM_CELL_B)
BS_ON_OFF             ( 1,TRUE)


AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY            ( 5000) /* wait until the MS has detected the cells */
```

History: 07.01.98   VK   Initial

3.2 Immediate assignment

3.2.1 MRR100: Immediate assignment / SDCCH or TCH assignment (26.6.1.1)

Description: (Ref.: GSM 11.10-1, §26.6.1.1)
Preamble: MRR000
Script:

```
{
MSG3_VAR ( msg)

SET_TIMEOUT          ( 30000)

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, msg,"  2:")
BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,"  3: SDCCH test: Channel type = SDCCH/8")
   BF_SET_VAL         (ref,MSG3_BF_GET_VAL(msg,ref),"")
   BF_SET_VAL         (t1_,MSG3_T1_(msg),SILENT)
   BF_SET_VAL         ( t3,MSG3_T3 (msg),SILENT)
   BF_SET_VAL         ( t2,MSG3_T2 (msg),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 4:")
BS_MSG3_SEND         ( 0, channel_release," 5:")

MSG3_COPY_DESTROY    ( msg)
}
```

History: 15.12.97   VK   Initial

3.2.2 MRR101: Immediate assignment / extended assignment (26.6.1.2)

Description: (Ref.: GSM 11.10-1, §26.6.1.2)
Differences to Test Specification :
The number of CHANNEL REQUESTS in step 1, 9, and 18 are not arbitrarily chosen.
Instead these items take on fixed values (8).

Preamble: None

Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)
MSG3_VAR ( page_msg2)
MSG3_VAR ( page_msg3)
MSG3_VAR ( page_msg4)
MSG3_VAR ( page_msg5)
MSG3_VAR ( page_msg6)
MSG3_VAR ( page_msg7)

IE_BF_SET_VAL        ( rach_control_parameter, max_retrans, 3," Max-retrans is 7 (coded:3)")

#include              <mrr000.tds>

SET_TIMEOUT          ( 30000)

/* PART 1 of 3 : successul paging */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 2: 1st answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 2: 2nd answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg2," 2: 3rd answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg3," 2: 4th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg4," 2: 5th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg5," 2: 6th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg6," 2: 7th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg7," 3: 8th answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_extended,"  4:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg5,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg5),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg5),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg5),SILENT)
   BF_SET_VAL        (request_reference_2.random_access_info,M3(0,1,0),"different Req Ref")
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND         ( 0, channel_release," 6:")

ISS_DELAY            ( 12000) /* wait until cell reselection (step 7) */

/* PART 2 of 3 : only the last three 'channel requests' are handled */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 8:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 8: 1st answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 8: 2nd answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg2," 8: 3rd answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg3," 8: 4th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg4," 8: 5th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg5," 8: 6th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg6," 8: 7th answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg7," 10: 8th answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_extended,"  11:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg4,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg4),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg4),SILENT)
```

```
      BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg4),SILENT)
      BF_SET_VAL          (request_reference_2.random_access_info,M3(0,1,0),"different Req Ref")
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)

TIMEOUT             ( 3000) /* step 14 */

IE_BF_SET_VAL       ( control_channel_description, ccch_conf, 0," 15:not combined")
BS_SET_SYS_INFO     ( 0, system_information_type_3)

ISS_DELAY           ( 40000) /* wait until cell reselection (step 16) */

/* PART 3 of 3 : extented immediate assigment via 'second valid Request Reference' */


BS_CONFIG_CHANNEL   ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        ( 0, paging_request_type_1," 17:")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg0," 18: 1st answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg1," 18: 2nd answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg2," 18: 3rd answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg3," 18: 4th answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg4," 18: 5th answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg5," 18: 6th answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg6," 18: 7th answer to paging")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg7," 19: 8th answer to paging")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_extended,"  20:")
   BF_SET_VAL       (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg5,ref),"")
   BF_SET_VAL       (request_reference_2.t1_,MSG3_T1_(page_msg5),SILENT)
   BF_SET_VAL       (request_reference_2.t3 ,MSG3_T3 (page_msg5),SILENT)
   BF_SET_VAL       (request_reference_2.t2 ,MSG3_T2 (page_msg5),SILENT)
   BF_SET_VAL       (request_reference.random_access_info,M3(0,1,0),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND        ( 0, channel_release," 6:")

MSG3_COPY_DESTROY   ( page_msg7)
MSG3_COPY_DESTROY   ( page_msg6)
MSG3_COPY_DESTROY   ( page_msg5)
MSG3_COPY_DESTROY   ( page_msg4)
MSG3_COPY_DESTROY   ( page_msg3)
MSG3_COPY_DESTROY   ( page_msg2)
MSG3_COPY_DESTROY   ( page_msg1)
MSG3_COPY_DESTROY   ( page_msg0)
}
```

History: 15.12.97   VK   Initial

3.2.3 MRR102: Immediate assignment / assignment rejection (26.6.1.3)

Description: (Ref.: GSM 11.10-1, §26.6.1.3)
Differences to Test Specification :
After the reception of IMMEDIATE ASSIGNMENT REJECT, the MS shall not transmit during the time indicated in the" Wait Indication" field of the IMMEDIATE ASSIGNMENT REJECT message. This conformance requirement cannot be checked in this test suite.

Preamble: None

Script:

```
{
MSG3_VAR ( page_msg)

IE_BF_SET_VAL         ( rach_control_parameter, max_retrans, 3," Max-retrans is 7 (coded:3)")

#include               <mrr001.tds>

SET_TIMEOUT           ( 30000)

BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_1," 1:")

REPEAT_BEGIN          ( COUNT, 8)
BS_RACH_AWAIT_COPY    ( 0, channel_request, page_msg," 1+n: answer to paging")
REPEAT_END(COUNT)

BS_RACH_EXPECT_TIMEOUT( 0, 1000)

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_reject,"  2+n:")
   BF_SET_VAL         (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg,ref),"")
   BF_SET_VAL         (request_reference_2.t1_,MSG3_T1_(page_msg),SILENT)
   BF_SET_VAL         (request_reference_2.t3 ,MSG3_T3 (page_msg),SILENT)
   BF_SET_VAL         (request_reference_2.t2 ,MSG3_T2 (page_msg),SILENT)
   BF_SET_VAL         (wait_indication_2.t3122, 15,"wait 15 seconds")
   BF_SET_VAL         (request_reference.random_access_info  ,M3(0,1,0),"different Req Ref")
   BF_SET_VAL         (request_reference_3.random_access_info,M3(0,1,0),"different Req Ref")
   BF_SET_VAL         (request_reference_4.random_access_info,M3(0,1,0),"different Req Ref")
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
REPEAT_BEGIN          ( COUNT, 10)
   BS_MSG3_SEND       ( 0, paging_request_type_1," 3+n:")
   BS_RACH_EXPECT_TIMEOUT( 0, 1000)
REPEAT_END(COUNT)

ISS_DELAY             ( 6000) /* wait another xx seconds */
                             /* T3122 should now have been elapsed */

BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_1," k:")
BS_RACH_AWAIT_COPY    ( 0, channel_request, page_msg," k+1:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_reject,"  k+2:")
   BF_SET_VAL         (request_reference_3.ref,MSG3_BF_GET_VAL(page_msg,ref),"")
   BF_SET_VAL         (request_reference_3.t1_,MSG3_T1_(page_msg),SILENT)
   BF_SET_VAL         (request_reference_3.t3 ,MSG3_T3 (page_msg),SILENT)
   BF_SET_VAL         (request_reference_3.t2 ,MSG3_T2 (page_msg),SILENT)
   BF_SET_VAL         (wait_indication_3.t3122,255,"wait 255 seconds")
   BF_SET_VAL         (request_reference.random_access_info  ,M3(0,1,0),"different Req Ref")
   BF_SET_VAL         (request_reference_2.random_access_info,M3(0,1,0),"different Req Ref")
   BF_SET_VAL         (request_reference_4.random_access_info,M3(0,1,0),"different Req Ref")
BS_MSG3_SEND_END()

BS_SET_POWER          ( 0,-9999)
BS_SET_POWER          ( 1,-10)

ISS_DELAY             ( 20000) /* wait until the MS has detected the new cell */
```

```
BS_CONFIG_CHANNEL    ( 1, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 1, paging_request_type_1," k+4:")
BS_RACH_AWAIT_COPY   ( 1, channel_request, page_msg," k+5:")

BS_CONFIG_CHANNEL    ( 1, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 1, immediate_assignment_reject,"  k+6:")
   BF_SET_VAL        (request_reference_3.ref,MSG3_BF_GET_VAL(page_msg,ref),"")
   BF_SET_VAL        (request_reference_3.t1_,MSG3_T1_(page_msg),SILENT)
   BF_SET_VAL        (request_reference_3.t3 ,MSG3_T3 (page_msg),SILENT)
   BF_SET_VAL        (request_reference_3.t2 ,MSG3_T2 (page_msg),SILENT)
   BF_SET_VAL        (wait_indication_3.t3122,255,"wait 255 seconds")
   BF_SET_VAL        (request_reference.random_access_info  ,M3(0,1,0),"different Req Ref")
   BF_SET_VAL        (request_reference_2.random_access_info,M3(0,1,0),"different Req Ref")
   BF_SET_VAL        (request_reference_4.random_access_info,M3(0,1,0),"different Req Ref")
BS_MSG3_SEND_END()

MSG3_COPY_DESTROY    ( page_msg)
}
```

History:	08.01.98	VK	Initial
	25.01.99	LE	Testcase updated

3.2.4 MRR103: Immediate assignment / ignore assignment (26.6.1.4, Step 1-2)

Description: (Ref.: GSM 11.10-1, §26.6.1.4, Step 1, 2)
Preamble: None
Script:

```
{
MSG3_VAR ( page_msg)

IE_BF_SET_VAL          ( rach_control_parameter, max_retrans, 3," Max-retrans is 7 (coded:3)")

#include                <mrr000.tds>

SET_TIMEOUT            ( 30000)

BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg," 2: answer to paging")

BS_CONFIG_CHANNEL      ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_GSM," 3:")
   BF_SET_VAL          (request_reference.ref,MSG3_BF_GET_VAL(page_msg,ref),"")
   BF_SET_VAL          (request_reference.t1_,MSG3_T1_(page_msg)   ,SILENT)
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg)+2,"2 too high")
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg)   ,SILENT)
BS_MSG3_SEND_END()

MSG3_COPY_DESTROY     ( page_msg)
}
```

History: 08.01.97   VK   Initial

![Texas Instruments logo]

3.2.5 MRR104: Immediate assignment / ignore assignment (26.6.1.4, Step 3)

Description: (Ref.: GSM 11.10-1, §26.6.1.4, Step 3)
Preamble: MRR103
Script:

```
BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_EXPECT_TIMEOUT( 0, 2000)

BS_MSG3_EXPECT_TIMEOUT( 0, 10000) /* wait another 10 seconds !!! */
```

History: 08.01.97   VK   Initial

3.2.6 MRR105: Immediate assignment / ignore assignment (26.6.1.4, Step 4-8)

Description: (Ref.: GSM 11.10-1, §26.6.1.4, Step 4, 5, 6, 7, 8)
Preamble: MRR103
Script:

```
{
MSG3_VAR ( page_msg)

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg," 4: answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject," 5:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg),SILENT)
BS_MSG3_SEND_END()

ISS_DELAY            ( 6000) /* SS waits for 6 seconds (step 6:) */
ISS_DELAY            ( 4000) /* if PCO is used, wait another 4 seconds */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 7:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg," 8: answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,"  9:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg,ref)^~0,"inv Req Ref")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg),SILENT)
BS_MSG3_SEND_END()

MSG3_COPY_DESTROY    ( page_msg)
}
```

History: 08.01.97   VK   Initial

3.2.7 MRR106: Immediate assignment / ignore assignment (26.6.1.4, Step 9)

Description: (Ref.: GSM 11.10-1, §26.6.1.4, Step 9)
Preamble: MRR105
Script:

```
BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_EXPECT_TIMEOUT( 0, 2000)

BS_MSG3_EXPECT_TIMEOUT( 0, 10000) /* wait another 10 seconds !!! */
```

History: 08.01.97   VK   Initial

TEXAS INSTRUMENTS

3.2.8 MRR107: Immediate assignment / ignore assignment (26.6.1.4, Step 10-11)

Description: (Ref.: GSM 11.10-1, §26.6.1.4, Step 10,11)
Preamble: MRR105
Script:

```
{
MSG3_VAR ( page_msg)

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg," 10: answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  11:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg),SILENT)
BS_MSG3_SEND_END()

MSG3_COPY_DESTROY    ( page_msg)
}
```

History: 08.01.97   VK   Initial

3.2.9 MRR108: Immediate assignment / ignore assignment (26.6.1.4)

Description: (Ref.: GSM 11.10-1, §26.6.1.4)
                     Note : Step 3 and step 4 are swapped. Step 8 and step 9 are swapped.
Preamble: MRR000
Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)

SET_TIMEOUT          ( 30000)

REPEAT               (COUNT,2)

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 2: answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 4: answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,"  3:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg0,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg0)   ,SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg0)+2,"2 too high")
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg0)   ,SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_EXPECT_TIMEOUT( 0, 2000)

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject," 5:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

ISS_DELAY            ( 6000) /* SS waits for 6 seconds (step 6:) */
ISS_DELAY            ( 4000) /* if PCO is used, wait another 4 seconds */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 7:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 8: answer to paging")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 10: answer to paging")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,"  9:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg0,ref)^~0,"inv Req Ref")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg0),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg0),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg0),SILENT)
BS_MSG3_SEND_END()

BS_MSG3_EXPECT_TIMEOUT( 0, 2000)

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  11:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

ISS_DELAY            ( 6000) /* SS waits for 6 seconds */
ISS_DELAY            ( 4000) /* if PCO is used, wait another 4 seconds */

REPEAT_END(COUNT)

MSG3_COPY_DESTROY    ( page_msg0)
MSG3_COPY_DESTROY    ( page_msg1)

}
```

TEXAS INSTRUMENTS

History: 08.01.97   VK   Initial

TEXAS
INSTRUMENTS

3.2.10 MRR109: Immediate assignment after immediate assignment reject (26.6.1.5)

Description: (Ref.: GSM 11.10-1, §26.6.1.5)

                Note : in step 7 it is not verified, that the paging response message is sent on the correct channel. These is no delay between step 5 and 6.

Preamble: None

Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)
MSG3_VAR ( page_msg2)

IE_BF_SET_VAL        ( control_channel_description, ccch_conf, M3(0,0,0)," 1 chan, not comb.");
IE_BF_SET_VAL        ( rach_control_parameter, max_retrans, 3," Max-retrans is 7 (coded:3)")
IE_BF_SET_VAL        ( rach_control_parameter, tx_integer, M4(0,1,0,0)," 7 slots");

#include             <mrr000.tds>

SET_TIMEOUT          ( 30000)

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1, "   1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 2: first  request")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 3: second request")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg2," 4: third  request")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  5:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg0,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg0),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg0),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg0),SILENT)
   BF_SET_VAL        (wait_indication.t3122,6,"wait 6 seconds")
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,"  6:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 7:")
BS_MSG3_SEND         ( 0, channel_release," 8:")

MSG3_COPY_DESTROY    ( page_msg0)
MSG3_COPY_DESTROY    ( page_msg1)
MSG3_COPY_DESTROY    ( page_msg2)

}
```

History: 12.01.97   VK   Initial

TEXAS INSTRUMENTS

3.3 Paging

3.3.1 MRR130: Paging /normal /type 1 (26.6.2.1.1)

Description: (Ref.: GSM 11.10-1, §26.6.2.1.1)

                    Note CCCH_CONF, BS_AG_BLKS_RES and BS_PA_MFRMS take on fixed values.

Preamble: None

Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)

IE_BEGIN(p1_rest_octets_6)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
IE_END(p1_rest_octets_6)
IE_BEGIN(p1_rest_octets_4)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
IE_END(p1_rest_octets_4)
IE_BEGIN(mobile_identity_tmsi_other)
   BF(8,           5,ACT_CHECK,length,"   five octets to come")
   BF(4,M4(1,1,1,1),ACT_CHECK,ANONYMOUS,"bits 5-8 of octet 3 ='1111'")
   BF(1,           0,ACT_CHECK,odd_even," as applicable for TMSI")
   BF(3, M3(1,0,0),ACT_CHECK,type,  "   TMSI")
   BF(8,        0x78,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0x56,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0x34,ACT_CHECK,ANONYMOUS, SILENT)
   BF(8,        0x12,ACT_CHECK,ANONYMOUS, SILENT)
IE_END(mobile_identity_tmsi_other)

MSG3_BEGIN(paging_request_type_1_tmsi_other)
   IE(l2_pseudo_length_9)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_1_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(mobile_identity_tmsi)
   IE(iei_17)
   IE(mobile_identity_tmsi_other)
   IE(p1_rest_octets_6)
MSG3_END(paging_request_type_1_tmsi_other)

MSG3_BEGIN(paging_request_type_1_other_imsi)
   IE(l2_pseudo_length_9)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_1_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(mobile_identity_tmsi_other)
   IE(iei_17)
   IE(mobile_identity_imsi)
   IE(p1_rest_octets_4)
MSG3_END(paging_request_type_1_other_imsi)

MSG3_BEGIN(paging_request_type_1_other_tmsi)
   IE(l2_pseudo_length_9)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_1_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(mobile_identity_tmsi_other)
```

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```
    IE(iei_17)
    IE(mobile_identity_tmsi)
    IE(p1_rest_octets_6)
MSG3_END(paging_request_type_1_other_tmsi)

IE_BF_SET_VAL          ( rach_control_parameter, max_retrans, M2(0,1)," Max-retrans is 2")

#include               <mrr000.tds>

SET_TIMEOUT            ( 30000)
```

```
/* part I : 1st Mobile Identity : IMSI of IUT, 2nd Mobile Identity : not present */
```

```
BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           ( 0, paging_request_type_1_imsi_none,"1:")
BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg0," 2:")
BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL      ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_GSM,     "   4:")
   BF_SET_VAL          (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL          (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL      ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND           ( 0, tmsi_reallocation_command_tmsi , SILENT)
BS_MSG3_AWAIT          ( 0, tmsi_reallocation_complete , SILENT)
BS_MSG3_SEND           ( 0, channel_release," 6:")


ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */
```

```
/* part II : 1st Mobile Identity : TMSI of IUT, 2nd Mobile Identity : other TMSI */
```

```
BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           ( 0, paging_request_type_1_tmsi_other,"7:")
BS_RACH_AWAIT_COPY     ( 0,  channel_request, page_msg0," 8:")
BS_RACH_AWAIT_COPY     ( 0,  channel_request, page_msg1," 9:")

BS_CONFIG_CHANNEL      ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_GSM,     "   10:")
   BF_SET_VAL          (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL          (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL      ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          ( 0, paging_response_tmsi," 11: Mobile Ident: TMSI.")
BS_MSG3_SEND           ( 0, channel_release," 12:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */
```

```
/* part III : 1st Mobile Identity : TMSI of other MS, 2nd Mobile Identity : IMSI of IUT*/
```

```
BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           ( 0, paging_request_type_1_other_imsi,"13:")
BS_RACH_AWAIT_COPY     ( 0,  channel_request, page_msg0," 14:")
BS_RACH_AWAIT_COPY     ( 0,  channel_request, page_msg1," 15:")

BS_CONFIG_CHANNEL      ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_GSM,     "   16:")
   BF_SET_VAL          (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL          (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL      ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          ( 0, paging_response_imsi," 17: Mobile Ident: IMSI.")
BS_MSG3_SEND           ( 0, channel_release,   "   18:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */
```

```
/* part IV : 1st Mobile Identity : TMSI of other MS, 2nd Mobile Identity : TMSI of IUT */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1_other_tmsi,"19:")
BS_RACH_AWAIT_COPY   ( 0,  channel_request, page_msg0," 20:")
BS_RACH_AWAIT_COPY   ( 0,  channel_request, page_msg1," 21:")


BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,      "   22:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()


BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_tmsi," 23: Mobile Ident: TMSI.")
BS_MSG3_SEND         ( 0, channel_release," 24:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */

/* part V : 1st Mobile Identity : TMSI of IUT (wrong type), 2nd Mobile Identity : none */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, paging_request_type_1,"25:")
   BF_SET_VAL        ( mobile_identity_imsi.type, M3(0,0,0)," no Identity")
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0) /* step 26: no signalling for 1 second */
BS_MSG3_EXPECT_TIMEOUT( 0, 1000)

MSG3_COPY_DESTROY    ( page_msg0)
MSG3_COPY_DESTROY    ( page_msg1)

}
```

History: 12.01.97   VK   Initial

3.3.2 MRR131: Paging /normal /type 2 (26.6.2.1.2)

Description: (Ref.: GSM 11.10-1, §26.6.2.1.2)
                       Note CCCH_CONF, BS_AG_BLKS_RES and BS_PA_MFRMS take on fixed values.
Preamble: None
Script:
```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)


IE_BEGIN(iei_17)
   BF(8,0x17,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_17)

IE_BEGIN(p2_rest_octets_4)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
IE_END(p2_rest_octets_4)

MSG3_BEGIN(paging_request_type_2_tmsi_other_none)
   IE(l2_pseudo_length_11)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_2_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi)
   IE(tmsi_2)
   IE(p2_rest_octets)
MSG3_END(paging_request_type_2_tmsi_other_none)

MSG3_BEGIN(paging_request_type_2_other_tmsi_none)
   IE(l2_pseudo_length_11)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_2_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi_2)
   IE(tmsi)
   IE(p2_rest_octets)
MSG3_END(paging_request_type_2_other_tmsi_none)

MSG3_BEGIN(paging_request_type_2_other_other_tmsi)
   IE(l2_pseudo_length_11)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_2_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(iei_17)
   IE(mobile_identity_tmsi)
   IE(p2_rest_octets_4)
MSG3_END(paging_request_type_2_other_other_tmsi)

IE_BF_SET_VAL        ( rach_control_parameter, max_retrans, M2(0,1)," Max-retrans is 2")

#include              <mrr000.tds>

ISS_DELAY            ( 5000) /* wait until the MS has detected the cells */

SET_TIMEOUT          ( 30000)

/* preamble: allocation of TMSI */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1_imsi_none,"1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 2:")
```

```
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_GSM,    "   4:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND        ( 0, tmsi_reallocation_command_tmsi , SILENT)
BS_MSG3_AWAIT       ( 0, tmsi_reallocation_complete , SILENT)
BS_MSG3_SEND        ( 0, channel_release," 6:")


ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */


/* part I : 1st TMSI : TMSI of IUT, 2nd TMSI : another TMSI, Mob ID not present*/

BS_CONFIG_CHANNEL   ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        ( 0, paging_request_type_2_tmsi_other_none,"1:")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg0," 2:")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_GSM,    "   4:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 0, paging_response_tmsi," 5: Mobile Ident : TMSI")
BS_MSG3_SEND        ( 0, channel_release," 6:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */


/* part II : 1st TMSI : another , 2nd TMSI : TMSI of IUT, Mob ID not present*/

BS_CONFIG_CHANNEL   ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        ( 0, paging_request_type_2_other_tmsi_none,"7:")
BS_RACH_AWAIT_COPY  ( 0,  channel_request, page_msg0," 8:")
BS_RACH_AWAIT_COPY  ( 0,  channel_request, page_msg1," 9:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_GSM,    "   10:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 0, paging_response_tmsi," 11: Mobile Ident: TMSI.")
BS_MSG3_SEND        ( 0, channel_release," 12:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */


/* part III : 1st TMSI : another , 2nd TMSI : another, Mob ID : TMSI of IUT */

BS_CONFIG_CHANNEL   ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        ( 0, paging_request_type_2_other_other_tmsi,"13:")
BS_RACH_AWAIT_COPY  ( 0,  channel_request, page_msg0," 14:")
BS_RACH_AWAIT_COPY  ( 0,  channel_request, page_msg1," 15:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_GSM,      "   16:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()
```

```
BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_tmsi," 17: Mobile Ident: TMSI.")
BS_MSG3_SEND          ( 0, channel_release, "   18:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */


/* part IV : 1st TMSI : another , 2nd TMSI : another, Mob ID : IMSI of IUT */

BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_2_other_other_imsi,"19:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg0," 20:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg1," 21:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_GSM,      "   22:")
   BF_SET_VAL         (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL         (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_imsi," 23: Mobile Ident: IMSI.")
BS_MSG3_SEND          ( 0, channel_release," 24:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */

/* part V : 1st TMSI : another , 2nd TMSI : another, Mob ID : TMSI of IUT (wrong type)*/

BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, paging_request_type_2_other_other_tmsi,"25:")
   BF_SET_VAL         ( mobile_identity_tmsi.type, M3(0,0,0)," no Identity")
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0) /* step 26: no signalling for 1 second */
BS_MSG3_EXPECT_TIMEOUT( 0, 1000)

MSG3_COPY_DESTROY     ( page_msg0)
MSG3_COPY_DESTROY     ( page_msg1)


}
```

| History: | 13.01.98 | VK | Initial |
| | 25.01.99 | LE | Testcase updated |

3.3.3 MRR132: Paging /normal /type 3 (26.6.2.1.3)

Description: (Ref.: GSM 11.10-1, §26.6.2.1.3)
                   Note CCCH_CONF, BS_AG_BLKS_RES and BS_PA_MFRMS take on fixed values.

Preamble: None

Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)

MSG3_BEGIN(paging_request_type_3_tmsi_1)
   IE(l2_pseudo_length_19)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_3_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(p3_rest_octets)
MSG3_END(paging_request_type_3_tmsi_1)

MSG3_BEGIN(paging_request_type_3_tmsi_2)
   IE(l2_pseudo_length_19)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_3_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi_2)
   IE(tmsi)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(p3_rest_octets)
MSG3_END(paging_request_type_3_tmsi_2)

MSG3_BEGIN(paging_request_type_3_tmsi_3)
   IE(l2_pseudo_length_19)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_3_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(tmsi)
   IE(tmsi_2)
   IE(p3_rest_octets)
MSG3_END(paging_request_type_3_tmsi_3)

MSG3_BEGIN(paging_request_type_3_tmsi_4)
   IE(l2_pseudo_length_19)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(paging_request_type_3_message_type)
   IE(channel_needed)
   IE(page_mode)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(tmsi_2)
   IE(tmsi)
   IE(p3_rest_octets)
MSG3_END(paging_request_type_3_tmsi_4)

IE_BF_SET_VAL        ( rach_control_parameter, max_retrans, M2(0,1)," Max-retrans is 2")

#include            <mrr000.tds>

SET_TIMEOUT         ( 30000)

/* preamble: allocation of TMSI */
```

```
BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_1_imsi_none,"1:")
BS_RACH_AWAIT_COPY    ( 0, channel_request, page_msg0," 2:")
BS_RACH_AWAIT_COPY    ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_GSM,     "  4:")
   BF_SET_VAL         (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL         (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND          ( 0, tmsi_reallocation_command_tmsi , SILENT)
BS_MSG3_AWAIT         ( 0, tmsi_reallocation_complete , SILENT)
BS_MSG3_SEND          ( 0, channel_release," 6:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */
```

/* part I : 1st TMSI : TMSI of IUT */

```
BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_3_tmsi_1,"1:")
BS_RACH_AWAIT_COPY    ( 0, channel_request, page_msg0," 2:")
BS_RACH_AWAIT_COPY    ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_GSM,     "  4:")
   BF_SET_VAL         (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL         (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_tmsi," 5: Mobile Ident : TMSI")
BS_MSG3_SEND          ( 0, channel_release," 6:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */
```

/* part II : 2nd TMSI : TMSI of IUT */

```
BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_3_tmsi_2,"7:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg0," 8:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg1," 9:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_GSM,     "  10:")
   BF_SET_VAL         (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL         (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_tmsi," 11: Mobile Ident: TMSI.")
BS_MSG3_SEND          ( 0, channel_release," 12:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */
```

/* part III : 3rd TMSI : TMSI of IUT */

```
BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_3_tmsi_3,"13:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg0," 14:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg1," 15:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_GSM,     "  16:")
   BF_SET_VAL         (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL         (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
```

```
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_tmsi," 17: Mobile Ident: TMSI.")
BS_MSG3_SEND          ( 0, channel_release,   "   18:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */

/* part IV : 4th TMSI : TMSI of IUT */

BS_CONFIG_CHANNEL     ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          ( 0, paging_request_type_3_tmsi_4,"19:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg0," 20:")
BS_RACH_AWAIT_COPY    ( 0,  channel_request, page_msg1," 21:")

BS_CONFIG_CHANNEL     ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN    ( 0, immediate_assignment_GSM,     "   22:")
   BF_SET_VAL          (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),SILENT)
   BF_SET_VAL          (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 0, paging_response_tmsi," 23: Mobile Ident: TMSI.")
BS_MSG3_SEND          ( 0, channel_release," 24:")

ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */

MSG3_COPY_DESTROY    ( page_msg0)
MSG3_COPY_DESTROY    ( page_msg1)

}
```

History:	13.01.98	VK	Initial
	25.01.99	LE	Testcase updated

3.3.4 MRR133: Paging / extended (26.6.2.2)

Description: (Ref.: GSM 11.10-1, §26.6.2.2)
Note CCCH_CONF, BS_AG_BLKS_RES and BS_PA_MFRMS take on fixed values.

Preamble: None
Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)

IE_BF_SET_VAL        ( rach_control_parameter, max_retrans, M2(0,1)," Max-retrans is 2")

#include              <mrr000.tds>

SET_TIMEOUT          ( 30000)


/* preamble: allocation of TMSI */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1_imsi_none,"1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 2:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,    " 4:")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND         ( 0, tmsi_reallocation_command_tmsi , SILENT)
BS_MSG3_AWAIT        ( 0, tmsi_reallocation_complete , SILENT)
BS_MSG3_SEND         ( 0, channel_release," 6:")


ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */

/* part I : */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, paging_request_type_1,"1:")
   BF_SET_VAL        (page_mode.pm,M2(0,1),"extended paging")
BS_MSG3_SEND_END()
BS_MSG3_SEND         ( 0, paging_request_type_1,"2:")

BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 3:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 4:")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject," 5:")
   BF_SET_VAL        (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL        (wait_indication_2.t3122,5,"wait 5 seconds")
BS_MSG3_SEND_END()

ISS_DELAY ( 5000) /* step 6: */
ISS_DELAY ( 3000) /* wait another 3 seconds */

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM,    " 7:")
   BF_SET_VAL        (page_mode.pm,M2(0,1),"extended paging")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref)^(-1),"different")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()
```

```
/* part II : */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1,"8:")

BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 9:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 10:")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  11:")
   BF_SET_VAL        (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL        (wait_indication_2.t3122,5,"wait 5 seconds")
BS_MSG3_SEND_END()

ISS_DELAY ( 5000) /* step 12: */
ISS_DELAY ( 3000) /* wait another 3 seconds */

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_extended," 13:")
   BF_SET_VAL        (page_mode.pm,M2(0,1),"extended paging")
   BF_SET_VAL        (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref)^(-1),"different")
   BF_SET_VAL        (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

/* part III : */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_3,"14:")

BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 15:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 16:")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  17:")
   BF_SET_VAL        (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL        (wait_indication_2.t3122,5,"wait 5 seconds")
BS_MSG3_SEND_END()

ISS_DELAY ( 5000) /* step 18: */
ISS_DELAY ( 3000) /* wait another 3 seconds */

/* part IV : */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN   ( 0, paging_request_type_3,"19:")
   BF_SET_VAL        (page_mode.pm,M2(0,1),"extended paging")
BS_MSG3_SEND_END()

BS_MSG3_SEND         ( 0, paging_request_type_2_other_other_imsi,"20:")

BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 21:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 22:")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  23:")
   BF_SET_VAL        (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL        (wait_indication_2.t3122,5,"wait 5 seconds")
BS_MSG3_SEND_END()

ISS_DELAY ( 5000) /* step 24: */
ISS_DELAY ( 3000) /* wait another 3 seconds */
```

```
/* part V : */
BS_MSG3_SEND_BEGIN   ( 0, paging_request_type_2,"25:")
   BF_SET_VAL        (page_mode.pm,M2(0,1),"extended paging")
BS_MSG3_SEND_END()
BS_MSG3_SEND         ( 0, paging_request_type_1_imsi_none,"26:")

BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg0," 27:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, page_msg1," 28:")

BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_reject,"  29:")
   BF_SET_VAL        (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL        (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL        (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL        (wait_indication_2.t3122,5,"wait 5 seconds")
BS_MSG3_SEND_END()

MSG3_COPY_DESTROY    ( page_msg0)
MSG3_COPY_DESTROY    ( page_msg1)

}
```

History: 13.01.97   VK   Initial

TEXAS INSTRUMENTS

3.3.5 MRR134: Paging / reorganization (26.6.2.3)

Description: (Ref.: GSM 11.10-1, §26.6.2.3)
                      Note CCCH_CONF, BS_AG_BLKS_RES and BS_PA_MFRMS take on fixed values.
Preamble: None
Script:

```
{
MSG3_VAR ( page_msg0)
MSG3_VAR ( page_msg1)

IE_BF_SET_VAL          ( rach_control_parameter, max_retrans, M2(0,1)," Max-retrans is 2")
IE_BF_SET_VAL          ( control_channel_description, ccch_conf, M3(0,0,0)," 1 chan, uncomb.")

#include               <mrr000.tds>

SET_TIMEOUT            ( 30000)


/* preamble: allocation of TMSI */

BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           ( 0, paging_request_type_1_imsi_none,"1:")
BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg0," 2:")
BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg1," 3:")

BS_CONFIG_CHANNEL      ( 0, AGCH, UNACK, SAPI_0)
BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_GSM,     "  4:")
   BF_SET_VAL          (request_reference.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL          (request_reference.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference.t2 ,MSG3_T2 (page_msg1),SILENT)
BS_MSG3_SEND_END()

BS_CONFIG_CHANNEL      ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          ( 0, paging_response_imsi," 5:")
BS_MSG3_SEND           ( 0, tmsi_reallocation_command_tmsi , SILENT)
BS_MSG3_AWAIT          ( 0, tmsi_reallocation_complete , SILENT)
BS_MSG3_SEND           ( 0, channel_release," 6:")


ISS_DELAY ( 12000)  /*" The SS waits 12 seconds to perform cell reselection." */

/* part I : */

BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_extended," 1:")
   BF_SET_VAL          (page_mode.pm,M2(1,0),"reorganization")
BS_MSG3_SEND_END()

ISS_DELAY              ( 3000)        /* wait for the MS to accept the new page mode */

BS_SET_PAGE_MODE       ( 0, M2(1,0), 1, -1) /* set 'paging reorganization' */

BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           ( 0, paging_request_type_2,"2: normal paging")

BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg0," 3:")
BS_RACH_AWAIT_COPY     ( 0, channel_request, page_msg1," 4:")

BS_CONFIG_CHANNEL      ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN     ( 0, immediate_assignment_reject," 5:")
   BF_SET_VAL          (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL          (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL          (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL          (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL          (wait_indication_2.t3122,0,"wait 0 seconds")
BS_MSG3_SEND_END()

ISS_DELAY ( 8000) /* step 6: */

BS_CONFIG_CHANNEL      ( 0, PCH, UNACK, SAPI_0)
```

```
BS_MSG3_SEND_BEGIN  ( 0, paging_request_type_2," 7: paging reorganization")
   BF_SET_VAL         (page_mode.pm,M2(1,0),"reorganization")
BS_MSG3_SEND_END()

BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg0," 8:")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg1," 9:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_reject," 10:")
   BF_SET_VAL         (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL         (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL         (wait_indication_2.t3122,0,"wait 0 seconds")
BS_MSG3_SEND_END()

IE_BF_SET_VAL        ( control_channel_description, ccch_conf, M3(0,0,1)," 1 chan, comb.")
IE_BF_SET_VAL        ( control_channel_description, bs_ag_blks_res,2,"");
IE_BF_SET_VAL        ( control_channel_description, bs_pa_mfrms,7,"9 multiframes");
BS_SET_SYS_INFO      ( 0, system_information_type_3)

BS_SET_PAGE_MODE     ( 0, M2(0,0), 1, -1) /* set 'normal paging' */

ISS_DELAY ( 3000) /* step 14: */
ISS_DELAY ( 20000) /* wait another 20 seconds */

BS_CONFIG_CHANNEL   ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        ( 0, paging_request_type_1,"15: normal paging")

BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg0," 16:")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg1," 17:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_reject," 18:")
   BF_SET_VAL         (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL         (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL         (wait_indication_2.t3122,0,"wait 0 seconds")
BS_MSG3_SEND_END()

ISS_DELAY ( 5000) /* step 14: */
ISS_DELAY ( 3000) /* wait another 3 seconds: */

BS_CONFIG_CHANNEL   ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        ( 0, paging_request_type_2,"19: normal paging")

BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg0," 20:")
BS_RACH_AWAIT_COPY  ( 0, channel_request, page_msg1," 21:")

BS_CONFIG_CHANNEL   ( 0, AGCH, UNACK, SAPI_0)

BS_MSG3_SEND_BEGIN  ( 0, immediate_assignment_reject," 22:")
   BF_SET_VAL         (request_reference_2.ref,MSG3_BF_GET_VAL(page_msg1,ref),"")
   BF_SET_VAL         (request_reference_2.t1_,MSG3_T1_(page_msg1),SILENT)
   BF_SET_VAL         (request_reference_2.t3 ,MSG3_T3 (page_msg1),SILENT)
   BF_SET_VAL         (request_reference_2.t2 ,MSG3_T2 (page_msg1),SILENT)
   BF_SET_VAL         (wait_indication_2.t3122,0,"wait 0 seconds")
BS_MSG3_SEND_END()

MSG3_COPY_DESTROY   ( page_msg0)
MSG3_COPY_DESTROY   ( page_msg1)

}
```

History: 13.01.97   VK   Initial

Texas Instruments

3.3.6 MRR135: Call Setup Procedure for Mobile Terminated Calls (10.1)

Description: This test describes the generic mobile terminated call setup procedure.
System information messages must have been sent.

