



G23-GSM Protocol Stack  
**RR**

Entity Test Specification

**Author:** Condat AG  
Alt Moabit 90a  
10559 Berlin  
Germany

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## 0 Document Control

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Condat AG  
Alt Moabit 90a  
10559 Berlin  
Germany

Telephone: +49.30.39 49 0  
Fax: +49.30.39 49 1300  
Internet: [www.condat.de](http://www.condat.de)

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### 0.2 References, Abbreviations, Terms

[C\_7010.801] 7010.801, References and Vocabulary, Condat AG

## 1 Introduction

This document is the test document for the entity RR.

**Status of Document:** On baseline g23m\_S180 all tests passed.

## 2 Parameters

FIELD(AMR\_HO\_ALC)

0x68, 0x00,

0x18, 0x00,

0x00, 0x00, 0x00, 0x06, 0x2B, 0x00, 0x56, 0x0E, 0x00, 0x5A, 0x0C, 0x05, 0x03, 0x02, 0x20, 0x80, 0x2B,

0x2B, 0x2B, 0x2B, 0x2B

ENDFIELD(AMR\_HO\_ALC,25)

/\*

31	length of list
43,0	channel 0x43
0xFF, 0xFF	end of list

\*/

FIELD (ACT\_DESC\_0043)      31,  
    0x43,0,  
    0xFF,0xFF

ENDFIELD (ACT\_DESC\_0043, 5)

/\*

31	length of list
3,0	Channel 3
24, 0	Channel 24
99,0	Channel 99
0xFF, 0xFF	end of list

\*/

FIELD (ACT\_DESC\_1)            31,  
    3,0,  
    24,0,  
    99,0,  
    0xFF,0xFF

ENDFIELD (ACT\_DESC\_1, 9)

/\*

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x00, 0x04, 0x00, 0x00	115
0x00, 0x02, 0x00, 0x01	82    65
0x00, 0x08, 0x00, 0x00	52
0x81, 0x00, 0x00, 0x00	32 25

\*/

FIELD (CELL\_CHAN\_DESC\_1) 0x80, 0x00,  
    0x00, 0x00,  
    0x00, 0x04, 0x00, 0x00,  
    0x00, 0x02, 0x00, 0x01,  
    0x00, 0x08, 0x00, 0x00,  
    0x81, 0x00, 0x00, 0x00

ENDFIELD (CELL\_CHAN\_DESC\_1, 20)

FIELD (CELL\_CHAN\_DESC\_E\_GSM) 0x80, 0x00,  
    0x00, 0x00,  
    0x84, 0x18, 0xF5, 0x92,  
    0xC0, 0x00, 0x00, 0x00,  
    0x00, 0x00, 0x00, 0x00,

```

                                0x00, 0x00, 0x00, 0x00
ENDFIELD (CELL_CHAN_DESC_EGSM, 20)
FIELD (CELL_CHAN_DESC_512_15) 0x80, 0x00,
                                0x00, 0x00,
                                0x8F, 0x00, 0x70, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00
ENDFIELD (CELL_CHAN_DESC_512_15, 20)
    
```

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x00, 0x04, 0x00, 0x01	115 97
0x00, 0x02, 0x00, 0x01	82 65
0x00, 0x08, 0x00, 0x01	52 33
0x81, 0x00, 0x00, 0x0F	32 25 4,3,2,1

\*/

```

FIELD (CELL_CHAN_DESC_2) 0x80, 0x00,
                            0x00, 0x00,
                            0x00, 0x04, 0x00, 0x01,
                            0x00, 0x02, 0x00, 0x01,
                            0x00, 0x08, 0x00, 0x01,
                            0x81, 0x00, 0x00, 0x0F
ENDFIELD (CELL_CHAN_DESC_2, 20)
    
```

/\*

0, 0x37, ...	time in TDMA frames between random bursts
--------------	---

\*/

```

FIELD (DELTA_TWO_BURSTS) 0, 0x37,0,0,0,0,0,0
ENDFIELD (DELTA_TWO_BURSTS, 8)
FIELD (DELTA_EIGHT_BURSTS) 0, 0x56,0x56,0x56,0x56,0x56,0x56,0x56
ENDFIELD (DELTA_EIGHT_BURSTS, 8)
    
```