Preamble: MRR000

Script:

```
SET_TIMEOUT          ( 30000)

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT         (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND          (0,authentication_request,"Step 5")
BS_MSG3_AWAIT         (0,authentication_response,"Step 6")
BS_MSG3_SEND          (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND          (0,setup_19,"Step 1")
BS_MSG3_AWAIT         (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT         (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT         (0,connect,"Step 11")
BS_MSG3_SEND          (0,assignment_command_19,"Step 12")

BS_CONFIG_CHANNEL     (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,assignment_complete,"Step 13")
BS_MSG3_SEND          (0,connect_acknowledge,"Step 14")
```

History: 22.01.97   VK   Initial

3.4 Measurements

3.4.1 MRR150: Measurement / no neighbours (26.6.3.1)

Description: (Ref.: GSM 11.10-1, §26.6.3.1)
Preamble: None
Script:

```
IE_BEGIN(measurement_results)
  BF(1,1,ACT_CHECK  ,ba_ind                      ,SILENT)
  BF(1,0,ACT_CHECK,dtx                           ,"DTX was not used")
  BF(6,0x32,ACT_CHECK  ,rxlev_full_serving_cell ,SILENT)
  BF(1,0,ACT_CHECK  ,ANONYMOUS                   ,"spare")
  BF(1,0,ACT_CHECK,meas_valid               ,"valid within the 2nd SACCH"
                                              "   block at the latest")
  BF(6,0x32,ACT_CHECK  ,rxlev_sub_serving_cell ,SILENT)
  BF(1,0,ACT_CHECK  ,ANONYMOUS                   ,"spare")
  BF(3,0,ACT_CHECK  ,rxqual_full_serving_cell,SILENT)
  BF(3,0,ACT_CHECK  ,rxqual_sub_serving_cell ,SILENT)
  BF(3,0,ACT_CHECK ,num_ncell_m               ,"no neighbor cell (0) or :"
                                              "   ncell info not avail (7)")
  BF(6,0,ACT_CHECK,    rxlev_ncell_1        ,SILENT)
  BF(5,0,ACT_CHECK,bcch_freq_ncell_1        ,SILENT)
  BF(6,0,ACT_CHECK,     bsic_ncell_1        ,SILENT)
  BF(6,0,ACT_CHECK,    rxlev_ncell_2        ,SILENT)
  BF(5,0,ACT_CHECK,bcch_freq_ncell_2        ,SILENT)
  BF(6,0,ACT_CHECK,     bsic_ncell_2        ,SILENT)
  BF(6,0,ACT_CHECK,    rxlev_ncell_3        ,SILENT)
  BF(5,0,ACT_CHECK,bcch_freq_ncell_3        ,SILENT)
  BF(6,0,ACT_CHECK,     bsic_ncell_3        ,SILENT)
  BF(6,0,ACT_CHECK,    rxlev_ncell_4        ,SILENT)
  BF(5,0,ACT_CHECK,bcch_freq_ncell_4        ,SILENT)
  BF(6,0,ACT_CHECK,     bsic_ncell_4        ,SILENT)
  BF(6,0,ACT_CHECK,    rxlev_ncell_5        ,SILENT)
  BF(5,0,ACT_CHECK,bcch_freq_ncell_5        ,SILENT)
  BF(6,0,ACT_CHECK,     bsic_ncell_5        ,SILENT)
  BF(6,0,ACT_CHECK,    rxlev_ncell_6        ,SILENT)
  BF(5,0,ACT_CHECK,bcch_freq_ncell_6        ,SILENT)
  BF(6,0,ACT_CHECK,     bsic_ncell_6        ,SILENT)
IE_END(measurement_results)

IE_BEGIN(neighbour_cell_description_26_6_3_1_3)
  BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
  BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
  BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
  BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
  BF(32,0x00000001,ACT_CHECK,ba_096_065,"no neigbours")
  BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
  BF(32,0x00000000,ACT_CHECK,ba_032_001,"no neigbours")
IE_END(neighbour_cell_description_26_6_3_1_3)

IE_BEGIN(neighbour_cell_description_5bis_26_6_3_1_3)
  BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
  BF( 1,         1,ACT_CHECK,ext_ind  ,"extention indication")
  BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
  BF( 1,         0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
  BF( 1,         0,ACT_CHECK,f0       ,"frequency 0 indicator")
  BF(10,       500,ACT_CHECK,w1       ,"channel 500 belongs to the BA")
  BF( 9,         0,ACT_CHECK,w2       ,SILENT)
  BF( 9,         0,ACT_CHECK,w3       ,SILENT)
  BF( 8,         0,ACT_CHECK,w4       ,SILENT)
  BF( 8,         0,ACT_CHECK,w5       ,SILENT)
  BF( 8,         0,ACT_CHECK,w6       ,SILENT)
  BF( 8,         0,ACT_CHECK,w7       ,SILENT)
  BF( 7,         0,ACT_CHECK,w8       ,SILENT)
  BF( 7,         0,ACT_CHECK,w9       ,SILENT)
  BF( 7,         0,ACT_CHECK,w10      ,SILENT)
  BF( 7,         0,ACT_CHECK,w11      ,SILENT)
  BF( 7,         0,ACT_CHECK,w12      ,SILENT)
  BF( 7,         0,ACT_CHECK,w13      ,SILENT)
  BF( 7,         0,ACT_CHECK,w14      ,SILENT)
  BF( 7,         0,ACT_CHECK,w15      ,SILENT)
```

```
      BF( 6,          0,ACT_CHECK,w16        ,SILENT)
IE_END(neighbour_cell_description_5bis_26_6_3_1_3)


MSG3_BEGIN(measurement_report)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(measurement_report_message_type)
    IE(measurement_results)
MSG3_END(measurement_report)

MSG3_BEGIN(system_information_type_5_26_6_3_1_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_26_6_3_1_3)
MSG3_END(system_information_type_5_26_6_3_1_3)

MSG3_BEGIN(system_information_type_5bis_26_6_3_1_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5bis_message_type)
    IE(neighbour_cell_description_5bis_26_6_3_1_3)
MSG3_END(system_information_type_5bis_26_6_3_1_3)


/*------------------------------------------------------------*\
| Information Elements
\*------------------------------------------------------------*/

IE_BEGIN(authentication_parameter_rand)
    BF(32,0x80000000,ACT_CHECK,rand_127_096,SILENT)
    BF(32,0x00000012,ACT_CHECK,rand_095_064,SILENT)
    BF(32,0x34000000,ACT_CHECK,rand_063_032,SILENT)
    BF(32,0x0000000F,ACT_CHECK,rand_031_000,SILENT)
IE_END(authentication_parameter_rand)


IE_BEGIN(authentication_parameter_sres)
    BF(32,0x0000000F,ACT_SHOW,sres_031_000,SILENT)
IE_END(authentication_parameter_sres)


IE_BEGIN(call_control_protocol_discriminator)
    BF(4, 3,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(call_control_protocol_discriminator)

IE_BEGIN(called_party_bcd_number)
    BF( 8,7,ACT_CHECK,length                    ,"length of IE")
    BF( 1,1,ACT_CHECK,ext                       ,"Extension Bit")
    BF( 3,0,ACT_CHECK,type_of_number            ,"Unknown")
    BF( 4,1,ACT_CHECK,numbering_plan            ,"ISDN/telephony")
    BF( 4,3,ACT_CHECK,digit_2                   ,"Digit 2")
    BF( 4,0,ACT_CHECK,digit_1                   ,"Digit 1")
    BF( 4,3,ACT_CHECK,digit_4                   ,"Digit 4")
    BF( 4,0,ACT_CHECK,digit_3                   ,"Digit 3")
    BF( 4,0,ACT_CHECK,digit_6                   ,"Digit 6")
    BF( 4,9,ACT_CHECK,digit_5                   ,"Digit 5")
    BF( 4,4,ACT_CHECK,digit_8                   ,"Digit 8")
    BF( 4,9,ACT_CHECK,digit_7                   ,"Digit 7")
    BF( 4,1,ACT_CHECK,digit_10                  ,"Digit 10")
    BF( 4,1,ACT_CHECK,digit_9                   ,"Digit 9")
    BF( 4,7,ACT_CHECK,digit_12                  ,"Digit 12")
    BF( 4,0xF,ACT_CHECK,digit_11                ,"Digit 11")
IE_END(called_party_bcd_number)

IE_BEGIN(channels_needed_for_mobiles_1_and_2)
    BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
    BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)

IE_BEGIN(channel_description)
    BF( 5,M5(0,0,1,0,1),ACT_CHECK,          channel_type,"SDCCH/SACCH 4 (1)")
    BF( 3,          0,ACT_CHECK,     time_slot_number,"zero")
    BF( 3,          BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
    BF( 1,          0,ACT_CHECK,                hopping,"No")
    BF( 2,          0,ACT_CHECK,                  spare,SILENT)
    BF(10,    ARFCN_BCCH_GSM,ACT_CHECK,              arfcn,"ARFCN of the BCCH")
IE_END(channel_description)
```

TEXAS INSTRUMENTS

```
IE_BEGIN(ciphering_key_sequence_number_2)
   BF(1,          0,ACT_CHECK,         spare,SILENT)
   BF(3,M3(1,0,1),ACT_CHECK,key_sequence,"sent BS->MS")
IE_END(ciphering_key_sequence_number_2)


IE_BEGIN(ciphering_mode_setting)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,          1,ACT_CHECK,    start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)


IE_BEGIN(cipher_response)
   BF(3,0,ACT_CHECK,               spare,SILENT)
   BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)


IE_BEGIN(description_of_the_first_channel_after_time)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,            channel_type,"TCH")
   BF( 3,            3,ACT_CHECK,      time_slot_number,"three")
   BF( 3,          BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,            0,ACT_CHECK,                hopping,"No")
   BF( 2,            0,ACT_CHECK,                  spare,SILENT)
   BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,                 arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time)


IE_BEGIN(ia_rest_octets)   /* maximum length (11), no hop, no start time */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(ia_rest_octets)


IE_BEGIN(iei_5E)
   BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5E)


IE_BEGIN(iei_15)
   BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)


IE_BEGIN(iei_04)
   BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)


IE_BEGIN(iei_34)
   BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_34)


IE_BEGIN(l2_pseudo_length_11)  /* pag req type 1 with TMSI (one mobile)*/
   BF(8, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_11)


IE_BEGIN(mobile_allocation)
   BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
IE_END(mobile_allocation)


IE_BEGIN(mobile_identity)              /* has 8 octets */
   BF(8,          7,ACT_CHECK,  length,"seven octets to come")
   BF(4,          2,ACT_CHECK, digit_1,SILENT)
   BF(1,          1,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,0,1),ACT_CHECK,    type,"IMSI")
   BF(4,          2,ACT_CHECK, digit_3,SILENT)
   BF(4,          6,ACT_CHECK, digit_2,SILENT)
   BF(4,          1,ACT_CHECK, digit_4,SILENT)
   BF(4,          0,ACT_CHECK, digit_3,SILENT)
   BF(4,          7,ACT_CHECK, digit_6,SILENT)
   BF(4,          4,ACT_CHECK, digit_5,SILENT)
```

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```
   BF(4,          1,ACT_CHECK, digit_8,SILENT)
   BF(4,          1,ACT_CHECK, digit_7,SILENT)
   BF(4,          9,ACT_CHECK, digit_10,SILENT)
   BF(4,          4,ACT_CHECK, digit_9,SILENT)
   BF(4,          2,ACT_CHECK, digit_12,SILENT)
   BF(4,          1,ACT_CHECK, digit_11,SILENT)
IE_END(mobile_identity)


IE_BEGIN(mobility_management_protocol_discriminator)
   BF(4, 5,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobility_management_protocol_discriminator)


IE_BEGIN(ms_classmark)
   BF(8,          3,ACT_CHECK, length,SILENT)
   BF(1,          0,ACT_CHECK, spare,SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
   BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
   BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
   BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
   BF(1,          0,ACT_CHECK, spare2,SILENT)
   BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
   BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
   BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
   BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
   BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
   BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
   BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
   BF(5,          1,ACT_CHECK, ccbs,SILENT)
   BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
   BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
IE_END(ms_classmark)


IE_BEGIN(p1_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets)


IE_BEGIN(page_mode)
   BF(2,0,ACT_CHECK,spare,"two spare bits")
   BF(2,0,ACT_CHECK,pm   ,"Normal Paging")
IE_END(page_mode)


IE_BEGIN(power_command)
   BF(8,10,ACT_CHECK,power,SILENT)
IE_END(power_command)


IE_BEGIN(rach)
   BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any chan'")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach)


IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)


IE_BEGIN(request_reference)
   BF(3,    M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,SILENT)
   BF(5,          0,ACT_SHOW,            t1_,SILENT)
   BF(6,          0,ACT_SHOW,            t3 ,SILENT)
   BF(5,          0,ACT_SHOW,            t2 ,SILENT)
IE_END(request_reference)


IE_BEGIN(rr_cause)
   BF(8,0,ACT_CHECK,rr_cause,"normal event")
```

```
        IE_END(rr_cause)

IE_BEGIN(signal_call_waiting)
        BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
IE_END(signal_call_waiting)

IE_BEGIN(spare_half_octet)
        BF(4, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(spare_half_octet)

IE_BEGIN(timing_advance)
        BF(2,0,ACT_CHECK,          spare,SILENT)
        BF(6,0,ACT_CHECK,timing_advance,"0")
IE_END(timing_advance)

IE_BEGIN(transaction_identifier_source)
        BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source)

IE_BEGIN(transaction_identifier_dest)
        BF(4,M4(1,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest)

/*------------------------------------------------------------*\
| Messages
\*------------------------------------------------------------*/

MSG3_BEGIN(alerting)
        IE(transaction_identifier_dest)
        IE(call_control_protocol_discriminator)
        IE(alerting_message_type)
MSG3_END(alerting)

MSG3_BEGIN(assignment_command)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(assignment_command_message_type)
        IE(description_of_the_first_channel_after_time)
        IE(power_command)
        IE(iei_63)
        IE(mode_of_the_first_channel)
MSG3_END(assignment_command)

MSG3_BEGIN(assignment_complete)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(assignment_complete_message_type)
        IE(rr_cause)
MSG3_END(assignment_complete)

MSG3_BEGIN(authentication_request)
        IE(skip_indicator)
        IE(mobility_management_protocol_discriminator)
        IE(authentication_request_message_type)
        IE(spare_half_octet)
        IE(ciphering_key_sequence_number)
        IE(authentication_parameter_rand)
MSG3_END(authentication_request)

MSG3_BEGIN(authentication_response)
        IE(skip_indicator)
        IE(mobility_management_protocol_discriminator)
        IE(authentication_response_message_type)
        IE(authentication_parameter_sres)
MSG3_END(authentication_response)

MSG3_BEGIN(ciphering_mode_command)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(ciphering_mode_command_message_type)
        IE(cipher_response)
        IE(ciphering_mode_setting)
MSG3_END(ciphering_mode_command)

MSG3_BEGIN(ciphering_mode_complete)
```

```
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_complete_message_type)
MSG3_END(ciphering_mode_complete)


MSG3_BEGIN(connect)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(connect_message_type)
MSG3_END(connect)


MSG3_BEGIN(connect_acknowledge)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(connect_acknowledge_message_type)
MSG3_END(connect_acknowledge)

MSG3_BEGIN(setup)             /* contains 'signal' but no 'Bearer Cap' */
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_34)
    IE(signal_call_waiting)
MSG3_END(setup)


/* ------------- start testcase ---------- */


REPEAT(K,2)


ISS_INIT              ( 8)


COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")


COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


REPEAT(N,8)
IE_BF_SET_VAL          ( cell_identity, ci, N," ci used for SI 3 and SI 6")
IE_BF_SET_VAL          ( neighbour_cell_description, ba_ind,  0," BA for BCCH")
IE_BF_SET_VAL          ( neighbour_cell_description, ext_ind, 0, SILENT)
BS_SET_SYS_INFO        ( N, system_information_type_1)
BS_SET_SYS_INFO        ( N, system_information_type_2)
BS_SET_SYS_INFO        ( N, system_information_type_3)
BS_SET_SYS_INFO        ( N, system_information_type_4)
IE_BF_SET_VAL          ( neighbour_cell_description,  ba_ind, 1," BA for SACCH")
if ( K == 1)
{
    IE_BF_SET_VAL          ( neighbour_cell_description, ext_ind, 1,"")
    BS_SET_SYS_INFO_SACCH ( N, system_information_type_5bis_26_6_3_1_3)
}
```

```
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5_26_6_3_1_3)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_6)
REPEAT_END(N)

#define            NCC_0      1
#define            NCC_1      1
#define            NCC_2      1
#define            NCC_3      1
#define            NCC_4      1
#define            NCC_5      1
#define            NCC_6      1
#define            NCC_7      1


#define            BCC_0      3
#define            BCC_1      5
#define            BCC_2      7
#define            BCC_3      1
#define            BCC_4      3
#define            BCC_5      5
#define            BCC_6      7
#define            BCC_7      1


#define            BSIC_0     ((NCC_0<<3)|(BCC_0))
#define            BSIC_1     ((NCC_1<<3)|(BCC_1))
#define            BSIC_2     ((NCC_2<<3)|(BCC_2))
#define            BSIC_3     ((NCC_3<<3)|(BCC_3))
#define            BSIC_4     ((NCC_4<<3)|(BCC_4))
#define            BSIC_5     ((NCC_5<<3)|(BCC_5))
#define            BSIC_6     ((NCC_6<<3)|(BCC_6))
#define            BSIC_7     ((NCC_7<<3)|(BCC_7))


#define            ARFCN_0     2
#define            ARFCN_1     8
#define            ARFCN_2    14
#define            ARFCN_3    20
#define            ARFCN_4    26
#define            ARFCN_5    32
#define            ARFCN_6    38
#define            ARFCN_7    44


#define            PWRLEV_0   -60
#define            PWRLEV_1   -85
#define            PWRLEV_2   -80
#define            PWRLEV_3   -75
#define            PWRLEV_4   -55
#define            PWRLEV_5   -50
#define            PWRLEV_6   -45
#define            PWRLEV_7   -40

BS_SET_SCH          ( 0,  BSIC_0,RFN)
BS_SET_ARFCN        ( 0, ARFCN_0)
BS_SET_POWER        ( 0,PWRLEV_0)

BS_SET_SCH          ( 1,  BSIC_1,RFN)
BS_SET_ARFCN        ( 1, ARFCN_1)
BS_SET_POWER        ( 1,PWRLEV_1)

BS_SET_SCH          ( 2,  BSIC_2,RFN)
BS_SET_ARFCN        ( 2, ARFCN_2)
BS_SET_POWER        ( 2,PWRLEV_2)

BS_SET_SCH          ( 3,  BSIC_3,RFN)
BS_SET_ARFCN        ( 3, ARFCN_3)
BS_SET_POWER        ( 3,PWRLEV_3)

BS_SET_SCH          ( 4,  BSIC_4,RFN)
BS_SET_ARFCN        ( 4, ARFCN_4)
BS_SET_POWER        ( 4,PWRLEV_4)

BS_SET_SCH          ( 5,  BSIC_5,RFN)
BS_SET_ARFCN        ( 5, ARFCN_5)
BS_SET_POWER        ( 5,PWRLEV_5)

BS_SET_SCH          ( 6,  BSIC_6,RFN)
BS_SET_ARFCN        ( 6, ARFCN_6)
```

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```
BS_SET_POWER             ( 6,PWRLEV_6)

BS_SET_SCH               ( 7,  BSIC_7,RFN)
BS_SET_ARFCN             ( 7, ARFCN_7)
BS_SET_POWER             ( 7,PWRLEV_7)

BS_ON_OFF                ( 0,TRUE)
BS_ON_OFF                ( 1,FALSE)
BS_ON_OFF                ( 2,FALSE)
BS_ON_OFF                ( 3,FALSE)
BS_ON_OFF                ( 4,FALSE)
BS_ON_OFF                ( 5,FALSE)
BS_ON_OFF                ( 6,FALSE)
BS_ON_OFF                ( 7,FALSE)


/*-------------------------------------------------------------------*\
| Switch on IUT
\*-------------------------------------------------------------------*/


AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");


ISS_DELAY                ( 5000) /* wait until the MS has detected the cell */
SET_TIMEOUT              ( 30000)


/*-------------------------------------------------------------------*\
| Message exchange
\*-------------------------------------------------------------------*/

BS_CONFIG_CHANNEL        (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND             (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT            (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL        (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND             (0,immediate_assignment_GSM,"Step 3")


BS_CONFIG_CHANNEL        (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT            (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND             (0,authentication_request,"Step 5")
BS_MSG3_AWAIT            (0,authentication_response,"Step 6")
BS_MSG3_SEND             (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT            (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND             (0,setup,"Step 1")
BS_MSG3_AWAIT            (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT            (0,alerting,"Step 10")

ISS_DELAY (4000);


AT_SEND ("ATA\r\n"," Hook off");
BS_MSG3_AWAIT            (0,connect,"Step 11")
BS_MSG3_SEND             (0,assignment_command,"Step 12")

BS_CONFIG_CHANNEL        (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT            (0,assignment_complete,"Step 13")
BS_MSG3_SEND             (0,connect_acknowledge,"Step 14")

/* ---- end of preamble ---- */

BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)

/*
 * not tested
 * BS_MSG3_AWAIT        (0, measurement_report,"allow one unchecked report")
 */
ISS_DELAY (5000)

BS_MSG3_AWAIT_BEGIN (0, measurement_report,SILENT)
   BF_SET_VAL        (ba_ind      ,1,"BA INDEX SET TO 1")
   BF_SET_VAL        (num_ncell_m,0,"should be 0 OR 7 (IUT uses 0)")
BS_MSG3_AWAIT_END()

AT_SEND ("AT+CFUN=0"," Power Off");
```

BS_ON_OFF (0,FALSE)

ISS_DELAY (4000)

IE_BF_SET_VAL   (neighbour_cell_description_26_6_3_1_3, ext_ind, 1," part of BA")

REPEAT_END(K)

History:	16.01.98	VK	Initial
	25.01.99	LE	Testcase updated

3.4.2 MRR151: Measurement / all neighbours present (26.6.3.2)

Description: (Ref.: GSM 11.10-1, §26.6.3.2)
Preamble: None
Script:

```
IE_BEGIN(measurement_results)
    BF(1,    1,ACT_CHECK ,ba_ind                   ,SILENT)
    BF(1,    0,ACT_CHECK ,dtx                       ,"DTX was not used")
    BF(6,0x3f,ACT_CHECK ,rxlev_full_serving_cell   ,SILENT)
    BF(1,    0,ACT_CHECK ,ANONYMOUS                 ,"spare")
    BF(1,    0,ACT_CHECK ,meas_valid                ,"valid within the 2nd SACCH"
                                              "  block at the latest")
    BF(6,0x3f,ACT_CHECK ,rxlev_sub_serving_cell   ,SILENT)
    BF(1,    0,ACT_CHECK ,ANONYMOUS                 ,"spare")
    BF(3,    0,ACT_CHECK ,rxqual_full_serving_cell,SILENT)
    BF(3,    0,ACT_CHECK ,rxqual_sub_serving_cell  ,SILENT)
    BF(3,    6,ACT_CHECK ,num_ncell_m               ,"num of neighbor cells")
    BF(6,0x3F,ACT_CHECK ,    rxlev_ncell_1          ,SILENT)
    BF(5,0x00,ACT_CHECK ,bcch_freq_ncell_1          ,SILENT)
    BF(6,0x0b,ACT_CHECK ,    bsic_ncell_1           ,SILENT)
    BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_2          ,SILENT)
    BF(5,0x1f,ACT_CHECK ,bcch_freq_ncell_2          ,SILENT)
    BF(6,0x09,ACT_CHECK ,    bsic_ncell_2           ,SILENT)
    BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_3          ,SILENT)
    BF(5,0x1d,ACT_CHECK ,bcch_freq_ncell_3          ,SILENT)
    BF(6,0x0f,ACT_CHECK ,    bsic_ncell_3           ,SILENT)
    BF(6,0x3c,ACT_CHECK ,    rxlev_ncell_4          ,SILENT)
    BF(5,0x19,ACT_CHECK ,bcch_freq_ncell_4          ,SILENT)
    BF(6,0x0d,ACT_CHECK ,    bsic_ncell_4           ,SILENT)
    BF(6,0x37,ACT_CHECK ,    rxlev_ncell_5          ,SILENT)
    BF(5,0x15,ACT_CHECK ,bcch_freq_ncell_5          ,SILENT)
    BF(6,0x0b,ACT_CHECK ,    bsic_ncell_5           ,SILENT)
    BF(6,0x23,ACT_CHECK ,    rxlev_ncell_6          ,SILENT)
    BF(5,0x10,ACT_CHECK ,bcch_freq_ncell_6          ,SILENT)
    BF(6,0x09,ACT_CHECK ,    bsic_ncell_6           ,SILENT)
IE_END(measurement_results)


IE_BEGIN(neighbour_cell_description_26_6_3_2_3)
    BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,          0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x000008ae,ACT_CHECK,ba_064_033,"ARFCN 34,35,36,38,40,44")
    BF(32,0xbaffbffa,ACT_CHECK,ba_032_001,"all except : 31,27,25,15,3,1")
IE_END(neighbour_cell_description_26_6_3_2_3)


IE_BEGIN(neighbour_cell_description_5bis_26_6_3_2_3)
    BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
    BF( 1,          1,ACT_CHECK,ext_ind  ,"extention indication")
    BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF( 1,          0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
    BF( 1,          1,ACT_CHECK,f0       ,"frequency 0 indicator (F0 included)")
    BF(10,        800,ACT_CHECK,w1       ,"channel 800 belongs to the BA")
    BF( 9,          0,ACT_CHECK,w2       ,SILENT)
    BF( 9,          0,ACT_CHECK,w3       ,SILENT)
    BF( 8,          0,ACT_CHECK,w4       ,SILENT)
    BF( 8,          0,ACT_CHECK,w5       ,SILENT)
    BF( 8,          0,ACT_CHECK,w6       ,SILENT)
    BF( 8,          0,ACT_CHECK,w7       ,SILENT)
    BF( 7,          0,ACT_CHECK,w8       ,SILENT)
    BF( 7,          0,ACT_CHECK,w9       ,SILENT)
    BF( 7,          0,ACT_CHECK,w10      ,SILENT)
    BF( 7,          0,ACT_CHECK,w11      ,SILENT)
    BF( 7,          0,ACT_CHECK,w12      ,SILENT)
    BF( 7,          0,ACT_CHECK,w13      ,SILENT)
    BF( 7,          0,ACT_CHECK,w14      ,SILENT)
    BF( 7,          0,ACT_CHECK,w15      ,SILENT)
    BF( 6,          0,ACT_CHECK,w16      ,SILENT)
IE_END(neighbour_cell_description_5bis_26_6_3_2_3)


MSG3_BEGIN(measurement_report)
    IE(skip_indicator)
```

TEXAS INSTRUMENTS

```
    IE(rr_management_protocol_discriminator)
    IE(measurement_report_message_type)
    IE(measurement_results)
MSG3_END(measurement_report)


MSG3_BEGIN(system_information_type_5_26_6_3_2_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_26_6_3_2_3)
MSG3_END(system_information_type_5_26_6_3_2_3)


MSG3_BEGIN(system_information_type_5bis_26_6_3_2_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5bis_message_type)
    IE(neighbour_cell_description_5bis_26_6_3_2_3)
MSG3_END(system_information_type_5bis_26_6_3_2_3)



/*----------------------------------------------------------------*\
| Information Elements
\*----------------------------------------------------------------*/

IE_BEGIN(authentication_parameter_rand)
    BF(32,0x80000000,ACT_CHECK,rand_127_096,SILENT)
    BF(32,0x00000012,ACT_CHECK,rand_095_064,SILENT)
    BF(32,0x34000000,ACT_CHECK,rand_063_032,SILENT)
    BF(32,0x0000000F,ACT_CHECK,rand_031_000,SILENT)
IE_END(authentication_parameter_rand)


IE_BEGIN(authentication_parameter_sres)
    BF(32,0x0000000F,ACT_SHOW,sres_031_000,SILENT)
IE_END(authentication_parameter_sres)


IE_BEGIN(call_control_protocol_discriminator)
    BF(4, 3,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(call_control_protocol_discriminator)


IE_BEGIN(called_party_bcd_number)
    BF( 8,7,ACT_CHECK,length                       ,"length of IE")
    BF( 1,1,ACT_CHECK,ext                          ,"Extension Bit")
    BF( 3,0,ACT_CHECK,type_of_number               ,"Unknown")
    BF( 4,1,ACT_CHECK,numbering_plan               ,"ISDN/telephony")
    BF( 4,3,ACT_CHECK,digit_2                      ,"Digit 2")
    BF( 4,0,ACT_CHECK,digit_1                      ,"Digit 1")
    BF( 4,3,ACT_CHECK,digit_4                      ,"Digit 4")
    BF( 4,0,ACT_CHECK,digit_3                      ,"Digit 3")
    BF( 4,0,ACT_CHECK,digit_6                      ,"Digit 6")
    BF( 4,9,ACT_CHECK,digit_5                      ,"Digit 5")
    BF( 4,4,ACT_CHECK,digit_8                      ,"Digit 8")
    BF( 4,9,ACT_CHECK,digit_7                      ,"Digit 7")
    BF( 4,1,ACT_CHECK,digit_10                     ,"Digit 10")
    BF( 4,1,ACT_CHECK,digit_9                      ,"Digit 9")
    BF( 4,7,ACT_CHECK,digit_12                     ,"Digit 12")
    BF( 4,0xF,ACT_CHECK,digit_11                   ,"Digit 11")
IE_END(called_party_bcd_number)

IE_BEGIN(channels_needed_for_mobiles_1_and_2)
    BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
    BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)

IE_BEGIN(channel_description)
    BF( 5,M5(0,0,1,0,1),ACT_CHECK,          channel_type,"SDCCH/SACCH 4(1)")
    BF( 3,             0,ACT_CHECK,      time_slot_number,"zero")
    BF( 3,           BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
    BF( 1,             0,ACT_CHECK,              hopping,"No")
    BF( 2,             0,ACT_CHECK,                spare,SILENT)
    BF(10,   ARFCN_BCCH_GSM,ACT_CHECK,               arfcn,"ARFCN of the BCCH")
IE_END(channel_description)


IE_BEGIN(ciphering_key_sequence_number_2)
    BF(1,          0,ACT_CHECK,          spare,SILENT)
```

TEXAS INSTRUMENTS

```
   BF(3,M3(1,0,1),ACT_CHECK,key_sequence,"sent BS->MS")
IE_END(ciphering_key_sequence_number_2)

IE_BEGIN(ciphering_mode_setting)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,       1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)

IE_BEGIN(cipher_mode_setting_a5_1)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,       1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(cipher_mode_setting_a5_1)

IE_BEGIN(cipher_mode_setting_a5_2)
   BF(3,M3(0,0,1),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,       1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(cipher_mode_setting_a5_2)

IE_BEGIN(cipher_mode_setting_none)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,       0,ACT_CHECK,     start_ciphering,"not start ciphering")
IE_END(cipher_mode_setting_none)

IE_BEGIN(cipher_response)
   BF(3,0,ACT_CHECK,            spare,SILENT)
   BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)

IE_BEGIN(description_of_the_first_channel_after_time)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,            channel_type,"TCH")
   BF( 3,             3,ACT_CHECK,      time_slot_number,"three")
   BF( 3,           BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,             0,ACT_CHECK,                hopping,"No")
   BF( 2,             0,ACT_CHECK,                  spare,SILENT)
   BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,                 arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time)

IE_BEGIN(ia_rest_octets)   /* maximum length (11), no hop, no start time */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(ia_rest_octets)

IE_BEGIN(iei_5E)
   BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5E)

IE_BEGIN(iei_15)
   BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)

IE_BEGIN(iei_04)
   BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)

IE_BEGIN(iei_34)
   BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_34)

IE_BEGIN(l2_pseudo_length_11)  /* pag req type 1 with TMSI (one mobile)*/
   BF(8, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_11)

IE_BEGIN(mobile_allocation)
   BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
IE_END(mobile_allocation)
```

```
IE_BEGIN(mobile_identity)             /* has 8 octets */
   BF(8,          7,ACT_CHECK,  length,"seven octets to come")
   BF(4,          2,ACT_CHECK, digit_1,SILENT)
   BF(1,          1,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,0,1),ACT_CHECK,    type,"IMSI")
   BF(4,          2,ACT_CHECK, digit_3,SILENT)
   BF(4,          6,ACT_CHECK, digit_2,SILENT)
   BF(4,          1,ACT_CHECK, digit_4,SILENT)
   BF(4,          0,ACT_CHECK, digit_3,SILENT)
   BF(4,          7,ACT_CHECK, digit_6,SILENT)
   BF(4,          4,ACT_CHECK, digit_5,SILENT)
   BF(4,          1,ACT_CHECK, digit_8,SILENT)
   BF(4,          1,ACT_CHECK, digit_7,SILENT)
   BF(4,          9,ACT_CHECK, digit_10,SILENT)
   BF(4,          4,ACT_CHECK, digit_9,SILENT)
   BF(4,          2,ACT_CHECK, digit_12,SILENT)
   BF(4,          1,ACT_CHECK, digit_11,SILENT)
IE_END(mobile_identity)

IE_BEGIN(mobility_management_protocol_discriminator)
   BF(4, 5,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobility_management_protocol_discriminator)

IE_BEGIN(ms_classmark)
   BF(8,          3,ACT_CHECK, length,SILENT)
   BF(1,          0,ACT_CHECK, spare,SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
   BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
   BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
   BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
   BF(1,          0,ACT_CHECK, spare2,SILENT)
   BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
   BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
   BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
   BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
   BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
   BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
   BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
   BF(5,          1,ACT_CHECK, ccbs,SILENT)
   BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
   BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
IE_END(ms_classmark)

IE_BEGIN(p1_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets)

IE_BEGIN(page_mode)
   BF(2,0,ACT_CHECK,spare,"two spare bits")
   BF(2,0,ACT_CHECK,pm    ,"Normal Paging")
IE_END(page_mode)

IE_BEGIN(power_command)
   BF(8,10,ACT_CHECK,power,SILENT)
IE_END(power_command)

IE_BEGIN(rach)
   BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any chan'")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach)

IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)
```

```
IE_BEGIN(request_reference)
   BF(3,    M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
   BF(5,M5(1,1,1,1,1),ACT_SHOW,  random_reference,SILENT)
   BF(5,            0,ACT_SHOW,                t1_,SILENT)
   BF(6,            0,ACT_SHOW,                t3 ,SILENT)
   BF(5,            0,ACT_SHOW,                t2 ,SILENT)
IE_END(request_reference)

IE_BEGIN(rr_cause)
   BF(8,0,ACT_CHECK,rr_cause,"normal event")
IE_END(rr_cause)

IE_BEGIN(signal_call_waiting)
   BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
IE_END(signal_call_waiting)

IE_BEGIN(spare_half_octet)
   BF(4, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(spare_half_octet)

IE_BEGIN(timing_advance)
   BF(2,0,ACT_CHECK,          spare,SILENT)
   BF(6,0,ACT_CHECK,timing_advance,"0")
IE_END(timing_advance)

IE_BEGIN(transaction_identifier_source)
   BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source)

IE_BEGIN(transaction_identifier_dest)
   BF(4,M4(1,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest)

/*---------------------------------------------------------------*\
| Messages
\*---------------------------------------------------------------*/

MSG3_BEGIN(alerting)
   IE(transaction_identifier_dest)
   IE(call_control_protocol_discriminator)
   IE(alerting_message_type)
MSG3_END(alerting)

MSG3_BEGIN(assignment_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(assignment_command_message_type)
   IE(description_of_the_first_channel_after_time)
   IE(power_command)
   IE(iei_63)
   IE(mode_of_the_first_channel)
MSG3_END(assignment_command)

MSG3_BEGIN(assignment_complete)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(assignment_complete_message_type)
   IE(rr_cause)
MSG3_END(assignment_complete)

MSG3_BEGIN(authentication_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(authentication_request_message_type)
   IE(spare_half_octet)
   IE(ciphering_key_sequence_number)
   IE(authentication_parameter_rand)
MSG3_END(authentication_request)

MSG3_BEGIN(authentication_response)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(authentication_response_message_type)
   IE(authentication_parameter_sres)
```

```
MSG3_END(authentication_response)

MSG3_BEGIN(ciphering_mode_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_command_message_type)
    IE(cipher_response)
    IE(ciphering_mode_setting)
MSG3_END(ciphering_mode_command)

MSG3_BEGIN(ciphering_mode_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_complete_message_type)
MSG3_END(ciphering_mode_complete)

MSG3_BEGIN(connect)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(connect_message_type)
MSG3_END(connect)

MSG3_BEGIN(connect_acknowledge)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(connect_acknowledge_message_type)
MSG3_END(connect_acknowledge)

MSG3_BEGIN(setup)                /* contains 'signal' but no 'Bearer Cap' */
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_34)
    IE(signal_call_waiting)
MSG3_END(setup)

/* ---- start testcase -------- */
REPEAT(K,2)

ISS_INIT              ( 8)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111********  PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111********  RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101********  MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

REPEAT(N,8)
IE_BF_SET_VAL          ( cell_identity, ci, N," ci used for SI 3 and SI 6")
IE_BF_SET_VAL          ( neighbour_cell_description, ba_ind,  0," BA for BCCH")
IE_BF_SET_VAL          ( neighbour_cell_description, ext_ind, 0, SILENT)
```

```
BS_SET_SYS_INFO         ( N, system_information_type_1)
BS_SET_SYS_INFO         ( N, system_information_type_2)
BS_SET_SYS_INFO         ( N, system_information_type_3)
BS_SET_SYS_INFO         ( N, system_information_type_4)
IE_BF_SET_VAL           ( neighbour_cell_description,  ba_ind, 1," BA for SACCH")
if ( K == 1)
{
    IE_BF_SET_VAL         ( neighbour_cell_description, ext_ind, 1,"")
    BS_SET_SYS_INFO_SACCH ( N, system_information_type_5bis_26_6_3_2_3)
}
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5_26_6_3_2_3)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_6)
REPEAT_END(N)

#define             NCC_0    1
#define             NCC_1    1
#define             NCC_2    1
#define             NCC_3    1
#define             NCC_4    1
#define             NCC_5    1
#define             NCC_6    1
#define             NCC_7    1

#define             BCC_0    3
#define             BCC_1    5
#define             BCC_2    7
#define             BCC_3    1
#define             BCC_4    3
#define             BCC_5    5
#define             BCC_6    7
#define             BCC_7    1

#define             BSIC_0   ((NCC_0<<3)|(BCC_0))
#define             BSIC_1   ((NCC_1<<3)|(BCC_1))
#define             BSIC_2   ((NCC_2<<3)|(BCC_2))
#define             BSIC_3   ((NCC_3<<3)|(BCC_3))
#define             BSIC_4   ((NCC_4<<3)|(BCC_4))
#define             BSIC_5   ((NCC_5<<3)|(BCC_5))
#define             BSIC_6   ((NCC_6<<3)|(BCC_6))
#define             BSIC_7   ((NCC_7<<3)|(BCC_7))

#define             ARFCN_0   2
#define             ARFCN_1   8
#define             ARFCN_2   14
#define             ARFCN_3   20
#define             ARFCN_4   26
#define             ARFCN_5   32
#define             ARFCN_6   38
#define             ARFCN_7   44

#define             PWRLEV_0  -35                  /* force to be serving cell (was -60) */
#define             PWRLEV_1  -85
#define             PWRLEV_2  -80
#define             PWRLEV_3  -75
#define             PWRLEV_4  -55
#define             PWRLEV_5  -50
#define             PWRLEV_6  -45
#define             PWRLEV_7  -40

BS_SET_SCH          ( 0,  BSIC_0,RFN)
BS_SET_ARFCN        ( 0, ARFCN_0)
BS_SET_POWER        ( 0,PWRLEV_0)

BS_SET_SCH          ( 1,  BSIC_1,RFN)
BS_SET_ARFCN        ( 1, ARFCN_1)
BS_SET_POWER        ( 1,PWRLEV_1)

BS_SET_SCH          ( 2,  BSIC_2,RFN)
BS_SET_ARFCN        ( 2, ARFCN_2)
BS_SET_POWER        ( 2,PWRLEV_2)

BS_SET_SCH          ( 3,  BSIC_3,RFN)
BS_SET_ARFCN        ( 3, ARFCN_3)
BS_SET_POWER        ( 3,PWRLEV_3)
```

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```
BS_SET_SCH              ( 4,  BSIC_4,RFN)
BS_SET_ARFCN            ( 4, ARFCN_4)
BS_SET_POWER            ( 4,PWRLEV_4)

BS_SET_SCH              ( 5,  BSIC_5,RFN)
BS_SET_ARFCN            ( 5, ARFCN_5)
BS_SET_POWER            ( 5,PWRLEV_5)

BS_SET_SCH              ( 6,  BSIC_6,RFN)
BS_SET_ARFCN            ( 6, ARFCN_6)
BS_SET_POWER            ( 6,PWRLEV_6)

BS_SET_SCH              ( 7,  BSIC_7,RFN)
BS_SET_ARFCN            ( 7, ARFCN_7)
BS_SET_POWER            ( 7,PWRLEV_7)

BS_ON_OFF              ( 0,TRUE)
BS_ON_OFF              ( 1,TRUE)
BS_ON_OFF              ( 2,TRUE)
BS_ON_OFF              ( 3,TRUE)
BS_ON_OFF              ( 4,TRUE)
BS_ON_OFF              ( 5,TRUE)
BS_ON_OFF              ( 6,TRUE)
BS_ON_OFF              ( 7,TRUE)


/*-------------------------------------------------------------------*\
| Switch on IUT
\*-------------------------------------------------------------------*/

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY              ( 5000) /* wait until the MS has detected the cell */
SET_TIMEOUT            ( 30000)

/*-------------------------------------------------------------------*\
| Message exchange
\*-------------------------------------------------------------------*/

BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT          (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS   (0, 0)
BS_MSG3_SEND           (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND           (0,authentication_request,"Step 5")
BS_MSG3_AWAIT          (0,authentication_response,"Step 6")
BS_MSG3_SEND           (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND           (0,setup,"Step 1")
BS_MSG3_AWAIT          (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT          (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");
BS_MSG3_AWAIT          (0,connect,"Step 11")
BS_MSG3_SEND           (0,assignment_command,"Step 12")

BS_CONFIG_CHANNEL      (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,assignment_complete,"Step 13")
BS_MSG3_SEND           (0,connect_acknowledge,"Step 14")

/* ---- end of preamble ---- */

ISS_DELAY (10000)
BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
BS_MSG3_AWAIT      (0, measurement_report,"allow one unchecked report")

REPEAT(COUNT,10)
BS_MSG3_AWAIT_BEGIN (0, measurement_report,SILENT)
```

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```
    BF_SET_VAL        (dtx            ,0   ,"DTX was not used")
    BF_SET_VAL        (meas_valid     ,0   ,"measurement vaild (0)")
    BF_SET_VAL        (ba_ind         ,1   ,"BA INDEX SET TO 1")
    BF_SET_VAL        (num_ncell_m    ,6   ,"all neighbour present")
    BF_SET_VAL        (bcch_freq_ncell_1,0x00,"refers to ARFCN 2")
    BF_SET_VAL        (bcch_freq_ncell_2,0x1f,"refers to ARFCN 44")
    BF_SET_VAL        (bcch_freq_ncell_3,0x1d,"refers to ARFCN 38")
    BF_SET_VAL        (bcch_freq_ncell_4,0x19,"refers to ARFCN 32")
    BF_SET_VAL        (bcch_freq_ncell_5,0x15,"refers to ARFCN 26")
    BF_SET_VAL        (bcch_freq_ncell_6,0x10,"refers to ARFCN 20")
BS_MSG3_AWAIT_END()
REPEAT_END(COUNT)


AT_SEND ("AT+CFUN=0"," Power Off");


BS_ON_OFF          ( 0,FALSE)
BS_ON_OFF          ( 1,FALSE)
BS_ON_OFF          ( 2,FALSE)
BS_ON_OFF          ( 3,FALSE)
BS_ON_OFF          ( 4,FALSE)
BS_ON_OFF          ( 5,FALSE)
BS_ON_OFF          ( 6,FALSE)
BS_ON_OFF          ( 7,FALSE)


ISS_DELAY (10000);

IE_BF_SET_VAL      ( neighbour_cell_description_26_6_3_2_3, ext_ind, 1," part of BA")

REPEAT_END(K)
```

History:	22.01.98	VK	Initial
	25.01.99	LE	Testcase updated

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3.4.3 MRR152: Multiple Call Setup Procedure for Mobile Terminated Calls

Description: Do the MTC several times.
Preamble: None
Script:

```
ISS_INIT              ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)


REPEAT(COUNT,3)

BS_ON_OFF         ( 0,TRUE)

#include          <MRR135.tds>
ISS_DELAY         (10000)
AT_SEND ("AT+CFUN=0"," Power Off");
ISS_DELAY         (10000)
BS_ON_OFF         ( 0,FALSE)
ISS_DELAY         (4000)
COMMAND           ("MMI MEMCHECK")

REPEAT_END(COUNT)
```

History:	26.01.98	VK	Initial
	25.01.99	LE	Testcase updated

3.4.4 MRR153: Measurement / barred cells and non-permitted NCCs (26.6.3.3)

Description: (Ref.: GSM 11.10-1, §26.6.3.3)
Preamble: None
Script:

```
IE_BEGIN(measurement_results)
    BF(1,   1,ACT_CHECK ,ba_ind                   ,SILENT)
    BF(1,   0,ACT_CHECK ,dtx                      ,"DTX was not used")
    BF(6,0x3f,ACT_CHECK ,rxlev_full_serving_cell  ,SILENT)
    BF(1,   0,ACT_CHECK ,ANONYMOUS                ,"spare")
    BF(1,   0,ACT_CHECK ,meas_valid               ,"valid within the 2nd SACCH"
                                                   "  block at the latest")
    BF(6,0x3f,ACT_CHECK ,rxlev_sub_serving_cell   ,SILENT)
    BF(1,   0,ACT_CHECK ,ANONYMOUS                ,"spare")
    BF(3,   0,ACT_CHECK ,rxqual_full_serving_cell ,SILENT)
    BF(3,   0,ACT_CHECK ,rxqual_sub_serving_cell  ,SILENT)
    BF(3,   4,ACT_CHECK ,num_ncell_m              ,"num of neighbor cells")
    BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_1        ,SILENT)
    BF(5,   0,ACT_CHECK ,bcch_freq_ncell_1        ,SILENT)
    BF(6,0x0b,ACT_CHECK ,    bsic_ncell_1         ,SILENT)
    BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_2        ,SILENT)
    BF(5,   4,ACT_CHECK ,bcch_freq_ncell_2        ,SILENT)
    BF(6,0x09,ACT_CHECK ,    bsic_ncell_2         ,SILENT)
    BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_3        ,SILENT)
    BF(5,0x03,ACT_CHECK ,bcch_freq_ncell_3        ,SILENT)
    BF(6,0x0F,ACT_CHECK ,    bsic_ncell_3         ,SILENT)
    BF(6,0x1E,ACT_CHECK ,    rxlev_ncell_4        ,SILENT)
    BF(5,0x01,ACT_CHECK ,bcch_freq_ncell_4        ,SILENT)
    BF(6,0x0F,ACT_CHECK ,    bsic_ncell_4         ,SILENT)
    BF(6,   0,ACT_CHECK ,    rxlev_ncell_5        ,SILENT)
    BF(5,   0,ACT_CHECK ,bcch_freq_ncell_5        ,SILENT)
    BF(6,   0,ACT_CHECK ,    bsic_ncell_5         ,SILENT)
    BF(6,   0,ACT_CHECK ,    rxlev_ncell_6        ,SILENT)
    BF(5,   0,ACT_CHECK ,bcch_freq_ncell_6        ,SILENT)
    BF(6,   0,ACT_CHECK ,    bsic_ncell_6         ,SILENT)
IE_END(measurement_results)


IE_BEGIN(neighbour_cell_description_26_6_3_3_3)
    BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x00000820,ACT_CHECK,ba_064_033,"ARFCN 44, 38")
    BF(32,0x00082002,ACT_CHECK,ba_032_001,"ARFCN 20, 14,  2")
IE_END(neighbour_cell_description_26_6_3_3_3)


IE_BEGIN(neighbour_cell_description_5bis_26_6_3_3_3)  /* same as 26_6_3_2_3 */
    BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
    BF( 1,         1,ACT_CHECK,ext_ind  ,"extention indication")
    BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF( 1,         0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
    BF( 1,         1,ACT_CHECK,f0       ,"frequency 0 indicator (F0 included)")
    BF(10,       800,ACT_CHECK,w1       ,"channel 800 belongs to the BA")
    BF( 9,         0,ACT_CHECK,w2       ,SILENT)
    BF( 9,         0,ACT_CHECK,w3       ,SILENT)
    BF( 8,         0,ACT_CHECK,w4       ,SILENT)
    BF( 8,         0,ACT_CHECK,w5       ,SILENT)
    BF( 8,         0,ACT_CHECK,w6       ,SILENT)
    BF( 8,         0,ACT_CHECK,w7       ,SILENT)
    BF( 7,         0,ACT_CHECK,w8       ,SILENT)
    BF( 7,         0,ACT_CHECK,w9       ,SILENT)
    BF( 7,         0,ACT_CHECK,w10      ,SILENT)
    BF( 7,         0,ACT_CHECK,w11      ,SILENT)
    BF( 7,         0,ACT_CHECK,w12      ,SILENT)
    BF( 7,         0,ACT_CHECK,w13      ,SILENT)
    BF( 7,         0,ACT_CHECK,w14      ,SILENT)
    BF( 7,         0,ACT_CHECK,w15      ,SILENT)
    BF( 6,         0,ACT_CHECK,w16      ,SILENT)
IE_END(neighbour_cell_description_5bis_26_6_3_3_3)


MSG3_BEGIN(measurement_report)
    IE(skip_indicator)
```

```
        IE(rr_management_protocol_discriminator)
        IE(measurement_report_message_type)
        IE(measurement_results)
MSG3_END(measurement_report)


MSG3_BEGIN(system_information_type_5_26_6_3_3_3)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(system_information_type_5_message_type)
        IE(neighbour_cell_description_26_6_3_3_3)
MSG3_END(system_information_type_5_26_6_3_3_3)


MSG3_BEGIN(system_information_type_5bis_26_6_3_3_3)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(system_information_type_5bis_message_type)
        IE(neighbour_cell_description_5bis_26_6_3_3_3)
MSG3_END(system_information_type_5bis_26_6_3_3_3)


/*------------------------------------------------------------------*\
| Information Elements
\*------------------------------------------------------------------*/

IE_BEGIN(authentication_parameter_rand)
    BF(32,0x80000000,ACT_CHECK,rand_127_096,SILENT)
    BF(32,0x00000012,ACT_CHECK,rand_095_064,SILENT)
    BF(32,0x34000000,ACT_CHECK,rand_063_032,SILENT)
    BF(32,0x0000000F,ACT_CHECK,rand_031_000,SILENT)
IE_END(authentication_parameter_rand)


IE_BEGIN(authentication_parameter_sres)
    BF(32,0x0000000F,ACT_SHOW,sres_031_000,SILENT)
IE_END(authentication_parameter_sres)


IE_BEGIN(call_control_protocol_discriminator)
    BF(4, 3,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(call_control_protocol_discriminator)


IE_BEGIN(called_party_bcd_number)
    BF( 8,7,ACT_CHECK,length                     ,"length of IE")
    BF( 1,1,ACT_CHECK,ext                        ,"Extension Bit")
    BF( 3,0,ACT_CHECK,type_of_number          ,"Unknown")
    BF( 4,1,ACT_CHECK,numbering_plan          ,"ISDN/telephony")
    BF( 4,3,ACT_CHECK,digit_2                 ,"Digit 2")
    BF( 4,0,ACT_CHECK,digit_1                 ,"Digit 1")
    BF( 4,3,ACT_CHECK,digit_4                 ,"Digit 4")
    BF( 4,0,ACT_CHECK,digit_3                 ,"Digit 3")
    BF( 4,0,ACT_CHECK,digit_6                 ,"Digit 6")
    BF( 4,9,ACT_CHECK,digit_5                 ,"Digit 5")
    BF( 4,4,ACT_CHECK,digit_8                 ,"Digit 8")
    BF( 4,9,ACT_CHECK,digit_7                 ,"Digit 7")
    BF( 4,1,ACT_CHECK,digit_10                ,"Digit 10")
    BF( 4,1,ACT_CHECK,digit_9                 ,"Digit 9")
    BF( 4,7,ACT_CHECK,digit_12                ,"Digit 12")
    BF( 4,0xF,ACT_CHECK,digit_11              ,"Digit 11")
IE_END(called_party_bcd_number)

IE_BEGIN(channels_needed_for_mobiles_1_and_2)
    BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
    BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)


IE_BEGIN(channel_description)
    BF( 5,M5(0,0,1,0,1),ACT_CHECK,           channel_type,"SDCCH/SACCH 4(1)")
    BF( 3,              0,ACT_CHECK,       time_slot_number,"zero")
    BF( 3,            BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
    BF( 1,              0,ACT_CHECK,                 hopping,"No")
    BF( 2,              0,ACT_CHECK,                   spare,SILENT)
    BF(10,    ARFCN_BCCH_GSM,ACT_CHECK,                    arfcn,"ARFCN of the BCCH")
IE_END(channel_description)


IE_BEGIN(ciphering_mode_setting)
    BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
    BF(1,         1,ACT_CHECK,     start_ciphering,"Start ciphering")
```

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```
    IE_END(ciphering_mode_setting)


    IE_BEGIN(cipher_response)
        BF(3,0,ACT_CHECK,            spare,SILENT)
        BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
    IE_END(cipher_response)


    IE_BEGIN(description_of_the_first_channel_after_time)
        BF( 5,M5(0,0,0,0,1),ACT_CHECK,          channel_type,"TCH")
        BF( 3,             3,ACT_CHECK,     time_slot_number,"three")
        BF( 3,           BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
        BF( 1,           0,ACT_CHECK,                hopping,"No")
        BF( 2,           0,ACT_CHECK,                  spare,SILENT)
        BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,                arfcn,"ARFCN of the BCCH")
    IE_END(description_of_the_first_channel_after_time)


    IE_BEGIN(ia_rest_octets)    /* maximum length (11), no hop, no start time */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
    IE_END(ia_rest_octets)


    IE_BEGIN(iei_5E)
        BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
    IE_END(iei_5E)


    IE_BEGIN(iei_15)
        BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
    IE_END(iei_15)


    IE_BEGIN(iei_04)
        BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
    IE_END(iei_04)


    IE_BEGIN(iei_34)
        BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
    IE_END(iei_34)

    IE_BEGIN(l2_pseudo_length_11)   /* pag req type 1 with TMSI (one mobile)*/
        BF(8, 0,ACT_CHECK,ANONYMOUS,SILENT)
    IE_END(l2_pseudo_length_11)


    IE_BEGIN(mobile_allocation)
        BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
    IE_END(mobile_allocation)


    IE_BEGIN(mobile_identity)            /* has 8 octets */
        BF(8,          7,ACT_CHECK,  length,"seven octets to come")
        BF(4,          2,ACT_CHECK, digit_1,SILENT)
        BF(1,          1,ACT_CHECK,odd_even,SILENT)
        BF(3,  M3(0,0,1),ACT_CHECK,    type,"IMSI")
        BF(4,          2,ACT_CHECK, digit_3,SILENT)
        BF(4,          6,ACT_CHECK, digit_2,SILENT)
        BF(4,          1,ACT_CHECK, digit_4,SILENT)
        BF(4,          0,ACT_CHECK, digit_3,SILENT)
        BF(4,          7,ACT_CHECK, digit_6,SILENT)
        BF(4,          4,ACT_CHECK, digit_5,SILENT)
        BF(4,          1,ACT_CHECK, digit_8,SILENT)
        BF(4,          1,ACT_CHECK, digit_7,SILENT)
        BF(4,          9,ACT_CHECK, digit_10,SILENT)
        BF(4,          4,ACT_CHECK, digit_9,SILENT)
        BF(4,          2,ACT_CHECK, digit_12,SILENT)
        BF(4,          1,ACT_CHECK, digit_11,SILENT)
    IE_END(mobile_identity)


    IE_BEGIN(mobility_management_protocol_discriminator)
        BF(4, 5,ACT_CHECK,ANONYMOUS,SILENT)
```

```
    IE_END(mobility_management_protocol_discriminator)

    IE_BEGIN(ms_classmark)
        BF(8,          3,ACT_CHECK, length,SILENT)
        BF(1,          0,ACT_CHECK, spare,SILENT)
        BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
        BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
        BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
        BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
        BF(1,          0,ACT_CHECK, spare2,SILENT)
        BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
        BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
        BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
        BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
        BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
        BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
        BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
        BF(5,          1,ACT_CHECK, ccbs,SILENT)
        BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
        BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
    IE_END(ms_classmark)

    IE_BEGIN(neighbour_cell_description_26_6_3_1_3)
        BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
        BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
        BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
        BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
        BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
        BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
        BF(32,0x00000000,ACT_CHECK,ba_032_001,"no neigbours")
    IE_END(neighbour_cell_description_26_6_3_1_3)

    IE_BEGIN(p1_rest_octets)
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
        BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
    IE_END(p1_rest_octets)

    IE_BEGIN(page_mode)
        BF(2,0,ACT_CHECK,spare,"two spare bits")
        BF(2,0,ACT_CHECK,pm    ,"Normal Paging")
    IE_END(page_mode)

    IE_BEGIN(power_command)
        BF(8,10,ACT_CHECK,power,SILENT)
    IE_END(power_command)

    IE_BEGIN(rach)
        BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any chan'")
        BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
    IE_END(rach)

    IE_BEGIN(rach_moc)
        BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
        BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
    IE_END(rach_moc)

    IE_BEGIN(request_reference)
        BF(3,   M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
        BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,SILENT)
        BF(5,           0,ACT_SHOW,               t1_,SILENT)
        BF(6,           0,ACT_SHOW,               t3 ,SILENT)
        BF(5,           0,ACT_SHOW,               t2 ,SILENT)
    IE_END(request_reference)

    IE_BEGIN(rr_cause)
        BF(8,0,ACT_CHECK,rr_cause,"normal event")
```

```
    IE_END(rr_cause)

IE_BEGIN(signal_call_waiting)
    BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
IE_END(signal_call_waiting)

IE_BEGIN(spare_half_octet)
    BF(4, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(spare_half_octet)

IE_BEGIN(timing_advance)
    BF(2,0,ACT_CHECK,           spare,SILENT)
    BF(6,0,ACT_CHECK,timing_advance,"0")
IE_END(timing_advance)

IE_BEGIN(transaction_identifier_source)
    BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source)

IE_BEGIN(transaction_identifier_dest)
    BF(4,M4(1,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest)

/*-------------------------------------------------------------*\
| Messages
\*-------------------------------------------------------------*/

MSG3_BEGIN(alerting)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(alerting_message_type)
MSG3_END(alerting)

MSG3_BEGIN(assignment_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel)
MSG3_END(assignment_command)

MSG3_BEGIN(assignment_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_complete_message_type)
    IE(rr_cause)
MSG3_END(assignment_complete)

MSG3_BEGIN(authentication_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_request_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(authentication_parameter_rand)
MSG3_END(authentication_request)

MSG3_BEGIN(authentication_response)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_response_message_type)
    IE(authentication_parameter_sres)
MSG3_END(authentication_response)

MSG3_BEGIN(ciphering_mode_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_command_message_type)
    IE(cipher_response)
    IE(ciphering_mode_setting)
MSG3_END(ciphering_mode_command)

MSG3_BEGIN(ciphering_mode_complete)
```

```
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_complete_message_type)
MSG3_END(ciphering_mode_complete)


MSG3_BEGIN(connect)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(connect_message_type)
MSG3_END(connect)


MSG3_BEGIN(connect_acknowledge)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(connect_acknowledge_message_type)
MSG3_END(connect_acknowledge)

MSG3_BEGIN(setup)              /* contains 'signal' but no 'Bearer Cap' */
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_34)
    IE(signal_call_waiting)
MSG3_END(setup)


/* ------ Start of Testcase ----- */


REPEAT(K,2)


ISS_INIT              ( 8)


COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")


COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


REPEAT(N,8)
IE_BF_SET_VAL         ( cell_identity, ci, N," ci used for SI 3 and SI 6")
IE_BF_SET_VAL         ( neighbour_cell_description, ba_ind,  0," BA for BCCH")
IE_BF_SET_VAL         ( neighbour_cell_description, ext_ind, 0, SILENT)
BS_SET_SYS_INFO       ( N, system_information_type_1)
BS_SET_SYS_INFO       ( N, system_information_type_2)
BS_SET_SYS_INFO       ( N, system_information_type_3)
BS_SET_SYS_INFO       ( N, system_information_type_4)
IE_BF_SET_VAL         ( neighbour_cell_description,  ba_ind, 1," BA for SACCH")
if ( K == 1)
{
    IE_BF_SET_VAL         ( neighbour_cell_description, ext_ind, 1,"")
    BS_SET_SYS_INFO_SACCH ( N, system_information_type_5bis_26_6_3_3_3)
}
```

```
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_6)
REPEAT_END(N)

#define                NCC_0    1
#define                NCC_1    1
#define                NCC_2    1
#define                NCC_3    2
#define                NCC_4    3
#define                NCC_5    4
#define                NCC_6    1
#define                NCC_7    1

#define                BCC_0    3
#define                BCC_1    5
#define                BCC_2    7
#define                BCC_3    1
#define                BCC_4    3
#define                BCC_5    5
#define                BCC_6    7
#define                BCC_7    1

#define                BSIC_0    ((NCC_0<<3)|(BCC_0))
#define                BSIC_1    ((NCC_1<<3)|(BCC_1))
#define                BSIC_2    ((NCC_2<<3)|(BCC_2))
#define                BSIC_3    ((NCC_3<<3)|(BCC_3))
#define                BSIC_4    ((NCC_4<<3)|(BCC_4))
#define                BSIC_5    ((NCC_5<<3)|(BCC_5))
#define                BSIC_6    ((NCC_6<<3)|(BCC_6))
#define                BSIC_7    ((NCC_7<<3)|(BCC_7))

#define                ARFCN_0    2
#define                ARFCN_1    8
#define                ARFCN_2    14
#define                ARFCN_3    20
#define                ARFCN_4    26
#define                ARFCN_5    32
#define                ARFCN_6    38
#define                ARFCN_7    44

#define                PWRLEV_0  -35            /* force to be serving cell (was -60) */
#define                PWRLEV_1  -85
#define                PWRLEV_2  -80
#define                PWRLEV_3  -75
#define                PWRLEV_4  -55
#define                PWRLEV_5  -50
#define                PWRLEV_6  -45
#define                PWRLEV_7  -40

BS_SET_SCH            ( 0,  BSIC_0,RFN)
BS_SET_ARFCN         ( 0, ARFCN_0)
BS_SET_POWER         ( 0,PWRLEV_0)

BS_SET_SCH            ( 1,  BSIC_1,RFN)
BS_SET_ARFCN         ( 1, ARFCN_1)
BS_SET_POWER         ( 1,PWRLEV_1)

BS_SET_SCH            ( 2,  BSIC_2,RFN)
BS_SET_ARFCN         ( 2, ARFCN_2)
BS_SET_POWER         ( 2,PWRLEV_2)

BS_SET_SCH            ( 3,  BSIC_3,RFN)
BS_SET_ARFCN         ( 3, ARFCN_3)
BS_SET_POWER         ( 3,PWRLEV_3)

BS_SET_SCH            ( 4,  BSIC_4,RFN)
BS_SET_ARFCN         ( 4, ARFCN_4)
BS_SET_POWER         ( 4,PWRLEV_4)

BS_SET_SCH            ( 5,  BSIC_5,RFN)
BS_SET_ARFCN         ( 5, ARFCN_5)
BS_SET_POWER         ( 5,PWRLEV_5)

BS_SET_SCH            ( 6,  BSIC_6,RFN)
BS_SET_ARFCN         ( 6, ARFCN_6)
```

```
BS_SET_POWER              ( 6,PWRLEV_6)

BS_SET_SCH                ( 7,  BSIC_7,RFN)
BS_SET_ARFCN              ( 7, ARFCN_7)
BS_SET_POWER              ( 7,PWRLEV_7)

BS_ON_OFF                 ( 0,TRUE)
BS_ON_OFF                 ( 1,TRUE)
BS_ON_OFF                 ( 2,TRUE)
BS_ON_OFF                 ( 3,TRUE)
BS_ON_OFF                 ( 4,TRUE)
BS_ON_OFF                 ( 5,TRUE)
BS_ON_OFF                 ( 6,TRUE)
BS_ON_OFF                 ( 7,TRUE)


/*-------------------------------------------------------------*\
| Switch on IUT
\*-------------------------------------------------------------*/

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");


ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */
SET_TIMEOUT           ( 30000)


/*-------------------------------------------------------------*\
| Message exchange
\*-------------------------------------------------------------*/

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT         (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"Step 3")


BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND          (0,authentication_request,"Step 5")
BS_MSG3_AWAIT         (0,authentication_response,"Step 6")
BS_MSG3_SEND          (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND          (0,setup,"Step 1")
BS_MSG3_AWAIT         (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT         (0,alerting,"Step 10")

ISS_DELAY (10000);


AT_SEND ("ATA\r\n"," Hook off");
BS_MSG3_AWAIT         (0,connect,"Step 11")
BS_MSG3_SEND          (0,assignment_command,"Step 12")

BS_CONFIG_CHANNEL     (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,assignment_complete,"Step 13")
BS_MSG3_SEND          (0,connect_acknowledge,"Step 14")

/* ---- end of preamble ---- */

/*
 * BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
 * BS_MSG3_AWAIT      (0, measurement_report,"allow one unchecked report")
 *
 * not checked
 */
ISS_DELAY (10000)

REPEAT(COUNT,10)
BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
BS_MSG3_AWAIT_BEGIN (0, measurement_report,SILENT)
   BF_SET_VAL         (dtx               ,0   ,"DTX was not used")
   BF_SET_VAL         (meas_valid        ,0   ,"measurement vaild (0)")
   BF_SET_VAL         (ba_ind            ,1   ,"BA INDEX SET TO 1")
   BF_SET_VAL         (num_ncell_m       ,4   ,"number of neighbours measured")
   BF_SET_VAL         (bcch_freq_ncell_1,0x00,"refers to ARFCN 2")
```

TEXAS INSTRUMENTS

```
    BF_SET_VAL         (bcch_freq_ncell_2,0x04,"refers to ARFCN 44")
    BF_SET_VAL         (bcch_freq_ncell_3,0x03,"refers to ARFCN 38")
    BF_SET_VAL         (bcch_freq_ncell_4,0x01,"refers to ARFCN 14")
BS_MSG3_AWAIT_END()
REPEAT_END(COUNT)


AT_SEND ("AT+CFUN=0"," Power Off");


BS_ON_OFF          ( 0,FALSE)
BS_ON_OFF          ( 1,FALSE)
BS_ON_OFF          ( 2,FALSE)
BS_ON_OFF          ( 3,FALSE)
BS_ON_OFF          ( 4,FALSE)
BS_ON_OFF          ( 5,FALSE)
BS_ON_OFF          ( 6,FALSE)
BS_ON_OFF          ( 7,FALSE)


ISS_DELAY (10000);


IE_BF_SET_VAL      ( neighbour_cell_description_26_6_3_3_3, ext_ind, 1," part of BA")


REPEAT_END(K)
```

History:	27.01.98	VK	Initial
	25.01.99	LE	Testcase updated

3.4.5 MRR154: Measurement / barred cells and non-permitted NCCs (26.6.3.3, K=1+2)

Description: (Ref.: GSM 11.10-1, §26.6.3.3)
Preamble: None
Script:
```
IE_BEGIN(measurement_results)
   BF(1,   1,ACT_CHECK  ,ba_ind                   ,SILENT)
   BF(1,   0,ACT_CHECK  ,dtx                      ,"DTX was not used")
   BF(6,0x3f,ACT_CHECK  ,rxlev_full_serving_cell ,SILENT)
   BF(1,   0,ACT_CHECK  ,ANONYMOUS                ,"spare")
   BF(1,   0,ACT_CHECK  ,meas_valid               ,"valid within the 2nd SACCH"
                                             "  block at the latest")
   BF(6,0x3f,ACT_CHECK  ,rxlev_sub_serving_cell  ,SILENT)
   BF(1,   0,ACT_CHECK  ,ANONYMOUS                ,"spare")
   BF(3,   0,ACT_CHECK  ,rxqual_full_serving_cell,SILENT)
   BF(3,   0,ACT_CHECK  ,rxqual_sub_serving_cell ,SILENT)
   BF(3,   4,ACT_CHECK ,num_ncell_m               ,"num of neighbor cells")
   BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_1         ,SILENT)
   BF(5,   0,ACT_CHECK ,bcch_freq_ncell_1         ,SILENT)
   BF(6,0x0b,ACT_CHECK ,     bsic_ncell_1         ,SILENT)
   BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_2         ,SILENT)
   BF(5,   4,ACT_CHECK ,bcch_freq_ncell_2         ,SILENT)
   BF(6,0x09,ACT_CHECK ,     bsic_ncell_2         ,SILENT)
   BF(6,0x3f,ACT_CHECK ,    rxlev_ncell_3         ,SILENT)
   BF(5,0x03,ACT_CHECK ,bcch_freq_ncell_3         ,SILENT)
   BF(6,0x0F,ACT_CHECK ,     bsic_ncell_3         ,SILENT)
   BF(6,0x1E,ACT_CHECK ,    rxlev_ncell_4         ,SILENT)
   BF(5,0x01,ACT_CHECK ,bcch_freq_ncell_4         ,SILENT)
   BF(6,0x0F,ACT_CHECK ,     bsic_ncell_4         ,SILENT)
   BF(6,   0,ACT_CHECK ,    rxlev_ncell_5         ,SILENT)
   BF(5,   0,ACT_CHECK ,bcch_freq_ncell_5         ,SILENT)
   BF(6,   0,ACT_CHECK ,     bsic_ncell_5         ,SILENT)
   BF(6,   0,ACT_CHECK ,    rxlev_ncell_6         ,SILENT)
   BF(5,   0,ACT_CHECK ,bcch_freq_ncell_6         ,SILENT)
   BF(6,   0,ACT_CHECK ,     bsic_ncell_6         ,SILENT)
IE_END(measurement_results)


IE_BEGIN(neighbour_cell_description_26_6_3_3_3)
   BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
   BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
   BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
   BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
   BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
   BF(32,0x00000820,ACT_CHECK,ba_064_033,"ARFCN 44, 38")
   BF(32,0x00082002,ACT_CHECK,ba_032_001,"ARFCN 20, 14,  2")
IE_END(neighbour_cell_description_26_6_3_3_3)


IE_BEGIN(neighbour_cell_description_26_6_3_3_3_k2)
   BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
   BF( 1,         1,ACT_CHECK,ext_ind  ,"this IE carries the partBA")
   BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
   BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
   BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
   BF(32,0x00000820,ACT_CHECK,ba_064_033,"ARFCN 44, 38")
   BF(32,0x00082002,ACT_CHECK,ba_032_001,"ARFCN 20, 14,  2")
IE_END(neighbour_cell_description_26_6_3_3_3_k2)


IE_BEGIN(neighbour_cell_description_5bis_26_6_3_3_3)  /* same as 26_6_3_2_3 */
   BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
   BF( 1,         1,ACT_CHECK,ext_ind  ,"extention indication")
   BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
   BF( 1,         0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
   BF( 1,         1,ACT_CHECK,f0       ,"frequency 0 indicator (F0 included)")
   BF(10,       800,ACT_CHECK,w1       ,"channel 800 belongs to the BA")
   BF( 9,         0,ACT_CHECK,w2       ,SILENT)
   BF( 9,         0,ACT_CHECK,w3       ,SILENT)
   BF( 8,         0,ACT_CHECK,w4       ,SILENT)
   BF( 8,         0,ACT_CHECK,w5       ,SILENT)
   BF( 8,         0,ACT_CHECK,w6       ,SILENT)
   BF( 8,         0,ACT_CHECK,w7       ,SILENT)
   BF( 7,         0,ACT_CHECK,w8       ,SILENT)
   BF( 7,         0,ACT_CHECK,w9       ,SILENT)
```

```
        BF( 7,          0,ACT_CHECK,w10       ,SILENT)
        BF( 7,          0,ACT_CHECK,w11       ,SILENT)
        BF( 7,          0,ACT_CHECK,w12       ,SILENT)
        BF( 7,          0,ACT_CHECK,w13       ,SILENT)
        BF( 7,          0,ACT_CHECK,w14       ,SILENT)
        BF( 7,          0,ACT_CHECK,w15       ,SILENT)
        BF( 6,          0,ACT_CHECK,w16       ,SILENT)
IE_END(neighbour_cell_description_5bis_26_6_3_3_3)

MSG3_BEGIN(measurement_report)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(measurement_report_message_type)
    IE(measurement_results)
MSG3_END(measurement_report)

MSG3_BEGIN(system_information_type_5_26_6_3_3_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_26_6_3_3_3)
MSG3_END(system_information_type_5_26_6_3_3_3)

MSG3_BEGIN(system_information_type_5_26_6_3_3_3_k2)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_26_6_3_3_3_k2)
MSG3_END(system_information_type_5_26_6_3_3_3_k2)

MSG3_BEGIN(system_information_type_5bis_26_6_3_3_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5bis_message_type)
    IE(neighbour_cell_description_5bis_26_6_3_3_3)
MSG3_END(system_information_type_5bis_26_6_3_3_3)

/*------------------------------------------------------------------*\
| Information Elements
\*------------------------------------------------------------------*/

IE_BEGIN(authentication_parameter_rand)
    BF(32,0x80000000,ACT_CHECK,rand_127_096,SILENT)
    BF(32,0x00000012,ACT_CHECK,rand_095_064,SILENT)
    BF(32,0x34000000,ACT_CHECK,rand_063_032,SILENT)
    BF(32,0x0000000F,ACT_CHECK,rand_031_000,SILENT)
IE_END(authentication_parameter_rand)

IE_BEGIN(authentication_parameter_sres)
    BF(32,0x0000000F,ACT_SHOW,sres_031_000,SILENT)
IE_END(authentication_parameter_sres)

IE_BEGIN(call_control_protocol_discriminator)
    BF(4, 3,ACT_CHECK,ANONYMOUS ,SILENT)
IE_END(call_control_protocol_discriminator)

IE_BEGIN(called_party_bcd_number)
    BF( 8,7,ACT_CHECK,length                 ,"length of IE")
    BF( 1,1,ACT_CHECK,ext                     ,"Extension Bit")
    BF( 3,0,ACT_CHECK,type_of_number          ,"Unknown")
    BF( 4,1,ACT_CHECK,numbering_plan          ,"ISDN/telephony")
    BF( 4,3,ACT_CHECK,digit_2                 ,"Digit 2")
    BF( 4,0,ACT_CHECK,digit_1                 ,"Digit 1")
    BF( 4,3,ACT_CHECK,digit_4                 ,"Digit 4")
    BF( 4,0,ACT_CHECK,digit_3                 ,"Digit 3")
    BF( 4,0,ACT_CHECK,digit_6                 ,"Digit 6")
    BF( 4,9,ACT_CHECK,digit_5                 ,"Digit 5")
    BF( 4,4,ACT_CHECK,digit_8                 ,"Digit 8")
    BF( 4,9,ACT_CHECK,digit_7                 ,"Digit 7")
    BF( 4,1,ACT_CHECK,digit_10                ,"Digit 10")
    BF( 4,1,ACT_CHECK,digit_9                 ,"Digit 9")
    BF( 4,7,ACT_CHECK,digit_12                ,"Digit 12")
    BF( 4,0xF,ACT_CHECK,digit_11              ,"Digit 11")
IE_END(called_party_bcd_number)
```

```
IE_BEGIN(channels_needed_for_mobiles_1_and_2)
   BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
   BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)


IE_BEGIN(channel_description)
   BF( 5,M5(0,0,1,0,1),ACT_CHECK,        channel_type,"SDCCH/SACCH 4(1)")
   BF( 3,            0,ACT_CHECK,     time_slot_number,"zero")
   BF( 3,          BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,            0,ACT_CHECK,             hopping,"No")
   BF( 2,            0,ACT_CHECK,               spare,SILENT)
   BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,              arfcn,"ARFCN of the BCCH")
IE_END(channel_description)



IE_BEGIN(ciphering_mode_setting)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,         1,ACT_CHECK,    start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)


IE_BEGIN(cipher_response)
   BF(3,0,ACT_CHECK,           spare,SILENT)
   BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)


IE_BEGIN(description_of_the_first_channel_after_time)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,         channel_type,"TCH")
   BF( 3,            3,ACT_CHECK,     time_slot_number,"three")
   BF( 3,          BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,            0,ACT_CHECK,             hopping,"No")
   BF( 2,            0,ACT_CHECK,               spare,SILENT)
   BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,              arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time)


IE_BEGIN(ia_rest_octets)   /* maximum length (11), no hop, no start time */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(ia_rest_octets)

IE_BEGIN(iei_5E)
   BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5E)


IE_BEGIN(iei_15)
   BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)


IE_BEGIN(iei_04)
   BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)


IE_BEGIN(iei_34)
   BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_34)


IE_BEGIN(l2_pseudo_length_11)  /* pag req type 1 with TMSI (one mobile)*/
   BF(8, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_11)


IE_BEGIN(mobile_allocation)
   BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
IE_END(mobile_allocation)


IE_BEGIN(mobile_identity)            /* has 8 octets */
   BF(8,          7,ACT_CHECK, length,"seven octets to come")
   BF(4,          2,ACT_CHECK, digit_1,SILENT)
```

```
    BF(1,          1,ACT_CHECK,odd_even,SILENT)
    BF(3, M3(0,0,1),ACT_CHECK,    type,"IMSI")
    BF(4,          2,ACT_CHECK, digit_3,SILENT)
    BF(4,          6,ACT_CHECK, digit_2,SILENT)
    BF(4,          1,ACT_CHECK, digit_4,SILENT)
    BF(4,          0,ACT_CHECK, digit_3,SILENT)
    BF(4,          7,ACT_CHECK, digit_6,SILENT)
    BF(4,          4,ACT_CHECK, digit_5,SILENT)
    BF(4,          1,ACT_CHECK, digit_8,SILENT)
    BF(4,          1,ACT_CHECK, digit_7,SILENT)
    BF(4,          9,ACT_CHECK, digit_10,SILENT)
    BF(4,          4,ACT_CHECK, digit_9,SILENT)
    BF(4,          2,ACT_CHECK, digit_12,SILENT)
    BF(4,          1,ACT_CHECK, digit_11,SILENT)
IE_END(mobile_identity)

IE_BEGIN(mobility_management_protocol_discriminator)
    BF(4, 5,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobility_management_protocol_discriminator)

IE_BEGIN(ms_classmark)
    BF(8,          3,ACT_CHECK, length,SILENT)
    BF(1,          0,ACT_CHECK, spare,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
    BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
    BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
    BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
    BF(1,          0,ACT_CHECK, spare2,SILENT)
    BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
    BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
    BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
    BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
    BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
    BF(5,          1,ACT_CHECK, ccbs,SILENT)
    BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
    BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
IE_END(ms_classmark)

IE_BEGIN(neighbour_cell_description_26_6_3_1_3)
    BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,          0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28, 0x0000097,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_032_001,"no neigbours")
IE_END(neighbour_cell_description_26_6_3_1_3)

IE_BEGIN(p1_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets)

IE_BEGIN(page_mode)
    BF(2,0,ACT_CHECK,spare,"two spare bits")
    BF(2,0,ACT_CHECK,pm   ,"Normal Paging")
IE_END(page_mode)

IE_BEGIN(power_command)
    BF(8,10,ACT_CHECK,power,SILENT)
IE_END(power_command)

IE_BEGIN(rach)
    BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any chan'")
```

```
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach)

IE_BEGIN(rach_moc)
    BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

IE_BEGIN(request_reference)
    BF(3,    M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,  random_reference,SILENT)
    BF(5,            0,ACT_SHOW,               t1_,SILENT)
    BF(6,            0,ACT_SHOW,               t3 ,SILENT)
    BF(5,            0,ACT_SHOW,               t2 ,SILENT)
IE_END(request_reference)

IE_BEGIN(rr_cause)
    BF(8,0,ACT_CHECK,rr_cause,"normal event")
IE_END(rr_cause)

IE_BEGIN(signal_call_waiting)
    BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
IE_END(signal_call_waiting)

IE_BEGIN(spare_half_octet)
    BF(4, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(spare_half_octet)

IE_BEGIN(timing_advance)
    BF(2,0,ACT_CHECK,        spare,SILENT)
    BF(6,0,ACT_CHECK,timing_advance,"0")
IE_END(timing_advance)

IE_BEGIN(transaction_identifier_source)
    BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source)

IE_BEGIN(transaction_identifier_dest)
    BF(4,M4(1,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest)

/*----------------------------------------------------------------*\
| Messages
\*----------------------------------------------------------------*/

MSG3_BEGIN(alerting)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(alerting_message_type)
MSG3_END(alerting)

MSG3_BEGIN(assignment_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel)
MSG3_END(assignment_command)

MSG3_BEGIN(assignment_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_complete_message_type)
    IE(rr_cause)
MSG3_END(assignment_complete)

MSG3_BEGIN(authentication_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_request_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(authentication_parameter_rand)
```

```
    MSG3_END(authentication_request)

    MSG3_BEGIN(authentication_response)
        IE(skip_indicator)
        IE(mobility_management_protocol_discriminator)
        IE(authentication_response_message_type)
        IE(authentication_parameter_sres)
    MSG3_END(authentication_response)

    MSG3_BEGIN(ciphering_mode_command)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(ciphering_mode_command_message_type)
        IE(cipher_response)
        IE(ciphering_mode_setting)
    MSG3_END(ciphering_mode_command)

    MSG3_BEGIN(ciphering_mode_complete)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(ciphering_mode_complete_message_type)
    MSG3_END(ciphering_mode_complete)

    MSG3_BEGIN(connect)
        IE(transaction_identifier_dest)
        IE(call_control_protocol_discriminator)
        IE(connect_message_type)
    MSG3_END(connect)

    MSG3_BEGIN(connect_acknowledge)
        IE(transaction_identifier_source)
        IE(call_control_protocol_discriminator)
        IE(connect_acknowledge_message_type)
    MSG3_END(connect_acknowledge)

    MSG3_BEGIN(setup)                  /* contains 'signal' but no 'Bearer Cap' */
        IE(transaction_identifier_source)
        IE(call_control_protocol_discriminator)
        IE(setup_message_type)
        IE(iei_34)
        IE(signal_call_waiting)
    MSG3_END(setup)

    /* ------ Start of Testcase ----- */


    ISS_INIT          ( 8)

    COMMAND ("TAP REDIRECT CLEAR")
    COMMAND ("RR REDIRECT CLEAR")
    COMMAND ("MM REDIRECT CLEAR")
    COMMAND ("MMI REDIRECT CLEAR")
    COMMAND ("TAP DUPLICATE CLEAR")
    COMMAND ("RR DUPLICATE CLEAR")
    COMMAND ("MM DUPLICATE CLEAR")
    COMMAND ("MMI DUPLICATE CLEAR")

    COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
    COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
    COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
    COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
    COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
    COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
    COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
    COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
    COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
    COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
    COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
    COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("RR DUPLICATE PL TAP")
    COMMAND ("RR DUPLICATE DL TAP")
```

```
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

REPEAT(N,8)
IE_BF_SET_VAL        ( cell_identity, ci, N," ci used for SI 3 and SI 6")
IE_BF_SET_VAL        ( neighbour_cell_description, ba_ind,  0," BA for BCCH")
IE_BF_SET_VAL        ( neighbour_cell_description, ext_ind, 0, SILENT)
BS_SET_SYS_INFO      ( N, system_information_type_1)
BS_SET_SYS_INFO      ( N, system_information_type_2)
BS_SET_SYS_INFO      ( N, system_information_type_3)
BS_SET_SYS_INFO      ( N, system_information_type_4)
IE_BF_SET_VAL        ( neighbour_cell_description,  ba_ind, 1," BA for SACCH")
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_6)
REPEAT_END(N)

#define          NCC_0    1
#define          NCC_1    1
#define          NCC_2    1
#define          NCC_3    2
#define          NCC_4    3
#define          NCC_5    4
#define          NCC_6    1
#define          NCC_7    1

#define          BCC_0    3
#define          BCC_1    5
#define          BCC_2    7
#define          BCC_3    1
#define          BCC_4    3
#define          BCC_5    5
#define          BCC_6    7
#define          BCC_7    1

#define          BSIC_0   ((NCC_0<<3)|(BCC_0))
#define          BSIC_1   ((NCC_1<<3)|(BCC_1))
#define          BSIC_2   ((NCC_2<<3)|(BCC_2))
#define          BSIC_3   ((NCC_3<<3)|(BCC_3))
#define          BSIC_4   ((NCC_4<<3)|(BCC_4))
#define          BSIC_5   ((NCC_5<<3)|(BCC_5))
#define          BSIC_6   ((NCC_6<<3)|(BCC_6))
#define          BSIC_7   ((NCC_7<<3)|(BCC_7))

#define          ARFCN_0   2
#define          ARFCN_1   8
#define          ARFCN_2   14
#define          ARFCN_3   20
#define          ARFCN_4   26
#define          ARFCN_5   32
#define          ARFCN_6   38
#define          ARFCN_7   44

#define          PWRLEV_0  -35            /* force to be serving cell (was -60) */
#define          PWRLEV_1  -85
#define          PWRLEV_2  -80
#define          PWRLEV_3  -75
#define          PWRLEV_4  -55
#define          PWRLEV_5  -50
#define          PWRLEV_6  -45
#define          PWRLEV_7  -40

BS_SET_SCH       ( 0,  BSIC_0,RFN)
BS_SET_ARFCN     ( 0, ARFCN_0)
BS_SET_POWER     ( 0,PWRLEV_0)

BS_SET_SCH       ( 1,  BSIC_1,RFN)
BS_SET_ARFCN     ( 1, ARFCN_1)
BS_SET_POWER     ( 1,PWRLEV_1)

BS_SET_SCH       ( 2,  BSIC_2,RFN)
BS_SET_ARFCN     ( 2, ARFCN_2)
BS_SET_POWER     ( 2,PWRLEV_2)

BS_SET_SCH       ( 3,  BSIC_3,RFN)
BS_SET_ARFCN     ( 3, ARFCN_3)
```

```
BS_SET_POWER            ( 3,PWRLEV_3)

BS_SET_SCH              ( 4,  BSIC_4,RFN)
BS_SET_ARFCN            ( 4, ARFCN_4)
BS_SET_POWER            ( 4,PWRLEV_4)

BS_SET_SCH              ( 5,  BSIC_5,RFN)
BS_SET_ARFCN            ( 5, ARFCN_5)
BS_SET_POWER            ( 5,PWRLEV_5)

BS_SET_SCH              ( 6,  BSIC_6,RFN)
BS_SET_ARFCN            ( 6, ARFCN_6)
BS_SET_POWER            ( 6,PWRLEV_6)

BS_SET_SCH              ( 7,  BSIC_7,RFN)
BS_SET_ARFCN            ( 7, ARFCN_7)
BS_SET_POWER            ( 7,PWRLEV_7)

BS_ON_OFF               ( 0,TRUE)
BS_ON_OFF               ( 1,TRUE)
BS_ON_OFF               ( 2,TRUE)
BS_ON_OFF               ( 3,TRUE)
BS_ON_OFF               ( 4,TRUE)
BS_ON_OFF               ( 5,TRUE)
BS_ON_OFF               ( 6,TRUE)
BS_ON_OFF               ( 7,TRUE)

/*-------------------------------------------------------------*\
| Switch on IUT
\*-------------------------------------------------------------*/

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

REPEAT(K,2)

ISS_DELAY               ( 5000) /* wait until the MS has detected the cell */
SET_TIMEOUT             ( 30000)

/*-------------------------------------------------------------*\
| Message exchange
\*-------------------------------------------------------------*/

BS_CONFIG_CHANNEL       (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND            (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT           (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL       (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND            (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL       (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT           (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND            (0,authentication_request,"Step 5")
BS_MSG3_AWAIT           (0,authentication_response,"Step 6")
BS_MSG3_SEND            (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT           (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND            (0,setup,"Step 1")
BS_MSG3_AWAIT           (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT           (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");
BS_MSG3_AWAIT           (0,connect,"Step 11")
BS_MSG3_SEND            (0,assignment_command,"Step 12")

BS_CONFIG_CHANNEL       (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT           (0,assignment_complete,"Step 13")
BS_MSG3_SEND            (0,connect_acknowledge,"Step 14")

/* ---- end of preamble ---- */

/*
 * BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
```

```
 * BS_MSG3_AWAIT        (0, measurement_report,"allow one unchecked report")
 *
 * not checked
 */
ISS_DELAY (10000)

REPEAT(COUNT,10)
BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
BS_MSG3_AWAIT_BEGIN (0, measurement_report,SILENT)
    BF_SET_VAL          (dtx                ,0   ,"DTX was not used")
    BF_SET_VAL          (meas_valid         ,0   ,"measurement vaild (0)")
    BF_SET_VAL          (ba_ind             ,1   ,"BA INDEX SET TO 1")
    BF_SET_VAL          (num_ncell_m        ,4   ,"number of neighbours measured")
    BF_SET_VAL          (bcch_freq_ncell_1,0x00,"refers to ARFCN 2")
    BF_SET_VAL          (bcch_freq_ncell_2,0x04,"refers to ARFCN 44")
    BF_SET_VAL          (bcch_freq_ncell_3,0x03,"refers to ARFCN 38")
    BF_SET_VAL          (bcch_freq_ncell_4,0x01,"refers to ARFCN 14")
BS_MSG3_AWAIT_END()
REPEAT_END(COUNT)

BS_CONFIG_CHANNEL    (0, FACCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, channel_release," 16:")

ISS_DELAY (10000);

IE_BF_SET_VAL         ( neighbour_cell_description, ext_ind, 1,"")
BS_SET_SYS_INFO_SACCH ( 0, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 1, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 2, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 3, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 4, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 5, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 6, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 7, system_information_type_5bis_26_6_3_3_3)
BS_SET_SYS_INFO_SACCH ( 0, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 1, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 2, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 3, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 4, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 5, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 6, system_information_type_5_26_6_3_3_3_k2)
BS_SET_SYS_INFO_SACCH ( 7, system_information_type_5_26_6_3_3_3_k2)
IE_BF_SET_VAL        ( neighbour_cell_description_26_6_3_3_3, ext_ind, 1," part of BA")

REPEAT_END(K)
```

History:	27.01.98	VK	Initial
	25.01.99	LE	Testcase updated

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INSTRUMENTS

3.4.6 MRR155: Measurement / DTX (26.6.3.4)

Description: (Ref.: GSM 11.10-1, §26.6.3.4)
Preamble: None
Script:

```
/*-----------------------------------------------------------------*\
| Information Elements
\*-----------------------------------------------------------------*/

IE_BEGIN(authentication_parameter_rand)
   BF(32,0x80000000,ACT_CHECK,rand_127_096,SILENT)
   BF(32,0x00000012,ACT_CHECK,rand_095_064,SILENT)
   BF(32,0x34000000,ACT_CHECK,rand_063_032,SILENT)
   BF(32,0x0000000F,ACT_CHECK,rand_031_000,SILENT)
IE_END(authentication_parameter_rand)

IE_BEGIN(authentication_parameter_sres)
   BF(32,0x0000000F,ACT_SHOW,sres_031_000,SILENT)
IE_END(authentication_parameter_sres)

IE_BEGIN(call_control_protocol_discriminator)
   BF(4, 3,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(call_control_protocol_discriminator)

IE_BEGIN(called_party_bcd_number)
   BF( 8,7,ACT_CHECK,length                      ,"length of IE")
   BF( 1,1,ACT_CHECK,ext                         ,"Extension Bit")
   BF( 3,0,ACT_CHECK,type_of_number              ,"Unknown")
   BF( 4,1,ACT_CHECK,numbering_plan              ,"ISDN/telephony")
   BF( 4,3,ACT_CHECK,digit_2                     ,"Digit 2")
   BF( 4,0,ACT_CHECK,digit_1                     ,"Digit 1")
   BF( 4,3,ACT_CHECK,digit_4                     ,"Digit 4")
   BF( 4,0,ACT_CHECK,digit_3                     ,"Digit 3")
   BF( 4,0,ACT_CHECK,digit_6                     ,"Digit 6")
   BF( 4,9,ACT_CHECK,digit_5                     ,"Digit 5")
   BF( 4,4,ACT_CHECK,digit_8                     ,"Digit 8")
   BF( 4,9,ACT_CHECK,digit_7                     ,"Digit 7")
   BF( 4,1,ACT_CHECK,digit_10                    ,"Digit 10")
   BF( 4,1,ACT_CHECK,digit_9                     ,"Digit 9")
   BF( 4,7,ACT_CHECK,digit_12                    ,"Digit 12")
   BF( 4,0xF,ACT_CHECK,digit_11                  ,"Digit 11")
IE_END(called_party_bcd_number)

IE_BEGIN(channels_needed_for_mobiles_1_and_2)
   BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
   BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,1,0,1),ACT_CHECK,          channel_type,"SDCCH/SACCH 4(1)")
   BF( 3,             0,ACT_CHECK,      time_slot_number,"zero")
   BF( 3,            BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,             0,ACT_CHECK,              hopping,"No")
   BF( 2,             0,ACT_CHECK,                spare,SILENT)
   BF(10,   ARFCN_BCCH_GSM,ACT_CHECK,               arfcn,"ARFCN of the BCCH")
IE_END(channel_description)

IE_BEGIN(ciphering_mode_setting)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,          1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)

IE_BEGIN(cipher_response)
   BF(3,0,ACT_CHECK,            spare,SILENT)
   BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)

IE_BEGIN(description_of_the_first_channel_after_time)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,          channel_type,"TCH")
   BF( 3,             3,ACT_CHECK,      time_slot_number,"three")
   BF( 3,            BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,             0,ACT_CHECK,              hopping,"No")
   BF( 2,             0,ACT_CHECK,                spare,SILENT)
```

```
      BF(10,    ARFCN_BCCH_GSM,ACT_CHECK,                    arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time)

IE_BEGIN(ia_rest_octets)   /* maximum length (11), no hop, no start time */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(ia_rest_octets)

IE_BEGIN(iei_5E)
   BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5E)

IE_BEGIN(iei_15)
   BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)

IE_BEGIN(iei_04)
   BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)

IE_BEGIN(iei_34)
   BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_34)

IE_BEGIN(l2_pseudo_length_11)  /* pag req type 1 with TMSI (one mobile)*/
   BF(8, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_11)

IE_BEGIN(mobile_allocation)
   BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
IE_END(mobile_allocation)

IE_BEGIN(mobile_identity)            /* has 8 octets */
   BF(8,          7,ACT_CHECK, length,"seven octets to come")
   BF(4,          2,ACT_CHECK, digit_1,SILENT)
   BF(1,          1,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,0,1),ACT_CHECK,    type,"IMSI")
   BF(4,          2,ACT_CHECK, digit_3,SILENT)
   BF(4,          6,ACT_CHECK, digit_2,SILENT)
   BF(4,          1,ACT_CHECK, digit_4,SILENT)
   BF(4,          0,ACT_CHECK, digit_3,SILENT)
   BF(4,          7,ACT_CHECK, digit_6,SILENT)
   BF(4,          4,ACT_CHECK, digit_5,SILENT)
   BF(4,          1,ACT_CHECK, digit_8,SILENT)
   BF(4,          1,ACT_CHECK, digit_7,SILENT)
   BF(4,          9,ACT_CHECK, digit_10,SILENT)
   BF(4,          4,ACT_CHECK, digit_9,SILENT)
   BF(4,          2,ACT_CHECK, digit_12,SILENT)
   BF(4,          1,ACT_CHECK, digit_11,SILENT)
IE_END(mobile_identity)

IE_BEGIN(mobility_management_protocol_discriminator)
   BF(4, 5,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobility_management_protocol_discriminator)

IE_BEGIN(ms_classmark)
   BF(8,          3,ACT_CHECK, length,SILENT)
   BF(1,          0,ACT_CHECK, spare,SILENT)
   BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
   BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
   BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
   BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
   BF(1,          0,ACT_CHECK, spare2,SILENT)
   BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
   BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
   BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
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    BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
    BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
    BF(5,          1,ACT_CHECK, ccbs,SILENT)
    BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
    BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
IE_END(ms_classmark)

IE_BEGIN(neighbour_cell_description_26_6_3_1_3)
    BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_032_001,"no neigbours")
IE_END(neighbour_cell_description_26_6_3_1_3)

IE_BEGIN(p1_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets)

IE_BEGIN(page_mode)
    BF(2,0,ACT_CHECK,spare,"two spare bits")
    BF(2,0,ACT_CHECK,pm    ,"Normal Paging")
IE_END(page_mode)

IE_BEGIN(power_command)
    BF(8,10,ACT_CHECK,power,SILENT)
IE_END(power_command)

IE_BEGIN(rach)
    BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any chan'")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach)

IE_BEGIN(rach_moc)
    BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

IE_BEGIN(request_reference)
    BF(3,    M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,SILENT)
    BF(5,            0,ACT_SHOW,                t1_,SILENT)
    BF(6,            0,ACT_SHOW,                t3 ,SILENT)
    BF(5,            0,ACT_SHOW,                t2 ,SILENT)
IE_END(request_reference)

IE_BEGIN(rr_cause)
    BF(8,0,ACT_CHECK,rr_cause,"normal event")
IE_END(rr_cause)

IE_BEGIN(signal_call_waiting)
    BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
IE_END(signal_call_waiting)

IE_BEGIN(spare_half_octet)
    BF(4, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(spare_half_octet)

IE_BEGIN(timing_advance)
    BF(2,0,ACT_CHECK,            spare,SILENT)
    BF(6,0,ACT_CHECK,timing_advance,"0")
```

```
    IE_END(timing_advance)

IE_BEGIN(transaction_identifier_source)
    BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source)

IE_BEGIN(transaction_identifier_dest)
    BF(4,M4(1,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest)


/*----------------------------------------------------------------*\
| Messages
\*----------------------------------------------------------------*/

MSG3_BEGIN(alerting)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(alerting_message_type)
MSG3_END(alerting)

MSG3_BEGIN(assignment_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel)
MSG3_END(assignment_command)

MSG3_BEGIN(assignment_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_complete_message_type)
    IE(rr_cause)
MSG3_END(assignment_complete)

MSG3_BEGIN(authentication_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_request_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(authentication_parameter_rand)
MSG3_END(authentication_request)

MSG3_BEGIN(authentication_response)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_response_message_type)
    IE(authentication_parameter_sres)
MSG3_END(authentication_response)

MSG3_BEGIN(ciphering_mode_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_command_message_type)
    IE(cipher_response)
    IE(ciphering_mode_setting)
MSG3_END(ciphering_mode_command)

MSG3_BEGIN(ciphering_mode_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_complete_message_type)
MSG3_END(ciphering_mode_complete)

MSG3_BEGIN(connect)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(connect_message_type)
MSG3_END(connect)

MSG3_BEGIN(connect_acknowledge)
    IE(transaction_identifier_source)
```

```
    IE(call_control_protocol_discriminator)
    IE(connect_acknowledge_message_type)
MSG3_END(connect_acknowledge)

MSG3_BEGIN(setup)               /* contains 'signal' but no 'Bearer Cap' */
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_34)
    IE(signal_call_waiting)
MSG3_END(setup)


#define            NCC_0     1
#define            NCC_1     1
#define            NCC_2     1
#define            NCC_3     1
#define            NCC_4     1
#define            NCC_5     1
#define            NCC_6     1
#define            NCC_7     1


#define            BCC_0     3
#define            BCC_1     5
#define            BCC_2     7
#define            BCC_3     1
#define            BCC_4     3
#define            BCC_5     5
#define            BCC_6     7
#define            BCC_7     1


#define            BSIC_0    ((NCC_0<<3)|(BCC_0))
#define            BSIC_1    ((NCC_1<<3)|(BCC_1))
#define            BSIC_2    ((NCC_2<<3)|(BCC_2))
#define            BSIC_3    ((NCC_3<<3)|(BCC_3))
#define            BSIC_4    ((NCC_4<<3)|(BCC_4))
#define            BSIC_5    ((NCC_5<<3)|(BCC_5))
#define            BSIC_6    ((NCC_6<<3)|(BCC_6))
#define            BSIC_7    ((NCC_7<<3)|(BCC_7))


#define            ARFCN_0    2
#define            ARFCN_1    8
#define            ARFCN_2   14
#define            ARFCN_3   20
#define            ARFCN_4   26
#define            ARFCN_5   32
#define            ARFCN_6   38
#define            ARFCN_7   44


#define            PWRLEV_0  -60
#define            PWRLEV_1  -85
#define            PWRLEV_2  -80
#define            PWRLEV_3  -75
#define            PWRLEV_4  -55
#define            PWRLEV_5  -50
#define            PWRLEV_6  -45
#define            PWRLEV_7  -40

IE_BEGIN(cell_options_sacch_use_dtx)
   BF(1,0,ACT_CHECK,dtx0                ,"MS shall use DTX")
   BF(1,0,ACT_CHECK,pwrc                ,"power control indicator is not set")
   BF(2,1,ACT_CHECK,dtx                 ,"MS shall use DTX")
   BF(4,1,ACT_CHECK,radio_link_timeout ,"8 SACCH blocks")
IE_END(cell_options_sacch_use_dtx)

IE_BEGIN(cell_description_ho)
   BF( 2,ARFCN_0>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,     NCC_0,ACT_CHECK,ncc, "   network colour code")
   BF( 3,     BCC_0,ACT_CHECK,bcc, "   base station colour code")
   BF( 8,ARFCN_0   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description_ho)

IE_BEGIN(synchronization_indication)
   BF( 4, 0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,   0, ACT_CHECK,   nci,"out of range TAV is ignored")
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        BF( 1,   0, ACT_CHECK,   rot,"observed time diff not included")
        BF( 2,   0, ACT_CHECK,    si,"synchronization indication")
IE_END(synchronization_indication)


MSG3_BEGIN(handover_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
    IE(cell_description_ho)
    IE(channel_description)
    IE(handover_reference)
    IE(power_command)
    IE(synchronization_indication)
MSG3_END(handover_command)



IE_BEGIN(measurement_results)
    BF(1,0x01,ACT_CHECK  ,ba_ind                 ,SILENT)
    BF(1,   1,ACT_CHECK  ,dtx                    ,"DTX was used")
    BF(6,0x32,ACT_CHECK  ,rxlev_full_serving_cell ,SILENT)
    BF(1,   0,ACT_CHECK  ,ANONYMOUS              ,"spare")
    BF(1,   0,ACT_CHECK  ,meas_valid             ,"valid within the 2nd SACCH"
                                              "   block at the latest")
    BF(6,0x32,ACT_CHECK  ,rxlev_sub_serving_cell ,SILENT)
    BF(1,   0,ACT_CHECK  ,ANONYMOUS              ,"spare")
    BF(3,   0,ACT_CHECK  ,rxqual_full_serving_cell,SILENT)
    BF(3,   0,ACT_CHECK  ,rxqual_sub_serving_cell ,SILENT)
    BF(3,   6,ACT_CHECK , num_ncell_m            ,"num of neighbor cells")
    BF(6,0x3f,ACT_CHECK , rxlev_ncell_1          ,SILENT)
    BF(5,   7,ACT_CHECK , bcch_freq_ncell_1      ,SILENT)
    BF(6,0x09,ACT_CHECK , bsic_ncell_1           ,SILENT)
    BF(6,0x3f,ACT_CHECK , rxlev_ncell_2          ,SILENT)
    BF(5,   6,ACT_CHECK , bcch_freq_ncell_2      ,SILENT)
    BF(6,0x0F,ACT_CHECK , bsic_ncell_2           ,SILENT)
    BF(6,0x3c,ACT_CHECK , rxlev_ncell_3          ,SILENT)
    BF(5,   5,ACT_CHECK , bcch_freq_ncell_3      ,SILENT)
    BF(6,0x0d,ACT_CHECK , bsic_ncell_3           ,SILENT)
    BF(6,0x37,ACT_CHECK , rxlev_ncell_4          ,SILENT)
    BF(5,   4,ACT_CHECK , bcch_freq_ncell_4      ,SILENT)
    BF(6,0x0b,ACT_CHECK , bsic_ncell_4           ,SILENT)
    BF(6,0x32,ACT_CHECK , rxlev_ncell_5          ,SILENT)
    BF(5,   0,ACT_CHECK , bcch_freq_ncell_5      ,SILENT)
    BF(6,0x0B,ACT_CHECK , bsic_ncell_5           ,SILENT)
    BF(6,0x23,ACT_CHECK , rxlev_ncell_6          ,SILENT)
    BF(5,   3,ACT_CHECK , bcch_freq_ncell_6      ,SILENT)
    BF(6,0x09,ACT_CHECK , bsic_ncell_6           ,SILENT)
IE_END(measurement_results)

IE_BEGIN(neighbour_cell_description_bcch_26_6_3_4_3)
    BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,         0,ACT_CHECK,ba_ind   ,"BCCH allocation sequence")
    BF(28,0x00000000,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
    BF(32,0x00000002,ACT_CHECK,ba_032_001,"ARFCN 2")
IE_END(neighbour_cell_description_bcch_26_6_3_4_3)

IE_BEGIN(neighbour_cell_description_sacch_26_6_3_4_3)
    BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28,0x00000000,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x00000820,ACT_CHECK,ba_064_033,"ARFCN 44, 38")
    BF(32,0x82082082,ACT_CHECK,ba_032_001,"ARFCN 32, 26, 20, 14, 8, 2")
IE_END(neighbour_cell_description_sacch_26_6_3_4_3)

IE_BEGIN(neighbour_cell_description_sacch)
    BF( 2,         0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,         0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,         1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28,0x00000000,ACT_CHECK,ba_124_097,"no neighbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neighbours")
```

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       BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neighbours")
       BF(32,0x82082082,ACT_CHECK,ba_032_001,"ARFCN 32, 26, 20, 14, 8, 2")
IE_END(neighbour_cell_description_sacch)

IE_BEGIN(neighbour_cell_description_5bis_26_6_3_4_3)
    BF( 2,    M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
    BF( 1,          1,ACT_CHECK,ext_ind  ,"extention indication")
    BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF( 1,          0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
    BF( 1,          0,ACT_CHECK,f0       ,"frequency 0 indicator (F0 not included)")
    BF(10,        500,ACT_CHECK,w1       ,"channel 500 belongs to the BA")
    BF( 9,          0,ACT_CHECK,w2       ,SILENT)
    BF( 9,          0,ACT_CHECK,w3       ,SILENT)
    BF( 8,          0,ACT_CHECK,w4       ,SILENT)
    BF( 8,          0,ACT_CHECK,w5       ,SILENT)
    BF( 8,          0,ACT_CHECK,w6       ,SILENT)
    BF( 8,          0,ACT_CHECK,w7       ,SILENT)
    BF( 7,          0,ACT_CHECK,w8       ,SILENT)
    BF( 7,          0,ACT_CHECK,w9       ,SILENT)
    BF( 7,          0,ACT_CHECK,w10      ,SILENT)
    BF( 7,          0,ACT_CHECK,w11      ,SILENT)
    BF( 7,          0,ACT_CHECK,w12      ,SILENT)
    BF( 7,          0,ACT_CHECK,w13      ,SILENT)
    BF( 7,          0,ACT_CHECK,w14      ,SILENT)
    BF( 7,          0,ACT_CHECK,w15      ,SILENT)
    BF( 6,          0,ACT_CHECK,w16      ,SILENT)
IE_END(neighbour_cell_description_5bis_26_6_3_4_3)

MSG3_BEGIN(measurement_report)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(measurement_report_message_type)
    IE(measurement_results)
MSG3_END(measurement_report)

MSG3_BEGIN(system_information_type_2_26_6_3_4_3)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(neighbour_cell_description_bcch_26_6_3_4_3)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_26_6_3_4_3)

MSG3_BEGIN(system_information_type_5)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_sacch)
MSG3_END(system_information_type_5)

MSG3_BEGIN(system_information_type_5_26_6_3_4_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_sacch_26_6_3_4_3)
MSG3_END(system_information_type_5_26_6_3_4_3)

MSG3_BEGIN(system_information_type_5bis_26_6_3_4_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5bis_message_type)
    IE(neighbour_cell_description_5bis_26_6_3_4_3)
MSG3_END(system_information_type_5bis_26_6_3_4_3)

MSG3_BEGIN(system_information_type_6_26_6_3_4_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_6_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(cell_options_sacch_use_dtx)
    IE(ncc_permitted)
    IE(si_6_rest_octets)
```

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```
MSG3_END(system_information_type_6_26_6_3_4_3)

REPEAT(K,2)

ISS_INIT             ( 8)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

BS_SET_SCH           ( 7,  BSIC_0,RFN)
BS_SET_ARFCN         ( 7, ARFCN_0)
BS_SET_POWER         ( 7,PWRLEV_0)
#define      S1   7

BS_SET_SCH           ( 1,  BSIC_1,RFN)
BS_SET_ARFCN         ( 1, ARFCN_1)
BS_SET_POWER         ( 1,PWRLEV_1)
#define      N1   1

BS_SET_SCH           ( 2,  BSIC_2,RFN)
BS_SET_ARFCN         ( 2, ARFCN_2)
BS_SET_POWER         ( 2,PWRLEV_2)
#define      N2   2

BS_SET_SCH           ( 3,  BSIC_3,RFN)
BS_SET_ARFCN         ( 3, ARFCN_3)
BS_SET_POWER         ( 3,PWRLEV_3)
#define      N3   3

BS_SET_SCH           ( 4,  BSIC_4,RFN)
BS_SET_ARFCN         ( 4, ARFCN_4)
BS_SET_POWER         ( 4,PWRLEV_4)
#define      N4   4

BS_SET_SCH           ( 5,  BSIC_5,RFN)
BS_SET_ARFCN         ( 5, ARFCN_5)
BS_SET_POWER         ( 5,PWRLEV_5)
#define      N5   5

BS_SET_SCH           ( 6,  BSIC_6,RFN)
BS_SET_ARFCN         ( 6, ARFCN_6)
BS_SET_POWER         ( 6,PWRLEV_6)
#define      N6   6

BS_SET_SCH           ( 0,  BSIC_7,RFN)
BS_SET_ARFCN         ( 0, ARFCN_7)
BS_SET_POWER         ( 0,PWRLEV_7)
#define      N7   0
```

```
REPEAT(N,8)
IE_BF_SET_VAL           ( cell_options_sacch, dtx, 2," MS shall not use DTX (default)")
IE_BF_SET_VAL           ( cell_identity, ci, N," ci used for SI 3 and SI 6")
BS_SET_SYS_INFO         ( N, system_information_type_1)
BS_SET_SYS_INFO         ( N, system_information_type_2_26_6_3_4_3)
BS_SET_SYS_INFO         ( N, system_information_type_3)
BS_SET_SYS_INFO         ( N, system_information_type_4)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_6)
REPEAT_END(N)

IE_BF_SET_VAL           ( cell_identity, ci, S1," ci used for SI 3 and SI 6")
BS_SET_SYS_INFO         ( S1, system_information_type_1)
BS_SET_SYS_INFO         ( S1, system_information_type_2_26_6_3_4_3)
BS_SET_SYS_INFO         ( S1, system_information_type_3)
BS_SET_SYS_INFO         ( S1, system_information_type_4)


BS_ON_OFF             ( 0,TRUE)
BS_ON_OFF             ( 1,TRUE)
BS_ON_OFF             ( 2,TRUE)
BS_ON_OFF             ( 3,TRUE)
BS_ON_OFF             ( 4,TRUE)
BS_ON_OFF             ( 5,TRUE)
BS_ON_OFF             ( 6,TRUE)
BS_ON_OFF             ( 7,TRUE)

ISS_DELAY (10000);

/* MS will select N7 */

/*------------------------------------------------------------------*\
| Switch on IUT
\*------------------------------------------------------------------*/

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

COMMAND               (" CST CONFIG AUDIO_MUTE")

ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */
SET_TIMEOUT           ( 30000)

/*------------------------------------------------------------------*\
| Message exchange
\*------------------------------------------------------------------*/

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT         (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND          (0,authentication_request,"Step 5")
BS_MSG3_AWAIT         (0,authentication_response,"Step 6")
BS_MSG3_SEND          (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND          (0,setup,"Step 1")
BS_MSG3_AWAIT         (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT         (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");
BS_MSG3_AWAIT         (0,connect,"Step 11")
BS_MSG3_SEND          (0,assignment_command,"Step 12")

BS_CONFIG_CHANNEL     (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,assignment_complete,"Step 13")
BS_MSG3_SEND          (0,connect_acknowledge,"Step 14")
```

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```
/* ---- end of preamble ---- */

ISS_DELAY (5000)

BS_CONFIG_CHANNEL    ( N7, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( N7, handover_command," 1:")

BS_CONFIG_CHANNEL    ( S1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( S1, handover_complete," 6:")

if ( K == 1 )
{
    IE_BF_SET_VAL          ( neighbour_cell_description_sacch_26_6_3_4_3, ext_ind, 1,"")
    BS_SET_SYS_INFO_SACCH ( S1, system_information_type_5bis_26_6_3_4_3)
}
BS_SET_SYS_INFO_SACCH ( S1, system_information_type_5_26_6_3_4_3)
BS_SET_SYS_INFO_SACCH ( S1, system_information_type_6_26_6_3_4_3)

ISS_DELAY              ( 20000)
/*
 * BS_CONFIG_CHANNEL (S1, SACCH, UNACK, SAPI_0)
 * BS_MSG3_AWAIT      (S1, measurement_report,"allow one unchecked report")
 *
 * not checked
 */

REPEAT(COUNT,10)
BS_CONFIG_CHANNEL (S1, SACCH, UNACK, SAPI_0)
BS_MSG3_AWAIT (S1, measurement_report,SILENT)
REPEAT_END(COUNT)

AT_SEND ("AT+CFUN=0"," Power Off");

BS_ON_OFF            ( 0,FALSE)
BS_ON_OFF            ( 1,FALSE)
BS_ON_OFF            ( 2,FALSE)
BS_ON_OFF            ( 3,FALSE)
BS_ON_OFF            ( 4,FALSE)
BS_ON_OFF            ( 5,FALSE)
BS_ON_OFF            ( 6,FALSE)
BS_ON_OFF            ( 7,FALSE)

ISS_DELAY (10000);

IE_BF_SET_VAL        ( neighbour_cell_description_sacch_26_6_3_4_3, ext_ind, 1," part of BA")

REPEAT_END(K)
```

History:	28.01.98	VK	Initial
	25.01.99	LE	Testcase updated

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3.4.7 MRR156: Measurement / Frequency Formats (26.6.3.5)

Description: (Ref.: GSM 11.10-1, §26.6.3.5)
This test has been modified. The following W(i) are used yielding F(i):

```
w=1,510,3,255,254,6,7,126,120,125,11,12,13,14,15,16
f=1,1022,4,1021,2,517,11,1019,505,514,149,778,271,531,26,971
Of those frequencies only 1,4,2,11, and 26 are handled by the
IUT.
```

Preamble: None
Script:

```
IE_BEGIN(measurement_results)
   BF(1,   1,ACT_CHECK  ,ba_ind                  ,SILENT)
   BF(1,   0,ACT_CHECK  ,dtx                     ,"DTX was not used")
   BF(6,0x32,ACT_CHECK  ,rxlev_full_serving_cell ,SILENT)
   BF(1,   0,ACT_CHECK  ,ANONYMOUS               ,"spare")
   BF(1,   0,ACT_CHECK  ,meas_valid              ,"valid within the 2nd SACCH"
                                            "  block at the latest")
   BF(6,0x32,ACT_CHECK  ,rxlev_sub_serving_cell  ,SILENT)
   BF(1,   0,ACT_CHECK  ,ANONYMOUS               ,"spare")
   BF(3,   0,ACT_CHECK  ,rxqual_full_serving_cell,SILENT)
   BF(3,   0,ACT_CHECK  ,rxqual_sub_serving_cell ,SILENT)
   BF(3,   5,ACT_CHECK , num_ncell_m             ,"num of neighbor cells")
   BF(6,0x3f,ACT_CHECK , rxlev_ncell_1           ,SILENT)
   BF(5,   4,ACT_CHECK , bcch_freq_ncell_1       ,"refers to ARFCN 26")
   BF(6,0x0F,ACT_CHECK , bsic_ncell_1            ,SILENT)
   BF(6,0x32,ACT_CHECK , rxlev_ncell_2           ,SILENT)
   BF(5,   0,ACT_CHECK , bcch_freq_ncell_2       ,"refers to ARFCN 1")
   BF(6,0x0B,ACT_CHECK , bsic_ncell_2            ,SILENT)
   BF(6,0x23,ACT_CHECK , rxlev_ncell_3           ,SILENT)
   BF(5,   3,ACT_CHECK , bcch_freq_ncell_3       ,"refers to ARFCN 11")
   BF(6,0x09,ACT_CHECK , bsic_ncell_3            ,SILENT)
   BF(6,0x1E,ACT_CHECK , rxlev_ncell_4           ,SILENT)
   BF(5,   2,ACT_CHECK , bcch_freq_ncell_4       ,"refers to ARFCN 4")
   BF(6,0x0F,ACT_CHECK , bsic_ncell_4            ,SILENT)
   BF(6,0x19,ACT_CHECK , rxlev_ncell_5           ,SILENT)
   BF(5,   1,ACT_CHECK , bcch_freq_ncell_5       ,"refers to ARFCN 2")
   BF(6,0x0D,ACT_CHECK , bsic_ncell_5            ,SILENT)
   BF(6,   0,ACT_CHECK , rxlev_ncell_6           ,SILENT)
   BF(5,   0,ACT_CHECK , bcch_freq_ncell_6       ,SILENT)
   BF(6,   0,ACT_CHECK , bsic_ncell_6            ,SILENT)
IE_END(measurement_results)

IE_BEGIN(neighbour_cell_description_26_6_3_5_3)
   BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
   BF( 1,          1,ACT_CHECK,ext_ind  ,"this IE carries a part of the BA")
   BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
   BF(28,0x00000000,ACT_CHECK,ba_124_097,"no neigbours")
   BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
   BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
   BF(32,0x00000002,ACT_CHECK,ba_032_001,"ARFCN")
IE_END(neighbour_cell_description_26_6_3_5_3)

IE_BEGIN(neighbour_cell_description_5bis_26_6_3_5_3)
   BF( 2,   M2(1,0),ACT_CHECK,id_8_7   ,"format 1024 ID, part I")
   BF( 1,          1,ACT_CHECK,ext_ind  ,"extention indication")
   BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
   BF( 1,          0,ACT_CHECK,id_4     ,"format 1024 ID, part II")
   BF( 1,          1,ACT_CHECK,f0       ,"frequency 0 indicator (F0 included)")
   BF(10,          1,ACT_CHECK,w1       ,"channel 500 belongs to the BA")
   BF( 9,        510,ACT_CHECK,w2       ,SILENT)
   BF( 9,          3,ACT_CHECK,w3       ,SILENT)
   BF( 8,        255,ACT_CHECK,w4       ,SILENT)
   BF( 8,        254,ACT_CHECK,w5       ,SILENT)
   BF( 8,          6,ACT_CHECK,w6       ,SILENT)
   BF( 8,          7,ACT_CHECK,w7       ,SILENT)
   BF( 7,        126,ACT_CHECK,w8       ,SILENT)
   BF( 7,        120,ACT_CHECK,w9       ,SILENT)
   BF( 7,        125,ACT_CHECK,w10      ,SILENT)
   BF( 7,         11,ACT_CHECK,w11      ,SILENT)
   BF( 7,         12,ACT_CHECK,w12      ,SILENT)
```

```
    BF( 7,         13,ACT_CHECK,w13       ,SILENT)
    BF( 7,         14,ACT_CHECK,w14       ,SILENT)
    BF( 7,         15,ACT_CHECK,w15       ,SILENT)
    BF( 6,         16,ACT_CHECK,w16       ,SILENT)
IE_END(neighbour_cell_description_5bis_26_6_3_5_3)

MSG3_BEGIN(measurement_report)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(measurement_report_message_type)
    IE(measurement_results)
MSG3_END(measurement_report)

MSG3_BEGIN(system_information_type_5_26_6_3_5_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(neighbour_cell_description_26_6_3_5_3)
MSG3_END(system_information_type_5_26_6_3_5_3)

MSG3_BEGIN(system_information_type_5bis_26_6_3_5_3)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5bis_message_type)
    IE(neighbour_cell_description_5bis_26_6_3_5_3)
MSG3_END(system_information_type_5bis_26_6_3_5_3)

/*-------------------------------------------------------------------*\
| Information Elements
\*-------------------------------------------------------------------*/

IE_BEGIN(authentication_parameter_rand)
    BF(32,0x80000000,ACT_CHECK,rand_127_096,SILENT)
    BF(32,0x00000012,ACT_CHECK,rand_095_064,SILENT)
    BF(32,0x34000000,ACT_CHECK,rand_063_032,SILENT)
    BF(32,0x0000000F,ACT_CHECK,rand_031_000,SILENT)
IE_END(authentication_parameter_rand)

IE_BEGIN(authentication_parameter_sres)
    BF(32,0x0000000F,ACT_SHOW,sres_031_000,SILENT)
IE_END(authentication_parameter_sres)

IE_BEGIN(call_control_protocol_discriminator)
    BF(4, 3,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(call_control_protocol_discriminator)

IE_BEGIN(called_party_bcd_number)
    BF( 8,7,ACT_CHECK,length                      ,"length of IE")
    BF( 1,1,ACT_CHECK,ext                         ,"Extension Bit")
    BF( 3,0,ACT_CHECK,type_of_number              ,"Unknown")
    BF( 4,1,ACT_CHECK,numbering_plan              ,"ISDN/telephony")
    BF( 4,3,ACT_CHECK,digit_2                     ,"Digit 2")
    BF( 4,0,ACT_CHECK,digit_1                     ,"Digit 1")
    BF( 4,3,ACT_CHECK,digit_4                     ,"Digit 4")
    BF( 4,0,ACT_CHECK,digit_3                     ,"Digit 3")
    BF( 4,0,ACT_CHECK,digit_6                     ,"Digit 6")
    BF( 4,9,ACT_CHECK,digit_5                     ,"Digit 5")
    BF( 4,4,ACT_CHECK,digit_8                     ,"Digit 8")
    BF( 4,9,ACT_CHECK,digit_7                     ,"Digit 7")
    BF( 4,1,ACT_CHECK,digit_10                    ,"Digit 10")
    BF( 4,1,ACT_CHECK,digit_9                    ,"Digit 9")
    BF( 4,7,ACT_CHECK,digit_12                   ,"Digit 12")
    BF( 4,0xF,ACT_CHECK,digit_11                 ,"Digit 11")
IE_END(called_party_bcd_number)

IE_BEGIN(channels_needed_for_mobiles_1_and_2)
    BF(2,0,ACT_CHECK,second_channel,"spare, any channel")
    BF(2,0,ACT_CHECK, first_channel,"spare, any channel")
IE_END(channels_needed_for_mobiles_1_and_2)

IE_BEGIN(channel_description)
    BF( 5,M5(0,0,1,0,1),ACT_CHECK,          channel_type,"SDCCH/SACCH 4(1)")
    BF( 3,          0,ACT_CHECK,      time_slot_number,"zero")
    BF( 3,        BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
    BF( 1,          0,ACT_CHECK,              hopping,"No")
```

```
   BF( 2,             0,ACT_CHECK,                   spare,SILENT)
   BF(10,   ARFCN_BCCH_GSM,ACT_CHECK,                    arfcn,"ARFCN of the BCCH")
IE_END(channel_description)

IE_BEGIN(ciphering_mode_setting)
   BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1")
   BF(1,           1,ACT_CHECK,     start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)

IE_BEGIN(cipher_response)
   BF(3,0,ACT_CHECK,             spare,SILENT)
   BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)

IE_BEGIN(description_of_the_first_channel_after_time)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,          channel_type,"TCH")
   BF( 3,           3,ACT_CHECK,      time_slot_number,"three")
   BF( 3,         BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
   BF( 1,           0,ACT_CHECK,              hopping,"No")
   BF( 2,           0,ACT_CHECK,                spare,SILENT)
   BF(10,   ARFCN_BCCH_GSM,ACT_CHECK,                arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time)

IE_BEGIN(ia_rest_octets)    /* maximum length (11), no hop, no start time */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(ia_rest_octets)

IE_BEGIN(iei_5E)
   BF(8,0x5E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_5E)

IE_BEGIN(iei_15)
   BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)

IE_BEGIN(iei_04)
   BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)

IE_BEGIN(iei_34)
   BF(8,0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_34)

IE_BEGIN(l2_pseudo_length_11)   /* pag req type 1 with TMSI (one mobile)*/
   BF(8, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_11)

IE_BEGIN(mobile_allocation)
   BF(8,0,ACT_CHECK,length,"length 0 due to hopping disabled")
IE_END(mobile_allocation)

IE_BEGIN(mobile_identity)              /* has 8 octets */
   BF(8,           7,ACT_CHECK,  length,"seven octets to come")
   BF(4,           2,ACT_CHECK, digit_1,SILENT)
   BF(1,           1,ACT_CHECK,odd_even,SILENT)
   BF(3,  M3(0,0,1),ACT_CHECK,     type,"IMSI")
   BF(4,           2,ACT_CHECK, digit_3,SILENT)
   BF(4,           6,ACT_CHECK, digit_2,SILENT)
   BF(4,           1,ACT_CHECK, digit_4,SILENT)
   BF(4,           0,ACT_CHECK, digit_3,SILENT)
   BF(4,           7,ACT_CHECK, digit_6,SILENT)
   BF(4,           4,ACT_CHECK, digit_5,SILENT)
   BF(4,           1,ACT_CHECK, digit_8,SILENT)
   BF(4,           1,ACT_CHECK, digit_7,SILENT)
   BF(4,           9,ACT_CHECK, digit_10,SILENT)
```

```
    BF(4,          4,ACT_CHECK, digit_9,SILENT)
    BF(4,          2,ACT_CHECK, digit_12,SILENT)
    BF(4,          1,ACT_CHECK, digit_11,SILENT)
IE_END(mobile_identity)

IE_BEGIN(mobility_management_protocol_discriminator)
    BF(4, 5,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobility_management_protocol_discriminator)

IE_BEGIN(ms_classmark)
    BF(8,          3,ACT_CHECK, length,SILENT)
    BF(1,          0,ACT_CHECK, spare,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
    BF(1,          1,ACT_CHECK, es_ind,"Contr. Early Classmark Send.")
    BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
    BF(3,M3(0,0,1),ACT_CHECK, rf_power_capability,"class 2")
    BF(1,          0,ACT_CHECK, spare2,SILENT)
    BF(1,          0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
    BF(2,  M2(0,0),ACT_CHECK, ss_screening_indicator,"default phase 1")
    BF(1,          0,ACT_CHECK, sm_capability,"no point to point SMS")
    BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, frequency_capability,"no extention band G1")
    BF(1,          0,ACT_CHECK, classmark_3,"no add. MS cap. information")
    BF(5,          1,ACT_CHECK, ccbs,SILENT)
    BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
    BF(1,          0,ACT_CHECK, a5_2,"A5/2 not available")
IE_END(ms_classmark)

IE_BEGIN(neighbour_cell_description_26_6_3_1_3)
    BF( 2,          0,ACT_CHECK,format_id,"bit map 0")
    BF( 1,          0,ACT_CHECK,ext_ind  ,"this IE carries the complete BA")
    BF( 1,          1,ACT_CHECK,ba_ind   ,"SACCH allocation sequence")
    BF(28, 0x0000000,ACT_CHECK,ba_124_097,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_096_065,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_064_033,"no neigbours")
    BF(32,0x00000000,ACT_CHECK,ba_032_001,"no neigbours")
IE_END(neighbour_cell_description_26_6_3_1_3)

IE_BEGIN(p1_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets)

IE_BEGIN(page_mode)
    BF(2,0,ACT_CHECK,spare,"two spare bits")
    BF(2,0,ACT_CHECK,pm   ,"Normal Paging")
IE_END(page_mode)

IE_BEGIN(power_command)
    BF(8,10,ACT_CHECK,power,SILENT)
IE_END(power_command)

IE_BEGIN(rach)
    BF(3,M3(1,0,0),ACT_CHECK ,establishment_cause,"paging ind. any chan'")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach)

IE_BEGIN(rach_moc)
    BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

IE_BEGIN(request_reference)
    BF(3,     M3(1,0,0),ACT_SHOW,random_access_info,"As in CHAN REQ")
    BF(5,M5(1,1,1,1,1),ACT_SHOW,   random_reference,SILENT)
```

```
   BF(5,            0,ACT_SHOW,                 t1_,SILENT)
   BF(6,            0,ACT_SHOW,                 t3 ,SILENT)
   BF(5,            0,ACT_SHOW,                 t2 ,SILENT)
IE_END(request_reference)

IE_BEGIN(rr_cause)
   BF(8,0,ACT_CHECK,rr_cause,"normal event")
IE_END(rr_cause)

IE_BEGIN(signal_call_waiting)
   BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,signal_value,"(Any non-res. value)")
IE_END(signal_call_waiting)

IE_BEGIN(spare_half_octet)
   BF(4, 0,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(spare_half_octet)

IE_BEGIN(timing_advance)
   BF(2,0,ACT_CHECK,        spare,SILENT)
   BF(6,0,ACT_CHECK,timing_advance,"0")
IE_END(timing_advance)

IE_BEGIN(transaction_identifier_source)
   BF(4,M4(0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source)

IE_BEGIN(transaction_identifier_dest)
   BF(4,M4(1,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest)

/*---------------------------------------------------------------*\
| Messages
\*---------------------------------------------------------------*/

MSG3_BEGIN(alerting)
   IE(transaction_identifier_dest)
   IE(call_control_protocol_discriminator)
   IE(alerting_message_type)
MSG3_END(alerting)

MSG3_BEGIN(assignment_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(assignment_command_message_type)
   IE(description_of_the_first_channel_after_time)
   IE(power_command)
   IE(iei_63)
   IE(mode_of_the_first_channel)
MSG3_END(assignment_command)

MSG3_BEGIN(assignment_complete)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(assignment_complete_message_type)
   IE(rr_cause)
MSG3_END(assignment_complete)

MSG3_BEGIN(authentication_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(authentication_request_message_type)
   IE(spare_half_octet)
   IE(ciphering_key_sequence_number)
   IE(authentication_parameter_rand)
MSG3_END(authentication_request)

MSG3_BEGIN(authentication_response)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(authentication_response_message_type)
   IE(authentication_parameter_sres)
MSG3_END(authentication_response)

MSG3_BEGIN(ciphering_mode_command)
   IE(skip_indicator)
```

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```
        IE(rr_management_protocol_discriminator)
        IE(ciphering_mode_command_message_type)
        IE(cipher_response)
        IE(ciphering_mode_setting)
MSG3_END(ciphering_mode_command)

MSG3_BEGIN(ciphering_mode_complete)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(ciphering_mode_complete_message_type)
MSG3_END(ciphering_mode_complete)

MSG3_BEGIN(connect)
        IE(transaction_identifier_dest)
        IE(call_control_protocol_discriminator)
        IE(connect_message_type)
MSG3_END(connect)

MSG3_BEGIN(connect_acknowledge)
        IE(transaction_identifier_source)
        IE(call_control_protocol_discriminator)
        IE(connect_acknowledge_message_type)
MSG3_END(connect_acknowledge)

MSG3_BEGIN(setup)              /* contains 'signal' but no 'Bearer Cap' */
        IE(transaction_identifier_source)
        IE(call_control_protocol_discriminator)
        IE(setup_message_type)
        IE(iei_34)
        IE(signal_call_waiting)
MSG3_END(setup)

/* ------- start of testcase --------- */

ISS_INIT             ( 8)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

REPEAT(N,8)
IE_BF_SET_VAL          ( cell_identity, ci, N," ci used for SI 3 and SI 6")
IE_BF_SET_VAL          ( neighbour_cell_description, ba_ind,  0," BA for BCCH")
IE_BF_SET_VAL          ( neighbour_cell_description, ext_ind, 0, SILENT)
BS_SET_SYS_INFO        ( N, system_information_type_1)
BS_SET_SYS_INFO        ( N, system_information_type_2)
BS_SET_SYS_INFO        ( N, system_information_type_3)
BS_SET_SYS_INFO        ( N, system_information_type_4)
IE_BF_SET_VAL          ( neighbour_cell_description,  ba_ind, 1," BA for SACCH")
```

```
IE_BF_SET_VAL           ( neighbour_cell_description, ext_ind, 1,"")
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5_26_6_3_5_3)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_5bis_26_6_3_5_3)
BS_SET_SYS_INFO_SACCH ( N, system_information_type_6)
REPEAT_END(N)

#define             NCC_0    1
#define             NCC_1    1
#define             NCC_2    1
#define             NCC_3    1
#define             NCC_4    1
#define             NCC_5    1
#define             NCC_6    1
#define             NCC_7    1

#define             BCC_0    3
#define             BCC_1    5
#define             BCC_2    7
#define             BCC_3    1
#define             BCC_4    3
#define             BCC_5    5
#define             BCC_6    7
#define             BCC_7    1

#define             BSIC_0   ((NCC_0<<3)|(BCC_0))
#define             BSIC_1   ((NCC_1<<3)|(BCC_1))
#define             BSIC_2   ((NCC_2<<3)|(BCC_2))
#define             BSIC_3   ((NCC_3<<3)|(BCC_3))
#define             BSIC_4   ((NCC_4<<3)|(BCC_4))
#define             BSIC_5   ((NCC_5<<3)|(BCC_5))
#define             BSIC_6   ((NCC_6<<3)|(BCC_6))
#define             BSIC_7   ((NCC_7<<3)|(BCC_7))

#define             ARFCN_0    1
#define             ARFCN_1    2
#define             ARFCN_2    4
#define             ARFCN_3    11
#define             ARFCN_4    15
#define             ARFCN_5    21
#define             ARFCN_6    26
#define             ARFCN_7    44

#define             PWRLEV_0  -60
#define             PWRLEV_1  -85
#define             PWRLEV_2  -80
#define             PWRLEV_3  -75
#define             PWRLEV_4  -55
#define             PWRLEV_5  -50
#define             PWRLEV_6  -45
#define             PWRLEV_7  -40

BS_SET_SCH          ( 0,  BSIC_0,RFN)
BS_SET_ARFCN        ( 0, ARFCN_0)
BS_SET_POWER        ( 0,PWRLEV_0)

BS_SET_SCH          ( 1,  BSIC_1,RFN)
BS_SET_ARFCN        ( 1, ARFCN_1)
BS_SET_POWER        ( 1,PWRLEV_1)

BS_SET_SCH          ( 2,  BSIC_2,RFN)
BS_SET_ARFCN        ( 2, ARFCN_2)
BS_SET_POWER        ( 2,PWRLEV_2)

BS_SET_SCH          ( 3,  BSIC_3,RFN)
BS_SET_ARFCN        ( 3, ARFCN_3)
BS_SET_POWER        ( 3,PWRLEV_3)

BS_SET_SCH          ( 4,  BSIC_4,RFN)
BS_SET_ARFCN        ( 4, ARFCN_4)
BS_SET_POWER        ( 4,PWRLEV_4)

BS_SET_SCH          ( 5,  BSIC_5,RFN)
BS_SET_ARFCN        ( 5, ARFCN_5)
BS_SET_POWER        ( 5,PWRLEV_5)
```

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```
BS_SET_SCH              ( 6,  BSIC_6,RFN)
BS_SET_ARFCN            ( 6, ARFCN_6)
BS_SET_POWER            ( 6,PWRLEV_6)

BS_SET_SCH              ( 7,  BSIC_7,RFN)
BS_SET_ARFCN            ( 7, ARFCN_7)
BS_SET_POWER            ( 7,PWRLEV_7)

BS_ON_OFF               ( 0,TRUE)


/*-----------------------------------------------------------------*\
| Switch on IUT
\*-----------------------------------------------------------------*/


AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY               ( 5000) /* wait until the MS has detected the cell */
SET_TIMEOUT             ( 30000)

/*-----------------------------------------------------------------*\
| Message exchange
\*-----------------------------------------------------------------*/

BS_CONFIG_CHANNEL       (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND            (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT           (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL       (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS    (0, 0)
BS_MSG3_SEND            (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL       (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT           (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND            (0,authentication_request,"Step 5")
BS_MSG3_AWAIT           (0,authentication_response,"Step 6")
BS_MSG3_SEND            (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT           (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND            (0,setup,"Step 1")
BS_MSG3_AWAIT           (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT           (0,alerting,"Step 10")

AT_SEND ("ATA\r\n"," Hook off");
BS_MSG3_AWAIT           (0,connect,"Step 11")
BS_MSG3_SEND            (0,assignment_command,"Step 12")

BS_CONFIG_CHANNEL       (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT           (0,assignment_complete,"Step 13")
BS_MSG3_SEND            (0,connect_acknowledge,"Step 14")


/*
 * BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
 * BS_MSG3_AWAIT     (0, measurement_report,"allow one unchecked report")
 *
 * not checked by testcase
 */

BS_ON_OFF               ( 1,TRUE)
BS_ON_OFF               ( 2,TRUE)
BS_ON_OFF               ( 3,TRUE)
BS_ON_OFF               ( 4,TRUE)
BS_ON_OFF               ( 5,TRUE)
BS_ON_OFF               ( 6,TRUE)
BS_ON_OFF               ( 7,TRUE)

ISS_DELAY (20000)

REPEAT(COUNT,10)
BS_CONFIG_CHANNEL (0, SACCH, UNACK, SAPI_0)
BS_MSG3_AWAIT     (0, measurement_report,SILENT)
REPEAT_END(COUNT)
```

![Texas Instruments logo]

```
AT_SEND ("AT+CFUN=0"," Power Off");

BS_ON_OFF          ( 0,FALSE)
BS_ON_OFF          ( 1,FALSE)
BS_ON_OFF          ( 2,FALSE)
BS_ON_OFF          ( 3,FALSE)
BS_ON_OFF          ( 4,FALSE)
BS_ON_OFF          ( 5,FALSE)
BS_ON_OFF          ( 6,FALSE)
BS_ON_OFF          ( 7,FALSE)

ISS_DELAY (10000);
```

History:	28.01.98	VK	Initial
	25.01.99	LE	Testcase updated

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3.5 Channel Assignment

3.5.1 MRR180: Dedicated assignment / successful case (26.6.4.1)

Description: (Ref.: GSM 11.10-1, §26.6.4.1)
Preamble: MRR000
Script:
{

```
#define  N   5

IE_BEGIN(cell_channel_description_step_8)
  BF( 2,          0,ACT_CHECK,format_id        ,"bit map 0")
  BF( 2,          0,ACT_CHECK,spare            ,"")
  BF(28,0x00020800,ACT_CHECK,chan_124_thru_097,"          114  108")
  BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"       76..73  66")
  BF(32,0x04083000,ACT_CHECK,chan_064_thru_033," 59    52 46 45")
  BF(32,0x00000000,ACT_CHECK,chan_032_thru_001,"")
IE_END(cell_channel_description_step_8)

IE_BEGIN(channel_description_step_5)
  BF( 5,M5(0,0,0,0,1),ACT_CHECK,        channel_type,"TCH")
  BF( 3,   ((N+1) % 8),ACT_CHECK,     time_slot_number,"N+1 mod 8")
  BF( 3,             2,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
  BF( 1,             1,ACT_CHECK,                hopping,"yes")
  BF( 6,             2,ACT_CHECK,                  maio,"0..N-1")
  BF( 6,            25,ACT_CHECK,                   hsn,"chosen arbitrarily")
IE_END(channel_description_step_5)

IE_BEGIN(channel_description_step_8)
  BF( 5,M5(0,0,0,0,1),ACT_CHECK,        channel_type,"TCH")
  BF( 3,   ((N+3) % 8),ACT_CHECK,     time_slot_number," N+3  mod 8")
  BF( 3,             7,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
  BF( 1,             0,ACT_CHECK,                hopping,"no")
  BF( 2,             0,ACT_CHECK,                  spare,SILENT)
  BF(10,  ARFCN_BCCH_GSM,ACT_CHECK,               arfcn,"ARFCN of the BCCH")
IE_END(channel_description_step_8)

IE_BEGIN(channel_description_step_12)
  BF( 5,M5(0,0,0,0,1),ACT_CHECK,        channel_type,"TCH")
  BF( 3,   ((N+4) % 8),ACT_CHECK,     time_slot_number," N+4  mod 8")
  BF( 3,             1,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
  BF( 1,             1,ACT_CHECK,                hopping,"yes")
  BF( 6,             1,ACT_CHECK,                  maio,"0..N-1")
  BF( 6,            34,ACT_CHECK,                   hsn,"chosen arbitrarily")
IE_END(channel_description_step_12)

IE_BEGIN(channel_description_step_15)
  BF( 5,M5(0,0,0,0,1),ACT_CHECK,        channel_type,"TCH")
  BF( 3,   ((N+5) % 8),ACT_CHECK,     time_slot_number," N+5  mod 8")
  BF( 3,             2,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
  BF( 1,             0,ACT_CHECK,                hopping,"no")
  BF( 2,             0,ACT_CHECK,                  spare,SILENT)
  BF(10,            10,ACT_CHECK,                  arfcn,"ARFCN of the BCCH")
IE_END(channel_description_step_15)

IE_BEGIN(channel_mode_step_5)
  BF(8,0,ACT_CHECK,mode,"SIGNALLING")
IE_END(channel_mode_step_5)

IE_BEGIN(channel_mode_step_8)
  BF(8,1,ACT_CHECK,mode,"speech full, version 1")
IE_END(channel_mode_step_8)

IE_BEGIN(channel_mode_step_15)
  BF(8,0,ACT_CHECK,mode,"SIGNALLING")
IE_END(channel_mode_step_15)

IE_BEGIN(mobile_allocation_step_5)
  BF(8,1,ACT_CHECK,length,"ARFCN [70,50,30,20] need 4 bits - one octet")
  BF(8,M8(0,0,0,0,1,1,1,0),ACT_CHECK,ANONYMOUS,"20 is the BCCH [ARFCN exclued]")
```

```
    IE_END(mobile_allocation_step_5)


IE_BEGIN(mobile_allocation_step_12)
    BF(8,2,ACT_CHECK,length,"CA has 11 ARFCN -> 2 octets")
    BF(8,M8(0,0,0,0,0,1,1,1),ACT_CHECK,ANONYMOUS,"114,108,76")
    BF(8,M8(1,1,1,0,0,0,1,1),ACT_CHECK,ANONYMOUS,"75,74,73,[excluded:66,59,52],46,45")
IE_END(mobile_allocation_step_12)


IE_BEGIN(power_command_step_5)
    BF(3,0,ACT_CHECK,spare,SILENT)
    BF(5,5,ACT_CHECK,power,"arbitrarily, but with a changed value")
IE_END(power_command_step_5)


IE_BEGIN(power_command_step_8)
    BF(3,0,ACT_CHECK,spare,SILENT)
    BF(5,8,ACT_CHECK,power,"arbitrarily, but with a changed value")
IE_END(power_command_step_8)


IE_BEGIN(power_command_step_12)
    BF(3,0,ACT_CHECK,spare,SILENT)
    BF(5,12,ACT_CHECK,power,"arbitrarily, but with a changed value")
IE_END(power_command_step_12)


IE_BEGIN(power_command_step_15)
    BF(3,0,ACT_CHECK,spare,SILENT)
    BF(5,15,ACT_CHECK,power,"arbitrarily, but with a changed value")
IE_END(power_command_step_15)


IE_BEGIN(starting_time_step_15)
    BF(5,0,ACT_CHECK, t1,SILENT)
    BF(6,0,ACT_CHECK, t3,SILENT)
    BF(5,0,ACT_CHECK, t2,SILENT)
IE_END(starting_time_step_15)


MSG3_BEGIN(assignment_command_step_5)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_step_5)
    IE(power_command_step_5)
    IE(iei_63)
    IE(channel_mode_step_5)
    IE(iei_72)
    IE(mobile_allocation_step_5)
MSG3_END(assignment_command_step_5)


MSG3_BEGIN(assignment_command_step_8)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_step_8)
    IE(power_command_step_8)
    IE(iei_62)
    IE(cell_channel_description_step_8)
    IE(iei_63)
    IE(channel_mode_step_8)
MSG3_END(assignment_command_step_8)


MSG3_BEGIN(assignment_command_step_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_step_12)
    IE(power_command_step_12)
    IE(iei_72)
    IE(mobile_allocation_step_12)
MSG3_END(assignment_command_step_12)


MSG3_BEGIN(assignment_command_step_15)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(channel_description_step_15)
    IE(power_command_step_15)
    IE(iei_63)
```

```
       IE(channel_mode_step_15)
       IE(iei_7c)
       IE(starting_time_step_15)
MSG3_END(assignment_command_step_15)


MSG3_VAR ( msg)


SET_TIMEOUT            ( 30000)


BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT_COPY   ( 0, channel_request, msg,"  2:")
BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)


BS_MSG3_SEND_BEGIN   ( 0, immediate_assignment_GSM," 3:")
    BF_SET_VAL          (ref,MSG3_BF_GET_VAL(msg,ref),"")
    BF_SET_VAL          (t1_,MSG3_T1_(msg),SILENT)
    BF_SET_VAL          ( t3,MSG3_T3 (msg),SILENT)
    BF_SET_VAL          ( t2,MSG3_T2 (msg),SILENT)
    BF_SET_VAL          ( channel_type, M5(0,1,0,0,0)," SDCCH/8, subchannel 0")
    BF_SET_VAL          ( time_slot_number, N," chosen arbitrarily")
    BF_SET_VAL          ( training_sequence_code, 0," chosen arbitrarily")
    BF_SET_VAL          ( arfcn, ARFCN_BCCH_GSM," the ARFCN of the BCCH carrier")
BS_MSG3_SEND_END()


BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 4:")
BS_MSG3_SEND         ( 0, assignment_command_step_5," 5:")
BS_MSG3_AWAIT        ( 0, assignment_complete," 6:")


ISS_DELAY ( 5000) /* 7: check power level */


BS_MSG3_SEND         ( 0, assignment_command_step_8," 8:")
BS_MSG3_AWAIT        ( 0, assignment_complete," 9:")


BS_MSG3_SEND         ( 0, authentication_request,"10:")
BS_MSG3_AWAIT        ( 0, authentication_response,"11: not L2 acknowledged")


BS_MSG3_SEND         ( 0, assignment_command_step_12," 12:")
BS_MSG3_AWAIT        ( 0, assignment_complete," 13:")


/* performed by DL
BS_MSG3_AWAIT        ( 0, authentication_response,"14: same as in step 11")
*/


BS_MSG3_SEND         ( 0, assignment_command_step_15," 12:")
BS_MSG3_AWAIT        ( 0, assignment_complete," 18:")


MSG3_COPY_DESTROY    ( msg)
}
```

History: 15.12.97   VK   Initial

3.5.2 MRR181: Dedicated assignment / failure during active state (26.6.4.2.1)

Description: (Ref.: GSM 11.10-1, §26.6.4.2.1)
Preamble: MRR135
Script:

```
BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_SET_ERROR        ( 0, 3) /* step 2: generate DL_RELEASE_IND on receipt of DEDI_REQ! */
BS_MSG3_SEND        ( 0, assignment_command," 1:")
BS_MSG3_AWAIT_BEGIN ( 0, assignment_failure," 3:")
  BF_SET_VAL        ( cause, M8(0,1,1,0,1,1,1,1)," GSM 04.08, 10.5.2.31")
BS_MSG3_AWAIT_END()
```

History: 30.01.98   VK   Initial
                    25.01.99   LE   Testcase updated

3.5.3 MRR182: Dedicated assignment / failure / general case (26.6.4.2.2)

Description: (Ref.: GSM 11.10-1, §26.6.4.2.2)
Preamble: None
Script:

```
ISS_INIT              ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_DCS)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

COMMAND              ("RR CONFIG PCM=<MSCAP,0x33,0,0,0,0,0>")

ISS_DELAY            ( 5000) /* wait until the MS has detected the cell */

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT        ( 0, channel_request," 2:")
BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS(0, 0)
BS_MSG3_SEND         ( 0, immediate_assignment_GSM,"  3: SDCCH test: Channel type = SDCCH/8")

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 4:")

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_SET_ERROR         ( 0, 3)
BS_MSG3_SEND         ( 0, assignment_command_28," 5:")

BS_MSG3_AWAIT_BEGIN ( 0, assignment_failure," 7:")
  BF_SET_VAL         ( cause, M8(0,1,1,0,1,1,1,1)," GSM 04.08, 10.5.2.31")
```

```
BS_MSG3_AWAIT_END()

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_SET_ERROR         ( 0, 3)
BS_MSG3_SEND         ( 0, assignment_command_28_H," 8:")

BS_MSG3_AWAIT_BEGIN ( 0, assignment_failure," 10:")
   BF_SET_VAL        ( cause, M8(0,1,1,0,1,1,1,1)," GSM 04.08, 10.5.2.31")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND         ( 0, assignment_command_28," 11:")
BS_CONFIG_CHANNEL    ( 0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, assignment_complete," 12:")

BS_SET_ERROR         ( 0, 3)
BS_MSG3_SEND         ( 0, assignment_command_28_H," 13:")

BS_MSG3_AWAIT_BEGIN ( 0, assignment_failure," 15:")
   BF_SET_VAL        ( cause, M8(0,1,1,0,1,1,1,1)," GSM 04.08, 10.5.2.31")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND         ( 0, channel_release," 16:")
```

History: 30.01.98   VK   Initial

3.6 Handover

3.6.1 MRR200: Handover / Preamble (26.6.5.1)

Description: (Ref.: GSM 11.10-1, §26.6.5.1)
Preamble: None
Script:

```
IE_BEGIN(cell_channel_description)
    BF( 2,          0,ACT_CHECK,format_id          ,"bit map 0")
    BF( 2,          0,ACT_CHECK,spare              ,"")
    BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097," 114  108")
    BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"  76 75 74 73   66")
    BF(32,0x04083202,ACT_CHECK,chan_064_thru_033," 59 52 46 45 42 34")
    BF(32,0x02090200,ACT_CHECK,chan_032_thru_001,"  26  20  17  10")
IE_END(cell_channel_description)

IE_BEGIN(cell_channel_description_cell_b)
    BF( 2,          0,ACT_CHECK,format_id          ,"bit map 0")
    BF( 2,          0,ACT_CHECK,spare              ,"")
    BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097," 114  108")
    BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"  76 75 74 73   66")
    BF(32,0x080000a0,ACT_CHECK,chan_064_thru_033," 60          40 38")
    BF(32,0x60a22000,ACT_CHECK,chan_032_thru_001,"31 30 24 22 18 14")
IE_END(cell_channel_description_cell_b)

MSG3_BEGIN(system_information_type_1)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1)

MSG3_BEGIN(system_information_type_1_cell_b)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description_cell_b)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_cell_b)

ISS_INIT              ( 2)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
```

Texas Instruments

```
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


BS_SET_SYS_INFO      ( 0, system_information_type_1)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)


BS_SET_SYS_INFO      ( 1, system_information_type_1_cell_b)
BS_SET_SYS_INFO      ( 1, system_information_type_2)
BS_SET_SYS_INFO      ( 1, system_information_type_3_cell_b)
BS_SET_SYS_INFO      ( 1, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 1, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 1, system_information_type_6_cell_b)


#define MAKE_T1(FN)  ((ULONG)(((FN)/(26*51))      & ((1<<11)-1)))
#define MAKE_T2(FN)  ((ULONG)(((FN)%26)           & ((1<< 5)-1)))
#define MAKE_T3(FN)  ((ULONG)(((((FN)%51)-1)/10)  & ((1<< 3)-1)))


#define MAKE_RFN(FN) ((MAKE_T1((FN))<<(5+3)) | (MAKE_T2((FN))<<3) | MAKE_T1(FN))


#define ARFCN_A      20
#define ARFCN_B      40

BS_SET_SCH           ( 0,BSIC , 0)
BS_SET_ARFCN         ( 0,ARFCN_A)
BS_ON_OFF            ( 0,TRUE)

BS_SET_SCH           ( 1,BSIC , MAKE_RFN(100))
BS_SET_ARFCN         ( 1,ARFCN_B)
BS_ON_OFF            ( 1,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");
```

History: 30.01.98   VK   Initial

3.6.2 MRR201: Handover / successful / active call / non-sync / M=1 (26.6.5.1)

Description: (Ref.: GSM 11.10-1, §26.6.5.1)
Preamble: MRR200
Script:

```
{

#define  ARFCN_B   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_B>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,          1,ACT_CHECK,ncc, "   network colour code")
   BF( 3,          5,ACT_CHECK,bcc, "   base station colour code")
   BF( 8,ARFCN_B  ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(synchronization_indication)
   BF( 4, 0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,   0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,   0, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2,   0, ACT_CHECK,    si,"synchronization indication")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_GSM)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
MSG3_END(handover_command)

BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_SET_POWER          ( 1,DOWNLINK_INPUT_LEVEL_DBM_CELL_B)

ISS_DELAY             ( 5000) /* wait until the MS has detected the cells */

SET_TIMEOUT          ( 30000)

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT         (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS  (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND          (0,authentication_request,"Step 5")
BS_MSG3_AWAIT         (0,authentication_response,"Step 6")
BS_MSG3_SEND          (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND          (0,setup_19,"Step 1")
BS_MSG3_AWAIT         (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT         (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT         (0,connect,"Step 11")
BS_MSG3_SEND          (0,assignment_command_19,"Step 12")

BS_CONFIG_CHANNEL     (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,assignment_complete,"Step 13")
BS_MSG3_SEND          (0,connect_acknowledge,"Step 14")

ISS_DELAY             ( 5000) /* wait another 5 sec */

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
```

```
BS_MSG3_SEND        ( 0, handover_command," 1:")

BS_CONFIG_CHANNEL   ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT       ( 1, handover_access," 2:")

/*
 * not sent in simulation
 * BS_MSG3_SEND       ( 1, physical_information," 3:")
 */

BS_CONFIG_CHANNEL   ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 1, handover_complete," 6:")

ISS_DELAY           ( 5000)

}
```

History: 30.01.98   VK   Initial

3.6.3 MRR202: Handover / successful / active call / non-sync / M=2 (26.6.5.1)

Description: (Ref.: GSM 11.10-1, §26.6.5.1)
Preamble: MRR201
Script:
{

```
#define   ARFCN_HO   20

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           1,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,           5,ACT_CHECK,bcc,  "  base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,            channel_type,"TCH/F+ACCHs")
   BF( 3,           5,ACT_CHECK,      time_slot_number,"N+1 mod 8")
   BF( 3,           4,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
   BF( 1,           1,ACT_CHECK,               hopping,"yes")
   BF( 6,          11,ACT_CHECK,               maio,"0..# in Freq Chan Seq - 1")
   BF( 6,          63,ACT_CHECK,               hsn,"chosen arbitrarily")
IE_END(channel_description)

IE_BEGIN(frequency_channel_sequence)
   BF(1, 0,ACT_CHECK,              spare,SILENT)
   BF(7,10,ACT_CHECK,       lowest_arfcn," 10")
   BF(4, 7,ACT_CHECK, inc_skip_arfcn_01," 17= 10+ 7")
   BF(4, 3,ACT_CHECK, inc_skip_arfcn_02," 20= 17+ 3")
   BF(4, 6,ACT_CHECK, inc_skip_arfcn_03," 26= 20+ 6")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_04," 41= 26+15 (unused)")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_05," 56= 41+15 (unused)")
   BF(4, 3,ACT_CHECK, inc_skip_arfcn_06," 59= 56+ 3")
   BF(4, 7,ACT_CHECK, inc_skip_arfcn_07," 66= 59+ 7")
   BF(4, 7,ACT_CHECK, inc_skip_arfcn_08," 73= 66+ 7")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_09," 74= 73+ 1")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_10," 75= 74+ 1")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_11," 76= 75+ 1")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_12," 91= 76+15 (unused)")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_13,"106= 91+15 (unused)")
   BF(4, 2,ACT_CHECK, inc_skip_arfcn_14,"108=106+ 2")
   BF(4, 6,ACT_CHECK, inc_skip_arfcn_15,"114=108+ 6")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_16,"unused")
IE_END(frequency_channel_sequence)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description)
   IE(handover_reference)
   IE(power_command)
   IE(iei_69)
   IE(frequency_channel_sequence)
MSG3_END(handover_command)

ISS_DELAY            ( 5000) /* wait 5 sec */

BS_CONFIG_CHANNEL  ( 1, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND       ( 1, handover_command," 1:")

BS_CONFIG_CHANNEL  ( 0, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT      ( 0, handover_access," 2:")

/*
 * not send in simulation
 *
 * BS_MSG3_SEND         ( 0, physical_information," 3:")
 */

BS_CONFIG_CHANNEL  ( 0, FACCH, ACK, SAPI_0)
```

```
BS_MSG3_AWAIT        ( 0, handover_complete," 6:")

ISS_DELAY            ( 5000)

}
```

History: 04.02.98   VK   Initial

3.6.4 MRR203: Handover / successful / active call / non-sync / M=3 (26.6.5.1)

Description: (Ref.: GSM 11.10-1, §26.6.5.1)
Preamble: MRR202
Script:
```
{

#define  ARFCN_HO2   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO2>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,          1,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,          5,ACT_CHECK,bcc,  "  base station colour code")
   BF( 8,ARFCN_HO2  ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(starting_time)
   BF(5,10,ACT_CHECK,_t1,SILENT)
   BF(6,30,ACT_CHECK, t3,SILENT)
   BF(5,20,ACT_CHECK, t2,SILENT)
IE_END(starting_time)

IE_BEGIN(synchronization_indication)
   BF( 4, 0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,   1, ACT_CHECK,   nci,"out of range TAV shall trigger HO failure")
   BF( 1,   0, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2,   0, ACT_CHECK,    si,"Non-synchronized")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_GSM)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
   IE(iei_63)
   IE(mode_of_the_first_channel)
   IE(iei_7c)
   IE(starting_time)
MSG3_END(handover_command)

ISS_DELAY            ( 5000) /* wait 5 sec */

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, handover_command," 1:")

BS_CONFIG_CHANNEL    ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT        ( 1, handover_access," 2:")
/*
 * not send in simulation
 *
 * BS_MSG3_SEND         ( 1, physical_information," 3:")
 */


BS_CONFIG_CHANNEL    ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 1, handover_complete," 6:")

ISS_DELAY            ( 5000)

}
```

History: 05.02.98   VK   Initial

3.6.5 MRR210: Handover / Preamble (26.6.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.2)
Preamble: None
Script:

```
IE_BEGIN(cell_channel_description)
   BF( 2,          0,ACT_CHECK,format_id         ,"bit map 0")
   BF( 2,          0,ACT_CHECK,spare             ,"")
   BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097," 114  108")
   BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"   76 75 74 73   66")
   BF(32,0x04083202,ACT_CHECK,chan_064_thru_033," 59 52 46 45 42 34")
   BF(32,0x02090200,ACT_CHECK,chan_032_thru_001,"  26  20  17  10")
IE_END(cell_channel_description)

IE_BEGIN(cell_channel_description_cell_b)
   BF( 2,          0,ACT_CHECK,format_id         ,"bit map 0")
   BF( 2,          0,ACT_CHECK,spare             ,"")
   BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097," 114  108")
   BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"   76 75 74 73   66")
   BF(32,0x080000a0,ACT_CHECK,chan_064_thru_033," 60         40  38")
   BF(32,0x60a22000,ACT_CHECK,chan_032_thru_001,"31 30 24 22 18 14")
IE_END(cell_channel_description_cell_b)

MSG3_BEGIN(system_information_type_1)
   IE(l2_pseudo_length_21)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(system_information_type_1_message_type)
   IE(cell_channel_description)
   IE(rach_control_parameter)
   IE(si_1_rest_octets)
MSG3_END(system_information_type_1)

MSG3_BEGIN(system_information_type_1_cell_b)
   IE(l2_pseudo_length_21)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(system_information_type_1_message_type)
   IE(cell_channel_description_cell_b)
   IE(rach_control_parameter)
   IE(si_1_rest_octets)
MSG3_END(system_information_type_1_cell_b)

ISS_INIT            ( 2)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
```

```
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


/* the following setup of mcc and mnc do not conform with the GSM 11.10 */

IE_BF_SET_VAL          ( location_area_identification, mcc_dig_1, 2, SILENT)
IE_BF_SET_VAL          ( location_area_identification, mcc_dig_2, 6, SILENT)
IE_BF_SET_VAL          ( location_area_identification, mcc_dig_3, 2, SILENT)
IE_BF_SET_VAL          ( location_area_identification, mnc_dig_1, 0, SILENT)
IE_BF_SET_VAL          ( location_area_identification, mnc_dig_2, 1, SILENT)

IE_BF_SET_VAL          ( ncc_permitted, ncc_permit, M8(0,0,0,0,1,0,1,0)," Allow NCC=3, NCC=1")
BS_SET_SYS_INFO        ( 0, system_information_type_1)
BS_SET_SYS_INFO        ( 0, system_information_type_2)
BS_SET_SYS_INFO        ( 0, system_information_type_3)
BS_SET_SYS_INFO        ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

IE_BF_SET_VAL          ( ncc_permitted, ncc_permit, M8(0,0,0,0,0,0,1,0)," Allow NCC=1")
BS_SET_SYS_INFO        ( 1, system_information_type_1_cell_b)
BS_SET_SYS_INFO        ( 1, system_information_type_2)
BS_SET_SYS_INFO        ( 1, system_information_type_3_cell_b)
BS_SET_SYS_INFO        ( 1, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 1, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 1, system_information_type_6_cell_b)

#define ARFCN_A        20
#define ARFCN_B        40

#define  NCC_B               0x3  /* note : ncc_permitted (GSM 04.08, 10.5.2.27) */
#define  BCC_B               0x0  /* note : GSM 11.10, 26.6.14, IMMEDIATE ASSIGNMENT */
#define  BSIC_B              ((NCC_B<<3)|(BCC_B))

BS_SET_POWER           ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_SET_SCH             ( 0,BSIC , RFN)
BS_SET_ARFCN           ( 0,ARFCN_A)
BS_ON_OFF              ( 0,TRUE)

BS_SET_POWER           ( 1,DOWNLINK_INPUT_LEVEL_DBM_CELL_B)
BS_SET_SCH             ( 1,BSIC_B, RFN)
BS_SET_ARFCN           ( 1,ARFCN_B)
BS_ON_OFF              ( 1,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY              ( 20000)
```

History: 09.02.98   VK   Initial

3.6.6 MRR211: Handover / successful / call estab. / non-sync / M=1 (26.6.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.2)
Preamble: MRR210
Script:

```
{

#define   ARFCN_HO   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           3,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,           0,ACT_CHECK,bcc,  "   base station colour code")
   BF( 8,ARFCN_HO    ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,          channel_type,"TCH/F+ACCHs")
   BF( 3,           0,ACT_CHECK,      time_slot_number,SILENT)
   BF( 3,           4,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
   BF( 1,           1,ACT_CHECK,                hopping,"yes")
   BF( 6,          11,ACT_CHECK,                maio,"0..# in Freq Chan Seq - 1")
   BF( 6,          63,ACT_CHECK,                 hsn,"chosen arbitrarily")
IE_END(channel_description)

IE_BEGIN(frequency_channel_sequence)
   BF(1, 0,ACT_CHECK,               spare,SILENT)
   BF(7,14,ACT_CHECK,       lowest_arfcn," 14")
   BF(4, 4,ACT_CHECK, inc_skip_arfcn_01," 18= 14+ 4")
   BF(4, 4,ACT_CHECK, inc_skip_arfcn_02," 22= 18+ 4")
   BF(4, 2,ACT_CHECK, inc_skip_arfcn_03," 24= 22+ 2")
   BF(4, 6,ACT_CHECK, inc_skip_arfcn_04," 30= 24+ 6")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_05," 31= 30+ 1")
   BF(4, 7,ACT_CHECK, inc_skip_arfcn_06," 38= 31+ 7")
   BF(4,15,ACT_CHECK, inc_skip_arfcn_07," 53= 38+15")
   BF(4,13,ACT_CHECK, inc_skip_arfcn_08," 66= 53+13")
   BF(4, 7,ACT_CHECK, inc_skip_arfcn_09," 73= 66+ 7")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_10," 74= 73+ 1")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_11," 75= 74+ 1")
   BF(4, 1,ACT_CHECK, inc_skip_arfcn_12," 76= 75+ 1")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_13," 91= 76+15 (not used)")
   BF(4, 0,ACT_CHECK, inc_skip_arfcn_14,"106= 91+15 (not used)")
   BF(4, 2,ACT_CHECK, inc_skip_arfcn_15,"108=106+ 2")
   BF(4, 6,ACT_CHECK, inc_skip_arfcn_16,"114=108+ 6")
IE_END(frequency_channel_sequence)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description)
   IE(handover_reference)
   IE(power_command)
   IE(iei_63)
   IE(mode_of_the_first_channel)
   IE(iei_69)
   IE(frequency_channel_sequence)
MSG3_END(handover_command)

IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
   BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
   IE(rach_moc)
MSG3_END(channel_request_moc)

AT_SEND ("ATD1234567890123456;"," Dial");

BS_RACH_AWAIT          (0,channel_request_moc,"2:")
```

```
BS_CONFIG_CHANNEL      (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS  (0,0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"3:")

BS_CONFIG_CHANNEL      (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT         (0,cm_service_request,"4:")
BS_MSG3_SEND          (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT         (0,setup,"7:")

ISS_DELAY ( 15000)    /* wait for measurement result -> sync to neighbour cell */

BS_CONFIG_CHANNEL      ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND          ( 0, handover_command," 8:")

BS_CONFIG_CHANNEL      ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT         ( 1, handover_access," 9:")

/*
 * not send in simulation
 *
 * BS_MSG3_SEND        ( 1, physical_information," 3:")
 */

BS_CONFIG_CHANNEL      ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 1, handover_complete," 11:")
BS_MSG3_SEND          ( 1, channel_release," 15:")

}
```

History:	09.02.98	VK	Initial
	25.01.99	LE	Testcase updated

TEXAS INSTRUMENTS

3.6.7 MRR212: Handover / successful / call estab. / non-sync / M=3 (26.6.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.2)
Preamble: MRR210
Script:

```
{

#define   ARFCN_HO   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           3,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,           0,ACT_CHECK,bcc,  "   base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,           channel_type,"SDCCH/8+SACCH/C8")
   BF( 3,           0,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           4,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
   BF( 1,           1,ACT_CHECK,               hopping,"yes")
   BF( 6,           7,ACT_CHECK,                  maio,"0..# in Freq Chan Seq - 1")
   BF( 6,          21,ACT_CHECK,                   hsn,"chosen arbitrarily")
IE_END(channel_description)

IE_BEGIN(frequency_list)
   BF( 8,          16,ACT_CHECK,length            ,SILENT)
   BF( 2,           0,ACT_CHECK,format_id         ,"bit map 0")
   BF( 2,           0,ACT_CHECK,spare             ,SILENT)
   BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097," 114  108")
   BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"  76 75 74 73   66")
   BF(32,0x08000020,ACT_CHECK,chan_064_thru_033," 60             38")
   BF(32,0x60a22000,ACT_CHECK,chan_032_thru_001,"31 30 24 22 18 14")
IE_END(frequency_list)

IE_BEGIN(mode_of_the_first_channel)
   BF(8,0,ACT_CHECK,mode,"Signalling only")
IE_END(mode_of_the_first_channel)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description)
   IE(handover_reference)
   IE(power_command)
   IE(iei_05)
   IE(frequency_list)
   IE(iei_63)
   IE(mode_of_the_first_channel)
MSG3_END(handover_command)

IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
   BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
   IE(rach_moc)
MSG3_END(channel_request_moc)

AT_SEND ("ATD1234567890123456;"," Dial");

BS_RACH_AWAIT         (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL     (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS  (0,0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"3:")

BS_CONFIG_CHANNEL     (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT         (0,cm_service_request,"4:")
```

```
BS_MSG3_SEND           (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"6:")

BS_MSG3_AWAIT          (0,setup,"7:")

ISS_DELAY (8000)

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, handover_command," 8:")

BS_CONFIG_CHANNEL    ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT        ( 1, handover_access," 9:")

/*
 * not send in simulation
 *
 * BS_MSG3_SEND       ( 1, physical_information," 3:")
 */

BS_CONFIG_CHANNEL    ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 1, handover_complete," 11:")
BS_MSG3_SEND         ( 1, channel_release," 15:")

}
```

History:	10.02.98	VK	Initial.
	25.01.99	LE	Testcase updated

3.6.8 MRR213: Handover / successful / call estab. / non-sync / M=7 (26.6.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.2)
Preamble: MRR210
Script:

```
{

#define   ARFCN_HO   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           3,ACT_CHECK,ncc,  "    network colour code")
   BF( 3,           0,ACT_CHECK,bcc,  "    base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description_ho)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,           channel_type,"TCH/F + ACCHs")
   BF( 3,           0,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           4,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
   BF( 1,           1,ACT_CHECK,                hopping,"yes")
   BF( 6,           7,ACT_CHECK,                   maio,"0..# in Freq Chan Seq - 1")
   BF( 6,          21,ACT_CHECK,                    hsn,"chosen arbitrarily")
IE_END(channel_description_ho)

IE_BEGIN(channel_description_imm_ass)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,           channel_type,"TCH/F + ACCHs")
   BF( 3,           0,ACT_CHECK,       time_slot_number,SILENT)
   BF( 3,           4,ACT_CHECK,training_sequence_code,"chosen arbitrarily")
   BF( 1,           1,ACT_CHECK,                hopping,"yes")
   BF( 6,           2,ACT_CHECK,                   maio,"0..# in Freq Chan Seq - 1")
   BF( 6,           0,ACT_CHECK,                    hsn,"chosen arbitrarily")
IE_END(channel_description_imm_ass)

IE_BEGIN(frequency_list)
   BF( 8,          16,ACT_CHECK,length          ,SILENT)
   BF( 2,           0,ACT_CHECK,format_id        ,"bit map 0")
   BF( 2,           0,ACT_CHECK,spare           ,SILENT)
   BF(28, 0x0020800,ACT_CHECK,chan_124_thru_097," 114  108")
   BF(32,0x00000f02,ACT_CHECK,chan_096_thru_065,"  76 75 74 73    66")
   BF(32,0x080000A0,ACT_CHECK,chan_064_thru_033," 60         40  38")
   BF(32,0x60a22000,ACT_CHECK,chan_032_thru_001,"31 30 24 22 18 14")
IE_END(frequency_list)

IE_BEGIN(ia_rest_octets)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
IE_END(ia_rest_octets)

IE_BEGIN(mobile_allocation)
   BF(8,3,ACT_CHECK,length  ,"3 octets required by test case")
   BF(8,M8(0,0,0,0,0,0,0,1),ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,M8(0,0,0,0,0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,M8(0,0,0,0,0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobile_allocation)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_ho)
   IE(handover_reference)
   IE(power_command)
   IE(iei_05)
   IE(frequency_list)
```

```
        IE(iei_63)
        IE(mode_of_the_first_channel)
MSG3_END(handover_command)


MSG3_BEGIN(immediate_assignment_213)
        IE(l2_pseudo_length_14)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(immediate_assignment_message_type)
        IE(spare_half_octet)
        IE(page_mode)
        IE(channel_description_imm_ass)
        IE(request_reference)
        IE(timing_advance)
        IE(mobile_allocation)
        IE(ia_rest_octets)
MSG3_END(immediate_assignment_213)


IE_BEGIN(rach_moc)
        BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
        BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)


MSG3_BEGIN(channel_request_moc)
        IE(rach_moc)
MSG3_END(channel_request_moc)


AT_SEND ("ATD1234567890123456;"," Dial");


BS_RACH_AWAIT          (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL      (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS   (0,0)
BS_MSG3_SEND           (0,immediate_assignment_213,"3:")


BS_CONFIG_CHANNEL      (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT          (0,cm_service_request,"4:")
BS_MSG3_SEND           (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT          (0,setup,"7:")


ISS_DELAY (8000);


BS_CONFIG_CHANNEL      ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND           ( 0, handover_command," 8:")


BS_CONFIG_CHANNEL      ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT          ( 1, handover_access," 9:")


/*
 * not send in simulation
 *
 * BS_MSG3_SEND        ( 1, physical_information," 3:")
 */


BS_CONFIG_CHANNEL      ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT          ( 1, handover_complete," 11:")
BS_MSG3_SEND           ( 1, channel_release," 15:")


}
```

History: 10.02.98   VK   Initial
                  25.01.99   LE   Testcase updated

TEXAS INSTRUMENTS

3.6.9 MRR220: Handover / successful / active call / finely sync / M=1 (26.6.5.3)

Description: (Ref.: GSM 11.10-1, §26.6.5.3)
Preamble: MRR200
Script:
{

```
#define   ARFCN_B   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_B>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,          1,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,          5,ACT_CHECK,bcc,  "   base station colour code")
   BF( 8,ARFCN_B   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,  channel_type,"Bm + ACCHs (TCH/F+ACCHs)")
   BF( 3,            5,ACT_CHECK,  time_slot_number,"Arbitaray value, but not zero")
   BF( 3,            4,ACT_CHECK,  training_sequence_code, SILENT)
   BF( 1,            0,ACT_CHECK,  hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,  spare,SILENT)
   BF(10,      ARFCN_B,ACT_CHECK,  arfcn,"channel number 40")
IE_END(channel_description)

IE_BEGIN(synchronization_indication)
   BF( 4, 0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,   0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,   0, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2,   1, ACT_CHECK,    si,"synchronization indication")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
MSG3_END(handover_command)

BS_SET_POWER           ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_SET_POWER           ( 1,DOWNLINK_INPUT_LEVEL_DBM_CELL_B)

ISS_DELAY              ( 5000) /* wait until the MS has detected the cells */

SET_TIMEOUT            ( 30000)

BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT          (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND           (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND           (0,authentication_request,"Step 5")
BS_MSG3_AWAIT          (0,authentication_response,"Step 6")
BS_MSG3_SEND           (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND           (0,setup_19,"Step 1")
BS_MSG3_AWAIT          (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT          (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT          (0,connect,"Step 11")
```

```
BS_MSG3_SEND          (0,assignment_command_19,"Step 12")

BS_CONFIG_CHANNEL     (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,assignment_complete,"Step 13")
BS_MSG3_SEND          (0,connect_acknowledge,"Step 14")

ISS_DELAY (15000);

BS_CONFIG_CHANNEL     ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND          ( 0, handover_command," 1:")

BS_CONFIG_CHANNEL     ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT         ( 1, handover_access," 2:")

/*
 * only one rach message in simulation
 *
 * BS_RACH_AWAIT       ( 1, handover_access," 3:")
 * BS_RACH_AWAIT       ( 1, handover_access," 4:")
 * BS_RACH_AWAIT       ( 1, handover_access," 5:")
 */

BS_CONFIG_CHANNEL     ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT         ( 1, handover_complete," 6:")

ISS_DELAY             ( 5000)

}
```

History: 10.02.98   VK   Initial

3.6.10 MRR240: Handover / successful / active call / pre-sync / no TA IE (26.6.5.5.1)

Description: (Ref.: GSM 11.10-1, §26.6.5.5.1)
                    Timing Advance shall be set to 1.
Preamble: MRR200
Script:

```
{

#define   ARFCN_HO   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,          1,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,          5,ACT_CHECK,bcc,  "   base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,  channel_type,"Bm + ACCHs (TCH/F+ACCHs)")
   BF( 3,            5,ACT_CHECK,  time_slot_number,"Arbitaray value, but not zero")
   BF( 3,            4,ACT_CHECK,  training_sequence_code, SILENT)
   BF( 1,            0,ACT_CHECK,  hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,  spare,SILENT)
   BF(10,     ARFCN_HO,ACT_CHECK,  arfcn,"channel number 40")
IE_END(channel_description)

IE_BEGIN(synchronization_indication)
   BF( 4,     0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,       0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,       0, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2, M2(1,0), ACT_CHECK,    si,"pre-synchronized")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
MSG3_END(handover_command)

BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_SET_POWER          ( 1,DOWNLINK_INPUT_LEVEL_DBM_CELL_B)

ISS_DELAY             ( 5000) /* wait until the MS has detected the cells */

SET_TIMEOUT           ( 30000)

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT         (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS  (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND          (0,authentication_request,"Step 5")
BS_MSG3_AWAIT         (0,authentication_response,"Step 6")
BS_MSG3_SEND          (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND          (0,setup_19,"Step 1")
BS_MSG3_AWAIT         (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT         (0,alerting,"Step 10")

ISS_DELAY (10000);
```

```
AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT        (0,connect,"Step 11")
BS_MSG3_SEND         (0,assignment_command_19,"Step 12")

BS_CONFIG_CHANNEL    (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        (0,assignment_complete,"Step 13")
BS_MSG3_SEND         (0,connect_acknowledge,"Step 14")

ISS_DELAY (15000);

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, handover_command," 1:")

BS_CONFIG_CHANNEL    ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT        ( 1, handover_access," 2:")
/*
 * only one rach message in simulation
 *
 * BS_RACH_AWAIT       ( 1, handover_access," 3:")
 * BS_RACH_AWAIT       ( 1, handover_access," 4:")
 * BS_RACH_AWAIT       ( 1, handover_access," 5:")
 */

BS_CONFIG_CHANNEL    ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 1, handover_complete," 8:")

ISS_DELAY            ( 5000)

}
```

History:	10.02.98	VK	Initial.
	25.01.99	LE	Testcase updated

3.6.11 MRR241: Handover / successful / active call / pre-sync / TA IE / ROT (26.6.5.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.5.2)
Preamble: MRR210
Script:
{

```
#define   ARFCN_HO   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           3,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,           0,ACT_CHECK,bcc,  "  base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description_ho)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,  channel_type,"TCH/F + ACCHs")
   BF( 3,           0,ACT_CHECK,   time_slot_number,SILENT)
   BF( 3,           4,ACT_CHECK,   training_sequence_code,"chosen arbitrarily")
   BF( 1,           0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,           0,ACT_CHECK,   spare,SILENT)
   BF(10,    ARFCN_HO,ACT_CHECK,   arfcn,SILENT)
IE_END(channel_description_ho)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,1,0,0),ACT_CHECK,  channel_type,"to an SDCCH/4")
   BF( 3, TIMESLOT_TCH,ACT_CHECK,  time_slot_number, SILENT)
   BF( 3,         BCC,ACT_CHECK,   training_sequence_code, SILENT)
   BF( 1,           0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,           0,ACT_CHECK,   spare,SILENT)
   BF(10,  ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"channel number 30")
IE_END(channel_description)

#define   K    5   /* The BCCH of cell A is sent k bit periods before the BCCH of cell B */
#define   Y   10   /* The MS is commanded to use a timing advance of y bit periods on cell A*/

IE_BEGIN(mobile_time_difference)
   BF( 8,       3,ACT_CHECK,length,"3 octets to come")
   BF(21, 2*K+Y,ACT_CHECK,   mtd, SILENT)
   BF( 3,       0,ACT_CHECK, spare, SILENT)
IE_END(mobile_time_difference)


IE_BEGIN(synchronization_indication)
   BF( 4,     0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,       0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,       1, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2, M2(1,0), ACT_CHECK,    si,"pre-synchronized")
IE_END(synchronization_indication)

IE_BEGIN(timing_advance)
   BF(2,0,ACT_CHECK,spare,SILENT)
   BF(6,7,ACT_CHECK,tav  ,"9 bit periods")
IE_END(timing_advance)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_ho)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
   IE(iei_7d)
   IE(timing_advance)
MSG3_END(handover_command)

MSG3_BEGIN(handover_complete)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
```

```
     IE(handover_complete_message_type)
     IE(rr_cause)
     IE(iei_77)
     IE(mobile_time_difference)
MSG3_END(handover_complete)

MSG3_BEGIN(immediate_assignment)
     IE(l2_pseudo_length_14)
     IE(skip_indicator)
     IE(rr_management_protocol_discriminator)
     IE(immediate_assignment_message_type)
     IE(spare_half_octet)
     IE(page_mode)
     IE(channel_description)
     IE(request_reference)
     IE(timing_advance)
     IE(mobile_allocation)
     IE(ia_rest_octets)
MSG3_END(immediate_assignment)

IE_BEGIN(rach_moc)
     BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
     BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
     IE(rach_moc)
MSG3_END(channel_request_moc)

BS_SET_TIMING_ADVANCE(0,Y)
BS_SET_TIMING_ADVANCE(1,K)   /* BCCH of cell A is k bit before BCCH of cell B      */

AT_SEND ("ATD1234567890123456;"," Dial");

BS_RACH_AWAIT          (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL      (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0,0)
BS_MSG3_SEND           (0,immediate_assignment,"3:")

BS_CONFIG_CHANNEL      (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT          (0,cm_service_request,"4:")
BS_MSG3_SEND           (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT          (0,setup,"7:")

ISS_DELAY (15000);

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, handover_command," 8:")

BS_CONFIG_CHANNEL    ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT        ( 1, handover_access," 9:")
/*
 * only one rach message in simulation
 *
 * BS_RACH_AWAIT        ( 1, handover_access," 10:")
 * BS_RACH_AWAIT        ( 1, handover_access," 11:")
 * BS_RACH_AWAIT        ( 1, handover_access," 12:")
 */
BS_CONFIG_CHANNEL    ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 1, handover_complete," 15:")
BS_MSG3_SEND         ( 1, channel_release," 18:")

}
```

History:	11.02.98	VK	Initial.
	25.01.99	LE	Testcase updated

3.6.12 MRR242: Handover / successful / active call / pre-sync / TA IE / ROT (26.6.5.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.5.2). Same as MRR241, but with different parameters.

Preamble: MRR210
Script:
{

```
#define   ARFCN_HO   40

IE_BEGIN(cell_description)
    BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
    BF( 3,           3,ACT_CHECK,ncc,  "   network colour code")
    BF( 3,           0,ACT_CHECK,bcc,  "   base station colour code")
    BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description_ho)
    BF( 5,M5(0,0,0,0,1),ACT_CHECK,   channel_type,"TCH/F + ACCHs")
    BF( 3,           0,ACT_CHECK,   time_slot_number,SILENT)
    BF( 3,           4,ACT_CHECK,   training_sequence_code,"chosen arbitrarily")
    BF( 1,           0,ACT_CHECK,   hopping,"single RF channel")
    BF( 2,           0,ACT_CHECK,   spare,SILENT)
    BF(10,    ARFCN_HO,ACT_CHECK,   arfcn,SILENT)
IE_END(channel_description_ho)

IE_BEGIN(channel_description)
    BF( 5,M5(0,0,1,0,0),ACT_CHECK,   channel_type,"to an SDCCH/4")
    BF( 3, TIMESLOT_TCH,ACT_CHECK,   time_slot_number, SILENT)
    BF( 3,          BCC,ACT_CHECK,   training_sequence_code, SILENT)
    BF( 1,           0,ACT_CHECK,   hopping,"single RF channel")
    BF( 2,           0,ACT_CHECK,   spare,SILENT)
    BF(10, ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"channel number 30")
IE_END(channel_description)

#define   K   11    /* The BCCH of cell A is sent k bit periods before the BCCH of cell B */
#define   Y   0     /* The MS is commanded to use a timing advance of y bit periods on cell A*/

IE_BEGIN(mobile_time_difference)
    BF( 8,       3,ACT_CHECK,length,"3 octets to come")
    BF(21, 2*K+Y,ACT_CHECK,   mtd, SILENT)
    BF( 3,       0,ACT_CHECK, spare, SILENT)
IE_END(mobile_time_difference)

IE_BEGIN(synchronization_indication)
    BF( 4,     0xD, ACT_CHECK, iei_d,"IEI of sync ind")
    BF( 1,       0, ACT_CHECK,   nci,"out of range TAV is ignored")
    BF( 1,       1, ACT_CHECK,   rot,"observed time diff not included")
    BF( 2, M2(1,0), ACT_CHECK,    si,"pre-synchronized")
IE_END(synchronization_indication)

IE_BEGIN(timing_advance)
    BF(2,0,ACT_CHECK,spare,SILENT)
    BF(6,7,ACT_CHECK,tav  ,"9 bit periods")
IE_END(timing_advance)

MSG3_BEGIN(handover_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
    IE(cell_description)
    IE(channel_description_ho)
    IE(handover_reference)
    IE(power_command)
    IE(synchronization_indication)
    IE(iei_7d)
    IE(timing_advance)
MSG3_END(handover_command)

MSG3_BEGIN(handover_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_complete_message_type)
    IE(rr_cause)
    IE(iei_77)
    IE(mobile_time_difference)
MSG3_END(handover_complete)

MSG3_BEGIN(immediate_assignment)
```

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```
        IE(l2_pseudo_length_14)
        IE(skip_indicator)
        IE(rr_management_protocol_discriminator)
        IE(immediate_assignment_message_type)
        IE(spare_half_octet)
        IE(page_mode)
        IE(channel_description)
        IE(request_reference)
        IE(timing_advance)
        IE(mobile_allocation)
        IE(ia_rest_octets)
MSG3_END(immediate_assignment)

IE_BEGIN(rach_moc)
    BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
    BF(5,M5(1,1,1,1,1),ACT_NOP,  random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
    IE(rach_moc)
MSG3_END(channel_request_moc)

BS_SET_TIMING_ADVANCE(0,Y)
BS_SET_TIMING_ADVANCE(1,K)  /* BCCH of cell A is k bit before BCCH of cell B      */


AT_SEND ("ATD1234567890123456;"," Dial");

BS_RACH_AWAIT          (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL      (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0,0)
BS_MSG3_SEND           (0,immediate_assignment,"3:")

BS_CONFIG_CHANNEL      (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT          (0,cm_service_request,"4:")
BS_MSG3_SEND           (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT          (0,setup,"7:")


ISS_DELAY (15000);

BS_CONFIG_CHANNEL  ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND       ( 0, handover_command," 8:")

BS_CONFIG_CHANNEL  ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT      ( 1, handover_access," 9:")
/*
 * only one rach message in simulation
 *
 * BS_RACH_AWAIT       ( 1, handover_access," 10:")
 * BS_RACH_AWAIT       ( 1, handover_access," 11:")
 * BS_RACH_AWAIT       ( 1, handover_access," 12:")
 */
BS_CONFIG_CHANNEL  ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT      ( 1, handover_complete," 15:")
BS_MSG3_SEND       ( 1, channel_release," 18:")

}
```

History: 11.02.98   VK   Initial.

                        25.01.99   LE   Testcase updated

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3.6.13 MRR243: Handover / successful / active call / pre-sync / TA IE / ROT (26.6.5.5.2)

Description: (Ref.: GSM 11.10-1, §26.6.5.5.2). Same as MRR241, but with different parameters.
Preamble: MRR210
Script:
{

```
#define   ARFCN_HO   40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,            3,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,            0,ACT_CHECK,bcc,  "  base station colour code")
   BF( 8,ARFCN_HO    ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description_ho)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,  channel_type,"TCH/F + ACCHs")
   BF( 3,             0,ACT_CHECK,  time_slot_number,SILENT)
   BF( 3,             4,ACT_CHECK,  training_sequence_code,"chosen arbitrarily")
   BF( 1,             0,ACT_CHECK,  hopping,"single RF channel")
   BF( 2,             0,ACT_CHECK,  spare,SILENT)
   BF(10,       ARFCN_HO,ACT_CHECK,  arfcn,SILENT)
IE_END(channel_description_ho)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,1,0,0),ACT_CHECK,  channel_type,"to an SDCCH/4")
   BF( 3, TIMESLOT_TCH,ACT_CHECK,  time_slot_number, SILENT)
   BF( 3,          BCC,ACT_CHECK,  training_sequence_code, SILENT)
   BF( 1,            0,ACT_CHECK,  hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,  spare,SILENT)
   BF(10,   ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"channel number 30")
IE_END(channel_description)

#define   K   35    /* The BCCH of cell A is sent k bit periods before the BCCH of cell B */
#define   Y   40    /* The MS is commanded to use a timing advance of y bit periods on cell A*/

IE_BEGIN(mobile_time_difference)
   BF( 8,       3,ACT_CHECK,length,"3 octets to come")
   BF(21, 2*K+Y,ACT_CHECK,   mtd, SILENT)
   BF( 3,       0,ACT_CHECK, spare, SILENT)
IE_END(mobile_time_difference)

IE_BEGIN(synchronization_indication)
   BF( 4,      0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,        0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,        1, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2, M2(1,0), ACT_CHECK,    si,"pre-synchronized")
IE_END(synchronization_indication)

IE_BEGIN(timing_advance)
   BF(2,0,ACT_CHECK,spare,SILENT)
   BF(6,7,ACT_CHECK,tav  ,"9 bit periods")
IE_END(timing_advance)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_ho)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
   IE(iei_7d)
   IE(timing_advance)
MSG3_END(handover_command)

MSG3_BEGIN(handover_complete)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_complete_message_type)
```

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```
      IE(rr_cause)
      IE(iei_77)
      IE(mobile_time_difference)
MSG3_END(handover_complete)


MSG3_BEGIN(immediate_assignment)
      IE(l2_pseudo_length_14)
      IE(skip_indicator)
      IE(rr_management_protocol_discriminator)
      IE(immediate_assignment_message_type)
      IE(spare_half_octet)
      IE(page_mode)
      IE(channel_description)
      IE(request_reference)
      IE(timing_advance)
      IE(mobile_allocation)
      IE(ia_rest_octets)
MSG3_END(immediate_assignment)


IE_BEGIN(rach_moc)
      BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
      BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
      IE(rach_moc)
MSG3_END(channel_request_moc)

BS_SET_TIMING_ADVANCE(0,Y)
BS_SET_TIMING_ADVANCE(1,K)  /* BCCH of cell A is k bit before BCCH of cell B      */


AT_SEND ("ATD1234567890123456;"," Dial");


BS_RACH_AWAIT        (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL    (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0,0)
BS_MSG3_SEND         (0,immediate_assignment,"3:")

BS_CONFIG_CHANNEL    (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT        (0,cm_service_request,"4:")
BS_MSG3_SEND         (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT        (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT        (0,setup,"7:")


ISS_DELAY (15000);

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND        ( 0, handover_command," 8:")


BS_CONFIG_CHANNEL   ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT       ( 1, handover_access," 9:")
/*
 * only one rach message in simulation
 *
 * BS_RACH_AWAIT       ( 1, handover_access," 10:")
 * BS_RACH_AWAIT       ( 1, handover_access," 11:")
 * BS_RACH_AWAIT       ( 1, handover_access," 12:")
 */
BS_CONFIG_CHANNEL   ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 1, handover_complete," 15:")
BS_MSG3_SEND        ( 1, channel_release," 18:")


}
```

History:	11.02.98	VK	Initial.
	25.01.99	LE	Testcase updated

3.6.14 MRR250: Handover / successful / active call / pseudo-sync (26.6.5.6)

Description: (Ref.: GSM 11.10-1, §26.6.5.6)
Preamble: MRR210
Script:
{

```
#define   ARFCN_HO   40
#define   K   5   /* The BCCH of cell A is sent k bit periods before the BCCH of cell B */
#define   Y   10  /* The MS is commanded to use a timing advance of y bit periods on cell A*/


IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           3,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,           0,ACT_CHECK,bcc,  "   base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description_ho)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,   channel_type,"TCH/F + ACCHs")
   BF( 3,             0,ACT_CHECK,   time_slot_number,SILENT)
   BF( 3,             4,ACT_CHECK,   training_sequence_code," chosen arbitrarily")
   BF( 1,             0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,             0,ACT_CHECK,   spare,SILENT)
   BF(10,     ARFCN_HO,ACT_CHECK,   arfcn,SILENT)
IE_END(channel_description_ho)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,1,0,0),ACT_CHECK,   channel_type,"to an SDCCH/4")
   BF( 3, TIMESLOT_TCH,ACT_CHECK,   time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,          BCC,ACT_CHECK,   training_sequence_code, SILENT)
   BF( 1,            0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,   spare,SILENT)
   BF(10,  ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"channel number 30")
IE_END(channel_description)

IE_BEGIN(time_difference)
   BF( 8,      1,ACT_CHECK,length,"3 octets to come")
   BF( 8,      Y,ACT_CHECK,  tdv, SILENT)
IE_END(time_difference)

IE_BEGIN(mobile_time_difference)
   BF( 8,      3,ACT_CHECK,length,"3 octets to come")
   BF( 8,      0,ACT_CHECK,mtd_1,SILENT)
   BF( 8,      0,ACT_CHECK,mtd_2,SILENT)
   BF( 8,  0x50,ACT_CHECK,mtd_3,SILENT)
IE_END(mobile_time_difference)

IE_BEGIN(synchronization_indication)
   BF( 4,     0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,       0, ACT_CHECK,  nci,"out of range TAV is ignored")
   BF( 1,       1, ACT_CHECK,  rot,"observed time diff not included")
   BF( 2, M2(1,1), ACT_CHECK,   si,"pseudo-synchronized")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_ho)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
   IE(iei_7b)
   IE(time_difference)
MSG3_END(handover_command)

MSG3_BEGIN(handover_complete)
   IE(skip_indicator)
   IE(rr_managment_protocol_discriminator)
   IE(handover_complete_message_type)
```

```
    IE(rr_cause)
    IE(iei_77)
    IE(mobile_time_difference)
MSG3_END(handover_complete)


MSG3_BEGIN(immediate_assignment)
    IE(l2_pseudo_length_14)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment)


IE_BEGIN(rach_moc)
    BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
    BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
    IE(rach_moc)
MSG3_END(channel_request_moc)

COMMAND (" RR CONFIG PSEUDO_SYNC_HO=1")              /* switch on ps capability */

BS_SET_TIMING_ADVANCE(0,0)
BS_SET_TIMING_ADVANCE(1,K)  /* BCCH of cell A is k bit before BCCH of cell B       */


AT_SEND ("ATD1234567890123456;"," Dial");

BS_RACH_AWAIT        (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL    (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0,0)
BS_MSG3_SEND         (0,immediate_assignment,"3:")

BS_CONFIG_CHANNEL    (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT        (0,cm_service_request_pseudo_sync,"4:")        /* use ps capability */
BS_MSG3_SEND         (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT        (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT        (0,setup,"7:")

ISS_DELAY (15000);

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, handover_command," 8:")

BS_CONFIG_CHANNEL    ( 1, FACCH, UNACK, SAPI_0)
BS_RACH_AWAIT        ( 1, handover_access," 9:")
/*
 * only one rach message in simulation
 *
 * BS_RACH_AWAIT        ( 1, handover_access," 10:")
 * BS_RACH_AWAIT        ( 1, handover_access," 11:")
 * BS_RACH_AWAIT        ( 1, handover_access," 12:")
 */
BS_CONFIG_CHANNEL    ( 1, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 1, handover_complete," 13:")
BS_MSG3_SEND         ( 1, channel_release," 14:")

}
```

History:	11.02.98	VK	Initial.
	25.01.99	LE	Testcase updated
	24.06.02	MSB	configure the capability of pseudo-sync HO

3.6.15 MRR251: Handover / failure / active call / pseudo-sync (not supported)

Description:
Preamble: MRR210
Script:
{

```
#define   ARFCN_HO   40
#define   K   5    /* The BCCH of cell A is sent k bit periods before the BCCH of cell B */
#define   Y   10   /* The MS is commanded to use a timing advance of y bit periods on cell A*/


IE_BEGIN(cell_description)
   BF( 2,ARFCN_HO>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,           3,ACT_CHECK,ncc,  "   network colour code")
   BF( 3,           0,ACT_CHECK,bcc,  "   base station colour code")
   BF( 8,ARFCN_HO   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(channel_description_ho)
   BF( 5,M5(0,0,0,0,1),ACT_CHECK,   channel_type,"TCH/F + ACCHs")
   BF( 3,            0,ACT_CHECK,   time_slot_number,SILENT)
   BF( 3,            4,ACT_CHECK,   training_sequence_code," chosen arbitrarily")
   BF( 1,            0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,   spare,SILENT)
   BF(10,     ARFCN_HO,ACT_CHECK,   arfcn,SILENT)
IE_END(channel_description_ho)

IE_BEGIN(channel_description)
   BF( 5,M5(0,0,1,0,0),ACT_CHECK,   channel_type,"to an SDCCH/4")
   BF( 3, TIMESLOT_TCH,ACT_CHECK,   time_slot_number,"chosen arbitrarily by the test house")
   BF( 3,          BCC,ACT_CHECK,   training_sequence_code, SILENT)
   BF( 1,            0,ACT_CHECK,   hopping,"single RF channel")
   BF( 2,            0,ACT_CHECK,   spare,SILENT)
   BF(10, ARFCN_TCH_GSM,ACT_CHECK,  arfcn,"channel number 30")
IE_END(channel_description)

IE_BEGIN(time_difference)
   BF( 8,      1,ACT_CHECK,length,"3 octets to come")
   BF( 8,      Y,ACT_CHECK,  tdv, SILENT)
IE_END(time_difference)

IE_BEGIN(mobile_time_difference)
   BF( 8,      3,ACT_CHECK,length,"3 octets to come")
   BF( 8,      0,ACT_CHECK,mtd_1,SILENT)
   BF( 8,      0,ACT_CHECK,mtd_2,SILENT)
   BF( 8,   0x50,ACT_CHECK,mtd_3,SILENT)
IE_END(mobile_time_difference)

IE_BEGIN(synchronization_indication)
   BF( 4,     0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,       0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,       1, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2, M2(1,1), ACT_CHECK,    si,"pseudo-synchronized")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_ho)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
   IE(iei_7b)
   IE(time_difference)
MSG3_END(handover_command)

MSG3_BEGIN(handover_complete)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_complete_message_type)
```

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```
    IE(rr_cause)
    IE(iei_77)
    IE(mobile_time_difference)
MSG3_END(handover_complete)

MSG3_BEGIN(immediate_assignment_251)
    IE(l2_pseudo_length_14)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_251)

IE_BEGIN(rach_moc)
    BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
    BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
    IE(rach_moc)
MSG3_END(channel_request_moc)

BS_SET_TIMING_ADVANCE(0,0)
BS_SET_TIMING_ADVANCE(1,K)  /* BCCH of cell A is k bit before BCCH of cell B        */

AT_SEND ("ATD1234567890123456;"," Dial");

BS_RACH_AWAIT         (0,channel_request_moc,"2:")
BS_CONFIG_CHANNEL     (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS  (0,0)
BS_MSG3_SEND          (0,immediate_assignment_251,"3:")

BS_CONFIG_CHANNEL     (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT         (0,cm_service_request,"4:")
BS_MSG3_SEND          (0,ciphering_mode_command,"5:")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"6:")
BS_MSG3_AWAIT         (0,setup,"7:")

ISS_DELAY (15000);

BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND        ( 0, handover_command," 7:")

/* no support of pseudo-synchronized HO */
BS_CONFIG_CHANNEL   ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT       ( 0, handover_failure_incorrect_msg," 8:")

BS_MSG3_SEND        ( 1, channel_release," 9:")

}
```

History:	11.02.98	VK	Initial.
	25.01.99	LE	Testcase updated
	24.06.02	MSB	Test of not supported pseudo-sync HO

3.6.16 MRR270: Handover / layer 3 failure (26.6.5.8)

Description: (Ref.: GSM 11.10-1, §26.6.5.8)
Preamble: MRR200
Script:

```
{

#define   ARFCN_B    40

IE_BEGIN(cell_description)
   BF( 2,ARFCN_B>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
   BF( 3,         1,ACT_CHECK,ncc,  "   network colour code)
   BF( 3,         5,ACT_CHECK,bcc,  "   base station colour code)
   BF( 8,ARFCN_B   ,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(power_command)
   BF(3,0,ACT_CHECK,spare,SILENT)
   BF(5,8,ACT_CHECK,power,SILENT)
IE_END(power_command)

IE_BEGIN(synchronization_indication)
   BF( 4, 0xD, ACT_CHECK, iei_d,"IEI of sync ind")
   BF( 1,   0, ACT_CHECK,   nci,"out of range TAV is ignored")
   BF( 1,   0, ACT_CHECK,   rot,"observed time diff not included")
   BF( 2,   0, ACT_CHECK,    si,"non-synchronized")
IE_END(synchronization_indication)

MSG3_BEGIN(handover_command)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(handover_command_message_type)
   IE(cell_description)
   IE(channel_description_GSM)
   IE(handover_reference)
   IE(power_command)
   IE(synchronization_indication)
MSG3_END(handover_command)

BS_SET_POWER           ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_SET_POWER           ( 1,DOWNLINK_INPUT_LEVEL_DBM_CELL_B)

ISS_DELAY              ( 5000) /* wait until the MS has detected the cells */

SET_TIMEOUT            ( 30000)

BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT          (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS   (0, 0)
BS_MSG3_SEND           (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND           (0,authentication_request,"Step 5")
BS_MSG3_AWAIT          (0,authentication_response,"Step 6")
BS_MSG3_SEND           (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND           (0,setup_19,"Step 1")
BS_MSG3_AWAIT          (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT          (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT          (0,connect,"Step 11")
BS_MSG3_SEND           (0,assignment_command_19,"Step 12")

BS_CONFIG_CHANNEL      (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,assignment_complete,"Step 13")
```

```
BS_MSG3_SEND         (0,connect_acknowledge,"Step 14")

ISS_DELAY            ( 5000) /* wait another 5 sec */

BS_SET_ERROR (0, 5)          /* T3124 Timeout */

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         ( 0, handover_command," 1:")

/*
 * send by layer 1, but not from the simulation
 * BS_CONFIG_CHANNEL    ( 1, FACCH, UNACK, SAPI_0)
 *  BS_RACH_AWAIT       ( 1, handover_access," 2: sent once to L1, repeated there")
 */

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, handover_failure_abnormal_release," 3:")

ISS_DELAY            ( 5000)

}
```

History: 12.02.98   VK   Initial.
                 25.01.99   LE   Testcase updated

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3.7 Frequency Redefinition

3.7.1 MRR280: Frequency redefinition (26.6.6.1)

Description: (Ref.: GSM 11.10-1, §26.6.6.1)
Preamble: MRR000
Script:
{

```
IE_BEGIN(cell_channel_description_0) /* actually not used (equals to default) */
   BF( 2,           0,ACT_CHECK,format_id          ,"bit map 0")
   BF( 2,           0,ACT_CHECK,spare              ,"")
   BF(28, 0x0000000,ACT_CHECK,chan_124_thru_097,"")
   BF(32,0x00000020,ACT_CHECK,chan_096_thru_065,"              70")
   BF(32,0x00020000,ACT_CHECK,chan_064_thru_033,"      50")
   BF(32,0x20080000,ACT_CHECK,chan_032_thru_001," 30    20")
IE_END(cell_channel_description_0)

IE_BEGIN(cell_channel_description_1)
   BF( 2,           0,ACT_CHECK,format_id          ,"bit map 0")
   BF( 2,           0,ACT_CHECK,spare              ,"")
   BF(28, 0x0000000,ACT_CHECK,chan_124_thru_097,"")
   BF(32,0x00000000,ACT_CHECK,chan_096_thru_065,"")
   BF(32,0x0000000F,ACT_CHECK,chan_064_thru_033,"           36 35 34 33")
   BF(32,0x00000000,ACT_CHECK,chan_032_thru_001,"")
IE_END(cell_channel_description_1)

IE_BEGIN(cell_channel_description_2)
   BF( 2,           0,ACT_CHECK,format_id          ,"bit map 0")
   BF( 2,           0,ACT_CHECK,spare              ,"")
   BF(28, 0x0000000,ACT_CHECK,chan_124_thru_097,"")
   BF(32,0x00000000,ACT_CHECK,chan_096_thru_065,"")
   BF(32,0x00000000,ACT_CHECK,chan_064_thru_033,"")
   BF(32,0xF0000000,ACT_CHECK,chan_032_thru_001,"32 31 30 29")
IE_END(cell_channel_description_2)

IE_BEGIN(channel_description_0)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,           channel_type,"SDCCH/8 offset 0")
   BF( 3,           0,ACT_CHECK,      time_slot_number,SILENT)
   BF( 3,           0,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,                hopping,"yes")
   BF( 6,           1,ACT_CHECK,                   maio,"")
   BF( 6,           0,ACT_CHECK,                    hsn,"")
IE_END(channel_description_0)

IE_BEGIN(channel_description_1)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,           channel_type,"SDCCH/8 offset 0")
   BF( 3,           0,ACT_CHECK,      time_slot_number,SILENT)
   BF( 3,           0,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,                hopping,"yes")
   BF( 6,           1,ACT_CHECK,                   maio,"")
   BF( 6,           0,ACT_CHECK,                    hsn,"")
IE_END(channel_description_1)

IE_BEGIN(channel_description_2)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,           channel_type,"SDCCH/8 offset 0")
   BF( 3,           0,ACT_CHECK,      time_slot_number,SILENT)
   BF( 3,           0,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,           1,ACT_CHECK,                hopping,"yes")
   BF( 6,           0,ACT_CHECK,                   maio,"")
   BF( 6,           0,ACT_CHECK,                    hsn,"")
IE_END(channel_description_2)

IE_BEGIN(ia_rest_octets_0)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  0 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  1 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  2 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  3 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  4 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  5 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  6 */
```

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   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  7 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  8 */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /*  9 */
IE_END(ia_rest_octets_0)


IE_BEGIN(mobile_allocation_0)
   BF(8,1,ACT_CHECK,length,"ARFCN [70,50,30,20] need 4 bits - one octet")
   BF(8,M8(0,0,0,0,1,1,1,0),ACT_CHECK,ANONYMOUS,"70, 50, and 30 selected")
IE_END(mobile_allocation_0)


IE_BEGIN(mobile_allocation_1)
   BF(8,1,ACT_CHECK,length,"ARFCN [36,35,34,33] need 4 bits - one octet")
   BF(8,M8(0,0,0,0,1,1,0,0),ACT_CHECK,ANONYMOUS,"36 and 35 selected")
IE_END(mobile_allocation_1)


IE_BEGIN(mobile_allocation_2)
   BF(8,1,ACT_CHECK,length,"ARFCN [32,31,30,29] need 4 bits - one octet")
   BF(8,M8(0,0,0,0,0,0,1,1),ACT_CHECK,ANONYMOUS,"30 and 29 selected")
IE_END(mobile_allocation_2)


IE_BEGIN(starting_time)
   BF(5,19,ACT_CHECK,_t1,SILENT)
   BF(6,39,ACT_CHECK,_t3,SILENT)
   BF(5,12,ACT_CHECK,_t2,SILENT)
IE_END(starting_time)


MSG3_BEGIN(immediate_assignment)
   IE(l2_pseudo_length_12)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(immediate_assignment_message_type)
   IE(spare_half_octet)
   IE(page_mode)
   IE(channel_description_0)
   IE(request_reference)
   IE(timing_advance)
   IE(mobile_allocation_0)
   IE(ia_rest_octets_0)
MSG3_END(immediate_assignment)


MSG3_BEGIN(frequency_redefinition_1)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(frequency_redefinition_message_type)
   IE(channel_description_0)
   IE(mobile_allocation_1)
   IE(starting_time)
   IE(iei_62)
   IE(cell_channel_description_1)
MSG3_END(frequency_redefinition_1)


MSG3_BEGIN(frequency_redefinition_2)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(frequency_redefinition_message_type)
   IE(channel_description_0)
   IE(mobile_allocation_2)
   IE(starting_time)
   IE(iei_62)
   IE(cell_channel_description_2)
MSG3_END(frequency_redefinition_2)


SET_TIMEOUT          ( 30000)


BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT        ( 0, channel_request,"  2:")
BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS(0,0)
BS_MSG3_SEND         ( 0, immediate_assignment,"  3: SDCCH test: Channel type = SDCCH/8")


BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," 4:")
ISS_DELAY( 5000)
BS_MSG3_SEND         ( 0, frequency_redefinition_1," 6:")
```

```
ISS_DELAY( 5000)
BS_MSG3_SEND          ( 0, frequency_redefinition_2," 8:")
ISS_DELAY( 5000)
BS_MSG3_SEND          ( 0, channel_release," 10:")
ISS_DELAY( 5000)

}
```

History:	12.02.98	VK	Initial.
	25.01.99	LE	Testcase updated

3.8 Channel Mode Modify

3.8.1 MRR290: Channel Mode Modify / full rate (26.6.7.1)

Description: (Ref.: GSM 11.10-1, §26.6.7.1)
Preamble: MRR000
Script:
```
{

MSG3_BEGIN(channel_mode_modify)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_mode_modify_message_type)
    IE(channel_description_GSM)
    IE(channel_mode)
MSG3_END(channel_mode_modify)

SET_TIMEOUT            ( 30000)

BS_CONFIG_CHANNEL    ( 0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND         ( 0, paging_request_type_1," 1:")
BS_RACH_AWAIT        ( 0, channel_request,"  2:")
BS_CONFIG_CHANNEL    ( 0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS(0,0)
BS_MSG3_SEND         ( 0, immediate_assignment_GSM,"  3:")

BS_CONFIG_CHANNEL    ( 0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT        ( 0, paging_response_imsi," ?:")

BS_MSG3_SEND_BEGIN   ( 0, channel_mode_modify," 4:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,1)," speech full rate")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT_BEGIN ( 0, channel_mode_modify_acknowledge," 5:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,1)," speech full rate")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND_BEGIN   ( 0, channel_mode_modify," 6:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,1,1)," data, 12 kbit radio")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT_BEGIN ( 0, channel_mode_modify_acknowledge," 7:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,1)," speech full rate")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND_BEGIN   ( 0, channel_mode_modify," 8:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,1,0,1,1)," data, 6.0 kbit radio")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT_BEGIN ( 0, channel_mode_modify_acknowledge," 9:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,1)," speech full rate")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND_BEGIN   ( 0, channel_mode_modify," 10:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,1,0,0,1,1)," data, 3.6 kbit radio")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT_BEGIN ( 0, channel_mode_modify_acknowledge," 11:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,1)," speech full rate")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND_BEGIN   ( 0, channel_mode_modify," 12:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,0)," signalling only")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT_BEGIN ( 0, channel_mode_modify_acknowledge," 13:")
   BF_SET_VAL        ( channel_mode.mode_value, M8(0,0,0,0,0,0,0,0)," signalling only")
BS_MSG3_AWAIT_END()

BS_MSG3_SEND         ( 0, channel_release," 14:")
}
```

History: 13.02.98   VK   Initial.
                25.01.99   LE   Testcase updated

3.9 Cipher Mode Setting

3.9.1 MRR300: Ciphering mode / start ciphering (26.6.8.1)

Description: (Ref.: GSM 11.10-1, §26.6.8.1)
Preamble: None
Script:
{

```
IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
   BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
   IE(rach_moc)
MSG3_END(channel_request_moc)

ISS_INIT            ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

/* the following setup of mcc and mnc do not conform with the GSM 11.10 */
IE_BF_SET_VAL        ( location_area_identification, mcc_dig_1, 2, SILENT)
IE_BF_SET_VAL        ( location_area_identification, mcc_dig_2, 6, SILENT)
IE_BF_SET_VAL        ( location_area_identification, mcc_dig_3, 2, SILENT)
IE_BF_SET_VAL        ( location_area_identification, mnc_dig_1, 0, SILENT)
IE_BF_SET_VAL        ( location_area_identification, mnc_dig_2, 1, SILENT)

BS_SET_SYS_INFO      ( 0, system_information_type_1)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH           ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");

AT_SEND ("AT+COPS=0\r\n"," Start Registration");
```

```
ISS_DELAY              ( 5000) /* wait until the MS has detected the cell */

AT_SEND ("ATD1234567890123456;\r\n"," Dial");

BS_RACH_AWAIT          (0,channel_request_moc,"1:")
BS_CONFIG_CHANNEL      (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS   (0,0)
BS_MSG3_SEND           (0,immediate_assignment_GSM,"2:")

BS_CONFIG_CHANNEL      (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT          (0,cm_service_request,"3:")

BS_MSG3_SEND           (0,authentication_request,"4:")
BS_MSG3_AWAIT          (0,authentication_response,"5:")

BS_MSG3_SEND           (0,ciphering_mode_command,"6:")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"7:")
BS_MSG3_AWAIT          (0,setup,"8:")

BS_MSG3_SEND           (0,authentication_request,"9:")
BS_MSG3_AWAIT          (0,authentication_response,"10:")

BS_MSG3_SEND           ( 0, channel_release," 11:")
}
```

History: 13.02.98   VK   Initial.

TEXAS INSTRUMENTS

3.9.2 MRR301: Ciphering mode / no ciphering (26.6.8.2)

Description: (Ref.: GSM 11.10-1, §26.6.8.2)
Preamble: None
Script:
{

```
IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
   BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
   IE(rach_moc)
MSG3_END(channel_request_moc)

ISS_INIT              ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

/* the following setup of mcc and mnc do not conform with the GSM 11.10 */
IE_BF_SET_VAL         ( location_area_identification, mcc_dig_1, 2, SILENT)
IE_BF_SET_VAL         ( location_area_identification, mcc_dig_2, 6, SILENT)
IE_BF_SET_VAL         ( location_area_identification, mcc_dig_3, 2, SILENT)
IE_BF_SET_VAL         ( location_area_identification, mnc_dig_1, 0, SILENT)
IE_BF_SET_VAL         ( location_area_identification, mnc_dig_2, 1, SILENT)

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */
```

```
AT_SEND ("ATD1234567890123456;\r\n"," Dial");

BS_RACH_AWAIT        (0,channel_request_moc,"1:")
BS_CONFIG_CHANNEL    (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0,0)
BS_MSG3_SEND         (0,immediate_assignment_GSM,"2:")

BS_CONFIG_CHANNEL    (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT        (0,cm_service_request,"3:")

BS_MSG3_SEND         (0,authentication_request,"4:")
BS_MSG3_AWAIT        (0,authentication_response,"5:")

BS_MSG3_SEND_BEGIN   (0,ciphering_mode_command,"6:")
  BF_SET_VAL         (start_ciphering,0,"no ciphering")
BS_MSG3_SEND_END()

BS_MSG3_AWAIT        (0,ciphering_mode_complete,"7:")

BS_MSG3_AWAIT        (0,setup,"8:")

BS_MSG3_SEND         ( 0, channel_release," 11:")
}
```

History: 16.02.98   VK   Initial.

3.9.3 MRR302: Ciphering mode / no ciphering (26.6.8.3)

Description: (Ref.: GSM 11.10-1, §26.6.8.3)
Preamble: MRR301
Script:
{

```
IE_BEGIN(rach_moc)
   BF(3,M3(1,1,1),ACT_CHECK ,establishment_cause,"MOC & TCH/F, NECI not set to 1")
   BF(5,M5(1,1,1,1,1),ACT_NOP,   random_reference,"ignore Random Ref.")
IE_END(rach_moc)

MSG3_BEGIN(channel_request_moc)
   IE(rach_moc)
MSG3_END(channel_request_moc)

ISS_DELAY            ( 10000) /* wait after the release from MRR301 */

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY            ( 20000) /* wait until the MS has detected the cell */

AT_SEND ("ATD1234567890123456;\r\n"," Dial");

BS_RACH_AWAIT        (0,channel_request_moc,"1:")
BS_CONFIG_CHANNEL    (0,AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0,0)
BS_MSG3_SEND         (0,immediate_assignment_GSM,"2:")

BS_CONFIG_CHANNEL    (0, SDCCH, 1, SAPI_0)
BS_MSG3_AWAIT        (0,cm_service_request,"3:")

BS_MSG3_SEND         (0,ciphering_mode_command,"4:")

BS_MSG3_AWAIT        (0,ciphering_mode_complete,"5:")

BS_MSG3_AWAIT        (0,setup,"6:")

BS_MSG3_SEND         (0, channel_release," 7:")
}
```

History: 16.02.98   VK   Initial.

3.9.4 MRR303: Ciphering mode setting (26.6.8.4)

Description: This test is related to 26.6.8.4.
Preamble: None
Script:
{

```
IE_BEGIN(kc_3)
   BF( 8,  7,ACT_CHECK, kc_value_0 ,SILENT)
   BF( 8,  6,ACT_CHECK, kc_value_1 ,SILENT)
   BF( 8,  5,ACT_CHECK, kc_value_2 ,SILENT)
   BF( 8,  4,ACT_CHECK, kc_value_3 ,SILENT)
   BF( 8,  3,ACT_CHECK, kc_value_4 ,SILENT)
   BF( 8,  2,ACT_CHECK, kc_value_5 ,SILENT)
   BF( 8,  1,ACT_CHECK, kc_value_6 ,SILENT)
   BF( 8,  0,ACT_CHECK, kc_value_7 ,SILENT)
IE_END(kc_3)
IE_BEGIN(kc_4)
   BF( 8,  8,ACT_CHECK, kc_value_0 ,SILENT)
   BF( 8,  7,ACT_CHECK, kc_value_1 ,SILENT)
   BF( 8,  6,ACT_CHECK, kc_value_2 ,SILENT)
   BF( 8,  5,ACT_CHECK, kc_value_3 ,SILENT)
   BF( 8,  4,ACT_CHECK, kc_value_4 ,SILENT)
   BF( 8,  3,ACT_CHECK, kc_value_5 ,SILENT)
   BF( 8,  2,ACT_CHECK, kc_value_6 ,SILENT)
   BF( 8,  1,ACT_CHECK, kc_value_7 ,SILENT)
IE_END(kc_4)
ISS_INIT              ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */
```

```
SET_TIMEOUT           ( 30000)

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT         (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS  (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"Step 4")

BS_MSG3_SEND          (0,ciphering_mode_command,"Step 5")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 6")

/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 3
 */
MS_CHECK_CIPH (1, 0, kc_3);

BS_MSG3_SEND          (0,authentication_request,"Step 8")
BS_MSG3_AWAIT         (0,authentication_response,"Step 9")
BS_MSG3_SEND          (0,handover_command_no_ciph,"Step 10")
/*
 * handover access not seen in simulation
 */
BS_MSG3_AWAIT         (0,handover_complete,"Step 16")

BS_MSG3_SEND          (0,assignment_command_ciph,"Step 17")
BS_MSG3_AWAIT         (0,assignment_complete,"Step 19")

/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 3
 */
MS_CHECK_CIPH (1, 0, kc_3);

BS_MSG3_SEND          (0,ciphering_mode_command_no_ciph,"Step 20")
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"Step 21")

BS_MSG3_SEND          (0,handover_command_ciph,"Step 23")
/*
 * handover access not seen in simulation
 */
BS_MSG3_AWAIT         (0,handover_complete,"Step 29")

/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 4
 */
MS_CHECK_CIPH (1, 0, kc_4);

BS_MSG3_SEND          (0,identity_request,"Step 30")
BS_MSG3_AWAIT         (0,identity_response,"Step 31")

BS_MSG3_SEND          (0,handover_command_ciph,"Step 32")
/*
 * handover access not seen in simulation
 */
BS_MSG3_AWAIT         (0,handover_complete,"Step 38")

/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 4
 */
```

```
MS_CHECK_CIPH (1, 0, kc_4);

BS_MSG3_SEND        (0,assignment_command_no_ciph,"Step 39")
BS_MSG3_AWAIT       (0,assignment_complete,"Step 41")


BS_MSG3_SEND        (0,ciphering_mode_command_no_ciph,"Step 42")
BS_MSG3_AWAIT       (0,ciphering_mode_complete,"Step 43")

BS_MSG3_SEND        (0,authentication_request,"Step 44")
BS_MSG3_AWAIT       (0,authentication_response,"Step 45")

BS_MSG3_SEND        (0,handover_command_ciph,"Step 46")
/*
 * handover access not seen in simulation
 */
BS_MSG3_AWAIT       (0,handover_complete,"Step 52")


/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 4
 */
MS_CHECK_CIPH (1, 0, kc_4);

BS_SET_ERROR        ( 0, 3) /* step 2: generate DL_RELEASE_IND on receipt of DEDI_REQ! */
BS_MSG3_SEND        (0,handover_command_no_ciph,"Step 53")
BS_MSG3_AWAIT       (0,handover_failure_abnormal_release,"Step 55")


/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 4
 */
MS_CHECK_CIPH (1, 0, kc_4);

BS_MSG3_SEND        (0,identity_request,"Step 56")
BS_MSG3_AWAIT       (0,identity_response,"Step 57")

BS_SET_ERROR        ( 0, 3) /* step 2: generate DL_RELEASE_IND on receipt of DEDI_REQ! */
BS_MSG3_SEND        (0,assignment_command_no_ciph,"Step 58")
BS_MSG3_AWAIT_BEGIN ( 0, assignment_failure," Step 60")
   BF_SET_VAL       ( cause, M8(0,1,1,0,1,1,1,1),"")
BS_MSG3_AWAIT_END()


/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
 * KC = KC of CKSN = 4
 */
MS_CHECK_CIPH (1, 0, kc_4);

BS_MSG3_SEND        (0,assignment_command_ciph_a2,"Step 61B")
BS_MSG3_AWAIT       (0,assignment_complete,"Step 63B")


/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/2
 * KC = KC of CKSN = 4
 */
MS_CHECK_CIPH (1, 1, kc_4);

BS_MSG3_SEND        (0,handover_command_ciph,"Step 64B")
/*
 * handover access not seen in simulation
 */
BS_MSG3_AWAIT       (0,handover_complete,"Step 70B")


/*
 * Check Cipher Parameter
 * Start Ciphering
 * Algorithm A5/1
```

```
 * KC = KC of CKSN = 4
 */
MS_CHECK_CIPH (1, 0, kc_4);

BS_MSG3_SEND         (0,channel_release,"Step 71B")

}
```

History: 29.04.98   VK   Initial

3.9.5 MRR304: Ciphering mode / IMEISV request (26.6.8.5)

Description: (Ref.: GSM 11.10-1, §26.6.8.5)
Preamble: MRR000
Script:
{

```
MSG3_BEGIN(ciphering_mode_complete_mob_ident)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(ciphering_mode_complete_message_type)
    IE(iei_17)
    IE(mobile_identity_imeisv)
MSG3_END(ciphering_mode_complete_mob_ident)

IE_BF_SET_VAL ( ciphering_mode_setting, start_ciphering, 0," no ciphering")

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"1:")
BS_RACH_AWAIT         (0,channel_request,SILENT,"2:")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"3:")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"4:")

BS_MSG3_SEND_BEGIN    (0,ciphering_mode_command,"5:")
    BF_SET_VAL        (cipher_response,0,"IMEISV shall not be included")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT         (0,ciphering_mode_complete,"6:")

BS_MSG3_SEND_BEGIN    (0,ciphering_mode_command,"7:")
    BF_SET_VAL        (cipher_response,1,"IMEISV shall be included")
BS_MSG3_SEND_END()
BS_MSG3_AWAIT         (0,ciphering_mode_complete_mob_ident,"8:")

BS_MSG3_SEND          (0, channel_release," 9:")

}
```

History: 17.02.98   VK   Initial.

3.10 Classmark Interrogation

3.10.1 MRR350: Classmark interrogation (GSM 900, Single Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:
{

```
IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,         0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_request_message_type)
   IE(ciphering_key_sequence_number)
   IE(location_updating_type_att)
   IE(location_area_identification)
   IE(mobile_station_classmark_1_GSM)
   IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_accept_message_type)
   IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT            ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
```

```
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO      ( 0, system_information_type_1)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH           ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT         (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_GSM,"5:")
BS_MSG3_AWAIT         (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND          (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT         (0,classmark_change,"8:")

BS_MSG3_SEND          (0,location_updating_accept,"9:")

BS_MSG3_SEND          (0, channel_release," 10:")

}
```

History:	17.02.98	VK	Initial.
	21.02.98	VK	establishment_cause changed
	21.01.99	LE	testcase updated

TEXAS INSTRUMENTS

3.10.2 MRR351: Classmark interrogation (DCS 1800, Single Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:
{

```
IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,        0,ACT_SHOW  ,ref                ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_request_message_type)
   IE(ciphering_key_sequence_number)
   IE(location_updating_type_att)
   IE(location_area_identification)
   IE(mobile_station_classmark_1_DCS)
   IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_accept_message_type)
   IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT           ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")
```

```
IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO      ( 0, system_information_type_1)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH           ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_DCS)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

COMMAND              (" PL CONFIG STD=4")
AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL    (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT        (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL    (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND         (0,immediate_assignment_DCS,"5:")
BS_MSG3_AWAIT        (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL    (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT        (0,classmark_change_1800,"8:")

BS_MSG3_SEND         (0,location_updating_accept,"9:")

BS_MSG3_SEND         (0, channel_release," 10:")

}
```

History:	17.02.98	VK	Initial.
	21.02.98	VK	establishment_cause changed
	21.01.99	LE	testcase updated

TEXAS INSTRUMENTS

3.10.3 MRR352: Classmark interrogation (GSM 900, Dual Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:
{

```
IE_BEGIN(rach)
    BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
    BF(5,        0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
    IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(location_updating_request_message_type)
    IE(ciphering_key_sequence_number)
    IE(location_updating_type_att)
    IE(location_area_identification)
    IE(mobile_station_classmark_1_GSM)
    IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(location_updating_accept_message_type)
    IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT            ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111********  PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111********  RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101********  MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")
```

```
IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO      ( 0, system_information_type_1)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH           ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

COMMAND              (" PL CONFIG STD=5")
AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL    (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT        (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL    (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND         (0,immediate_assignment_GSM,"5:")
BS_MSG3_AWAIT        (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL    (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT        (0,classmark_change_GSM_DUAL,"8:")

BS_MSG3_SEND         (0,location_updating_accept,"9:")

BS_MSG3_SEND         (0, channel_release," 10:")

}
```

History: 17.02.98   VK   Initial.
                  21.02.98   VK   establishment_cause changed
                  21.01.99   LE   testcase updated

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3.10.4 MRR353: Classmark interrogation (DCS 1800, Dual Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:
{


```
IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,          0,ACT_SHOW  ,ref                  ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_request_message_type)
   IE(ciphering_key_sequence_number)
   IE(location_updating_type_att)
   IE(location_area_identification)
   IE(mobile_station_classmark_1_DCS)
   IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_accept_message_type)
   IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT           ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*0000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")
```

```
IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_DCS)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

COMMAND               (" PL CONFIG STD=5")
AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT         (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_DCS,"5:")
BS_MSG3_AWAIT         (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND          (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT         (0,classmark_change_DCS_DUAL,"8:")

BS_MSG3_SEND          (0,location_updating_accept,"9:")

BS_MSG3_SEND          (0, channel_release," 10:")

}
```

History: 17.02.98   VK   Initial.
                 21.02.98   VK   establishment_cause changed
                 21.01.99   LE   testcase updated

3.10.5 MRR354: Classmark interrogation (E-GSM, Dual Extended Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:
```
{


IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,        0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
```

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```
        IE(location_updating_request_message_type)
        IE(ciphering_key_sequence_number)
        IE(location_updating_type_att)
        IE(location_area_identification)
        IE(mobile_station_classmark_1_GSM)
        IE(mobile_identity_imsi)
    MSG3_END(location_updating_request)

    MSG3_BEGIN(location_updating_accept)
        IE(skip_indicator)
        IE(mobility_management_protocol_discriminator)
        IE(location_updating_accept_message_type)
        IE(location_area_identification)
    MSG3_END(location_updating_accept)


    ISS_INIT               ( 1)


    COMMAND ("TAP REDIRECT CLEAR")
    COMMAND ("RR REDIRECT CLEAR")
    COMMAND ("MM REDIRECT CLEAR")
    COMMAND ("MMI REDIRECT CLEAR")
    COMMAND ("TAP DUPLICATE CLEAR")
    COMMAND ("RR DUPLICATE CLEAR")
    COMMAND ("MM DUPLICATE CLEAR")
    COMMAND ("MMI DUPLICATE CLEAR")


    COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
    COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
    COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
    COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
    COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
    COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
    COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
    COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
    COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
    COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
    COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
    COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
    COMMAND ("RR DUPLICATE PL TAP")
    COMMAND ("RR DUPLICATE DL TAP")
    COMMAND ("MM REDIRECT DL TAP")
    COMMAND ("MMI REDIRECT MMI TAP")


    IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

    BS_SET_SYS_INFO        ( 0, system_information_type_1)
    BS_SET_SYS_INFO        ( 0, system_information_type_2)
    BS_SET_SYS_INFO        ( 0, system_information_type_3)
    BS_SET_SYS_INFO        ( 0, system_information_type_4)
    BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
    BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

    BS_SET_SCH             ( 0,BSIC , RFN)
    BS_SET_ARFCN           ( 0,ARFCN_BCCH_EGSM)
    BS_SET_POWER           ( 0,DOWNLINK_INPUT_LEVEL_DBM)
    BS_ON_OFF              ( 0,TRUE)

    COMMAND                (" PL CONFIG STD=6")
    AT_SEND ("AT+CFUN=1\r\n"," Power On");
    AT_SEND ("AT+COPS=0\r\n"," Start Registration");

    SET_TIMEOUT (20000);

    BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
    BS_RACH_AWAIT          (0,channel_request,SILENT,"4:")

    BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
    BS_STORE_RACH_PARAMS (0, 0)
    BS_MSG3_SEND           (0,immediate_assignment_DCS,"5:")
    BS_MSG3_AWAIT          (0,location_updating_request,"6:")
```

```
BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND           (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT          (0,classmark_change_GSM_DUAL_EXT,"8:")

BS_MSG3_SEND           (0,location_updating_accept,"9:")

BS_MSG3_SEND           (0, channel_release," 10:")

}
```

History: 19.11.02   MSB   Initial (copy from MRR353).

3.10.6 MRR355: Classmark interrogation (PCS 1900, Single Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:

```
{


IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,         0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_request_message_type)
   IE(ciphering_key_sequence_number)
   IE(location_updating_type_att)
   IE(location_area_identification)
   IE(mobile_station_classmark_1_DCS)
   IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_accept_message_type)
   IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT           ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")
```

TEXAS INSTRUMENTS

```
IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO      ( 0, system_information_type_1)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH           ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_DCS)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

COMMAND              ("PL CONFIG STD=3")
AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL    (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT        (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL    (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND         (0,immediate_assignment_DCS,"5:")
BS_MSG3_AWAIT        (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL    (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND         (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT        (0,classmark_change_1900,"8:")

BS_MSG3_SEND         (0,location_updating_accept,"9:")

BS_MSG3_SEND         (0, channel_release," 10:")

}
```

History: 19.11.02   MSB   Initial (copy from MRR353).

3.10.7 MRR356: Classmark interrogation (GSM 850, Single Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:
```
{


IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,        0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_request_message_type)
   IE(ciphering_key_sequence_number)
   IE(location_updating_type_att)
   IE(location_area_identification)
   IE(mobile_station_classmark_1_GSM)
```

```
    IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(location_updating_accept_message_type)
    IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT             ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*0000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_850)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)


COMMAND               ("PL CONFIG STD=7")
AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");


SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT         (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_850,"5:")
BS_MSG3_AWAIT         (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND          (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT         (0,classmark_change_850,"8:")
```

```
BS_MSG3_SEND          (0,location_updating_accept,"9:")

BS_MSG3_SEND          (0, channel_release," 10:")

}
```

History: 19.11.02   MSB   Initial (copy from MRR353).

3.10.8 MRR357: Classmark interrogation (GSM 850+PCS 1900, DUAL US-Band) (26.6.11.2)

Description: (Ref.: GSM 11.10-1, §26.6.11.2)
Preamble: None
Script:

```
{


IE_BEGIN(rach)
   BF(3,M3(0,0,0),ACT_CHECK ,establishment_cause,"location update (NECI=0)")
   BF(5,         0,ACT_SHOW  ,ref                 ,"not checked")
IE_END(rach)

MSG3_BEGIN(channel_request)
   IE(rach)
MSG3_END(channel_request)

MSG3_BEGIN(classmark_enquiry)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(classmark_enquiry_message_type)
MSG3_END(classmark_enquiry)

MSG3_BEGIN(location_updating_request)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_request_message_type)
   IE(ciphering_key_sequence_number)
   IE(location_updating_type_att)
   IE(location_area_identification)
   IE(mobile_station_classmark_1_DCS)
   IE(mobile_identity_imsi)
MSG3_END(location_updating_request)

MSG3_BEGIN(location_updating_accept)
   IE(skip_indicator)
   IE(mobility_management_protocol_discriminator)
   IE(location_updating_accept_message_type)
   IE(location_area_identification)
MSG3_END(location_updating_accept)


ISS_INIT          ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
```

```
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


IE_BF_SET_VAL ( control_channel_description, att, 1," IMSI attach-detach flag changed")

BS_SET_SYS_INFO       ( 0, system_information_type_1)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_DCS)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

COMMAND              ("PL CONFIG STD=8")
AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

SET_TIMEOUT (20000);

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_RACH_AWAIT         (0,channel_request,SILENT,"4:")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_DCS,"5:")
BS_MSG3_AWAIT         (0,location_updating_request,"6:")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_SEND          (0,classmark_enquiry,"7:")
BS_MSG3_AWAIT         (0,classmark_change_DUAL_US,"8:")

BS_MSG3_SEND          (0,location_updating_accept,"9:")

BS_MSG3_SEND          (0, channel_release," 10:")

}
```

History: 19.11.02   MSB   Initial (copy from MRR353).

3.11 Channel Release

3.11.1 MRR401: Channel release / SDCCH (26.6.12.1)

Description: (Ref.: GSM 11.10-1, §26.6.12.1)
Preamble: MRR000
Script:

```
{

REPEAT_BEGIN(COUNT,2)

BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           (0,paging_request_type_1,"1:")
BS_RACH_AWAIT          (0,channel_request,SILENT,"2:")

BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND           (0,immediate_assignment_GSM,"3:")

BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,paging_response_imsi,"4:")

BS_MSG3_SEND           (0, channel_release," 5:")

ISS_DELAY( 12000) /* step 7: */
ISS_DELAY(  6000) /* wait another 6 seconds */

REPEAT_END(COUNT)

}
```

History: 17.02.98   VK   Initial.

3.11.2 MRR402: TCH Assignment with Hopping for DCS 1800

Description: A mobile terminated call establishment is started. A channel assignment to TCH with frequency hopping is started in the DCS 1800 frequency range.
Preamble: MRR353
Script:

```
ISS_DELAY (10000)

BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT          (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND           (0,immediate_assignment_DCS,"Step 3")

BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,paging_response_imsi_dual,"Step 4")

BS_MSG3_SEND           (0,authentication_request,"Step 5")
BS_MSG3_AWAIT          (0,authentication_response,"Step 6")
BS_MSG3_SEND           (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND           (0,setup_19,"Step 1")
BS_MSG3_AWAIT          (0,call_confirmed_1800_DUAL,"Step 9")
BS_MSG3_AWAIT          (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT          (0,connect,"Step 11")
BS_MSG3_SEND           (0,assignment_command_1800_H,"Step 12")

BS_CONFIG_CHANNEL      (0, FACCH, ACK, SAPI_0)
```

```
BS_MSG3_AWAIT          (0,assignment_complete,"Step 13")
BS_MSG3_SEND           (0,connect_acknowledge,"Step 14")
```

History: 22.01.97   VK   Initial

3.12 Test of Starting Time

3.12.1 MRR410: Imm Ass with starting time / successful / time not elapsed / (26.6.13.9)

Description: Beside the actual test of Starting Time this test case checks that the IA rest octets are correctly decoded.
(Ref.: GSM 11.10-1, §26.6.13.9)

Preamble: None

Script:

```
{

IE_BEGIN(channel_description_26_6_13_9)
   BF( 5,M5(0,1,0,0,0),ACT_CHECK,           channel_type,"SDCCH/8")
   BF( 3,               2,ACT_CHECK,      time_slot_number,SILENT)
   BF( 3,               5,ACT_CHECK,training_sequence_code,SILENT)
   BF( 1,               1,ACT_CHECK,              hopping,"yes")
   BF( 6,               0,ACT_CHECK,                 maio,SILENT)
   BF( 6,               1,ACT_CHECK,                  hsn,SILENT)
IE_END(channel_description_26_6_13_9)

IE_BEGIN(mobile_allocation_ch114)
   BF(8,3,ACT_CHECK,length,SILENT)
   BF(8,M8(0,0,0,0,0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,M8(0,0,0,0,0,0,0,0),ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,M8(0,0,0,0,0,0,0,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(mobile_allocation_ch114)

IE_BEGIN(starting_time)
   BF(5,10,ACT_CHECK,_t1,SILENT)
   BF(6,30,ACT_CHECK, t3,SILENT)
   BF(5,20,ACT_CHECK, t2,SILENT)
IE_END(starting_time)

IE_BEGIN(ia_rest_octets_26_6_13_9)
   BF(2,2,ACT_CHECK,freq_ind,"HL: Frequency Parameter, before time")
   BF(6,2,ACT_CHECK,freq_len,"Length of Frequency Parameter, before time")
   BF(2,0,ACT_CHECK,ANONYMOUS,"spare bits")
   BF(6,47,ACT_CHECK,ANONYMOUS,"MAIO")
   BF(8,1,ACT_CHECK,ANONYMOUS,"Mobile Allocation Bitfield") /* selects first cell ARFCN */
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
   BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(ia_rest_octets_26_6_13_9)

MSG3_BEGIN(immediate_assignment_26_6_13_9)
   IE(l2_pseudo_length_11)
   IE(skip_indicator)
   IE(rr_management_protocol_discriminator)
   IE(immediate_assignment_message_type)
   IE(spare_half_octet)
   IE(page_mode)
   IE(channel_description_26_6_13_9)
   IE(request_reference)
   IE(timing_advance)
   IE(mobile_allocation_ch114)
   IE(iei_7c)
   IE(starting_time)
   IE(ia_rest_octets_26_6_13_9)
MSG3_END(immediate_assignment_26_6_13_9)

ISS_INIT               ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
```

```
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")


COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")


BS_SET_SYS_INFO       ( 0, system_information_type_1_cell_a_gsm900_26_6_13)
BS_SET_SYS_INFO       ( 0, system_information_type_2)
BS_SET_SYS_INFO       ( 0, system_information_type_3)
BS_SET_SYS_INFO       ( 0, system_information_type_4)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)


BS_SET_SCH            ( 0,BSIC , RFN)
BS_SET_ARFCN          ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER          ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF             ( 0,TRUE)

AT_SEND               ("AT+CFUN=1\r\n"," Power On")
AT_SEND               ("AT+COPS=0\r\n"," Start Registration")

ISS_DELAY             ( 5000) /* wait until the MS has detected the cell */

BS_CONFIG_CHANNEL     (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND          (0,paging_request_type_1,"1:")
BS_RACH_AWAIT         (0,channel_request,SILENT,"2:")

BS_CONFIG_CHANNEL     (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND          (0,immediate_assignment_26_6_13_9,"3: Mob Alloc in rest octets")

BS_CONFIG_CHANNEL     (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT         (0,paging_response_imsi,"4:")

BS_MSG3_SEND          (0, channel_release," 5:")

ISS_DELAY( 6000)

}
```

History: 26.03.2001   VK   Initial.

3.13 Extended GSM

3.13.1 MRR450: Immediate Assignment with Frequency Hopping (26.10.2.2 K=2)

Description: A mobile terminated call is started for E-GSM with frequency hopping. Channel 0 is used in the hopping list.

Preamble: None

Script:

```
ISS_INIT             ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

COMMAND             (" PL CONFIG STD=6")

BS_SET_SYS_INFO     ( 0, system_information_type_1_E_S1)
BS_SET_SYS_INFO     ( 0, system_information_type_2_E_S1)
BS_SET_SYS_INFO     ( 0, system_information_type_3_E_S1)
BS_SET_SYS_INFO     ( 0, system_information_type_4_E_S1)

BS_SET_SCH          ( 0, BSIC_1_3 , RFN)
BS_SET_ARFCN        ( 0, ARFCN_002)
BS_SET_POWER        ( 0, RXLEV_60)
BS_ON_OFF           ( 0, TRUE)

SET_TIMEOUT (20000);

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");
COMMAND             (" PL CONFIG STD=6")

ISS_DELAY           ( 5000) /* wait until the MS has detected the cell */

BS_CONFIG_CHANNEL   (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND        (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT       (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL   (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS (0, 0)
BS_MSG3_SEND        (0,immediate_assignment_HOP_SDCCH8,"Step 3")

BS_CONFIG_CHANNEL   (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT       (0,paging_response_imsi_egsm,"Step 4")
```

History: 26.01.99   LE   Initial

3.14 Additional Testcases

3.14.1 MRR500: Frequency Hopping in Assignment Command

Description: A call attempt with frequency hopping during assignment command.
Preamble: MRR000
Script:

```
SET_TIMEOUT            ( 30000)

BS_CONFIG_CHANNEL      (0, PCH, UNACK, SAPI_0)
BS_MSG3_SEND           (0,paging_request_type_1,"Step 1")
BS_RACH_AWAIT          (0,channel_request,"Step 2")

BS_CONFIG_CHANNEL      (0, AGCH, UNACK, SAPI_0)
BS_STORE_RACH_PARAMS   (0, 0)
BS_MSG3_SEND           (0,immediate_assignment_GSM,"Step 3")

BS_CONFIG_CHANNEL      (0, SDCCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,paging_response_imsi,"Step 4")
BS_MSG3_SEND           (0,authentication_request,"Step 5")
BS_MSG3_AWAIT          (0,authentication_response,"Step 6")
BS_MSG3_SEND           (0,ciphering_mode_command,"Step 7")
BS_MSG3_AWAIT          (0,ciphering_mode_complete,"Step 8")
BS_MSG3_SEND           (0,setup_19,"Step 1")
BS_MSG3_AWAIT          (0,call_confirmed,"Step 9")
BS_MSG3_AWAIT          (0,alerting,"Step 10")

ISS_DELAY (10000);

AT_SEND ("ATA\r\n"," Hook off");

BS_MSG3_AWAIT          (0,connect,"Step 11")
BS_MSG3_SEND           (0,assignment_command_300,"Step 12")

BS_CONFIG_CHANNEL      (0, FACCH, ACK, SAPI_0)
BS_MSG3_AWAIT          (0,assignment_complete,"Step 13")
BS_MSG3_SEND           (0,connect_acknowledge,"Step 14")
```

History: 22.01.97   VK   Initial

3.14.2 MRR501: CBCH Problem with Frequency Hopping in Turkey

Description: The testcase simulates an environment found in Turkey which has problems with CBCH reception if the CBCH channel uses frequency hopping.

Preamble: None

Script:

```
ISS_INIT            ( 1)

COMMAND ("TAP REDIRECT CLEAR")
COMMAND ("RR REDIRECT CLEAR")
COMMAND ("MM REDIRECT CLEAR")
COMMAND ("MMI REDIRECT CLEAR")
COMMAND ("TAP DUPLICATE CLEAR")
COMMAND ("RR DUPLICATE CLEAR")
COMMAND ("MM DUPLICATE CLEAR")
COMMAND ("MMI DUPLICATE CLEAR")

COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000100 PCO")
COMMAND ("TAP DUPLICATE TAP 0*010111******** PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP DUPLICATE TAP 10000000********0*00000000000011 PCO")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000100 RR")
COMMAND ("TAP REDIRECT TAP 0*010111******** RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 10000000********0*00000000000011 RR")
COMMAND ("TAP REDIRECT TAP 0*010101******** MMI")
COMMAND ("RR DUPLICATE ALL PCO") /* duplicate RR primitives */
COMMAND ("DL REDIRECT RR NULL") /* duplicate RR primitives */
COMMAND ("GRR DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MM DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("LC DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RRLP DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("MMI DUPLICATE RR PCO") /* duplicate RR primitives */
COMMAND ("RR DUPLICATE PL TAP")
COMMAND ("RR DUPLICATE DL TAP")
COMMAND ("MM REDIRECT DL TAP")
COMMAND ("MMI REDIRECT MMI TAP")

BS_SET_SYS_INFO      ( 0, system_information_type_1_turkey)
BS_SET_SYS_INFO      ( 0, system_information_type_2)
BS_SET_SYS_INFO      ( 0, system_information_type_3)
BS_SET_SYS_INFO      ( 0, system_information_type_4_turkey)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_5)
BS_SET_SYS_INFO_SACCH( 0, system_information_type_6)

BS_SET_SCH           ( 0,BSIC , RFN)
BS_SET_ARFCN         ( 0,ARFCN_BCCH_GSM)
BS_SET_POWER         ( 0,DOWNLINK_INPUT_LEVEL_DBM)
BS_ON_OFF            ( 0,TRUE)

AT_SEND ("AT+CFUN=1\r\n"," Power On");
AT_SEND ("AT+COPS=0\r\n"," Start Registration");

ISS_DELAY            ( 5000) /* wait until the MS has detected the cell */
```

History: 22.12.00   LE   Initial

Appendices

A. Acronyms

DS-WCDMA   Direct Sequence/Spread Wideband Code Division Multiple Access

B. Glossary

**International Mobile Tel-
ecommunication 2000
(IMT-2000/ITU-2000)**

Formerly referred to as FPLMTS (Future Public Land-Mobile Telephone System), this is the ITU's specification/family of standards for 3G. This initiative provides a global infrastructure through both satellite and terrestrial systems, for fixed and mobile phone users. The family of standards is a framework comprising a mix/blend of systems providing global roaming. <URL: http://www.imt-2000.org/>