/\*

	Frequency Channel Sequence (1,25,50,65,111,112,113,114)
0x01	Lowest ARFCN = 1
0x0	+15 = 16 not used
9	+9 = 25
0x0	+15 = 40 not used
a	+10 = 50
0xf	+15 = 65
0	+15 = 80 not used
0x0	+15 = 95 not used
0	+15 = 110 not used
0x1	+1 = 111
1	+1 = 112
0x1	+1 = 113
1	+1 = 114
0x0	not used

0	not used
0x0	not used
0	not used

\*/

FIELD (FREQ\_CHAN\_SEQ\_1\_INC\_SKIP)

0x0,0x9,0x0,0xa,0xf,0x0,0x0,0x0,0x1,0x1,0x1,0x1,0x0,0x0,0x0,0x0

ENDFIELD (FREQ\_CHAN\_SEQ\_1\_INC\_SKIP,16)

/\*

	Frequency list describing the same frequencies as hopping_2 (52, 82)
--	--

\*/

FIELD (FREQ\_LIST\_AFTER\_2) 16,

0x00, 0x00, 0x00, 0x00,

0x00, 0x02, 0x00, 0x00,

0x00, 0x08, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00

ENDFIELD (FREQ\_LIST\_AFTER\_2, 17)

/\*

1..32, 93..124	Frequency list
----------------	----------------

\*/

FIELD (FREQ\_LIST\_BEFORE\_1) 16,

0x0F, 0xFF, 0xFF, 0xFF,

0xF0, 0x00, 0x00, 0x00,

0x00, 0x00, 0x00, 0x00,

0xFF, 0xFF, 0xFF, 0xFF

ENDFIELD (FREQ\_LIST\_BEFORE\_1, 17)

/\*

0x00, ...	digits
0x0F	end of digits

\*/

FIELD (IMSI\_08158912) 0,8,1,5,8,9,1,2,

0x0F

ENDFIELD (IMSI\_08158912, 9)

/\*

0x01, ...	digits
0x0F	end of digits

\*/

FIELD (IMSI\_1233247114912) 0x01, 0x02, 0x03, 0x03,

0x02, 0x04, 0x07, 0x01,

0x01, 0x04, 0x09, 0x01,

0x02,

0x0F

ENDFIELD (IMSI\_1233247114912, 14)

FIELD (IMSI\_0010147114912) 0x00, 0x00, 0x01, 0x00,

0x01, 0x04, 0x07, 0x01,

0x01, 0x04, 0x09, 0x01,

0x02,

0x0F

ENDFIELD (IMSI\_0010147114912, 14)

/\*

0x00, ...	Kc values
-----------	-----------

\*/

FIELD (KC\_00112233) 0x00, 0x00, 0x01, 0x01,  
0x02, 0x02, 0x03, 0x03

ENDFIELD (KC\_00112233, 8)

/\*

0x01, ...	Kc values
-----------	-----------

\*/

FIELD (KC\_12345678) 0x01, 0x02, 0x03, 0x04,  
0x05, 0x06, 0x07, 0x08

ENDFIELD (KC\_12345678, 8)

/\*

0x01, ...	IMEI digits (in messages)
-----------	---------------------------

\*/

FIELD (M\_IMEI) 1, 3, 5, 7, 9, 0, 2, 4,  
6, 8, 1, 1, 2, 2, 7, 8

ENDFIELD (M\_IMEI, 16)

/\*

0x00, ...	IMSI digits (in messages)
-----------	---------------------------

\*/

FIELD (M\_IMSI\_08158912) 0,8,1,5,8,9,1,2

ENDFIELD (M\_IMSI\_08158912, 8)

/\*

0x01, ...	IMSI digits (in messages)
-----------	---------------------------

\*/

FIELD (M\_IMSI\_1233247114912) 0x01, 0x02, 0x03, 0x03,  
0x02, 0x04, 0x07, 0x01,  
0x01, 0x04, 0x09, 0x01,  
0x02

ENDFIELD (M\_IMSI\_1233247114912, 13)

FIELD (M\_IMSI\_0010147114912) 0x00, 0x00, 0x01, 0x00,  
0x01, 0x04, 0x07, 0x01,  
0x01, 0x04, 0x09, 0x01,  
0x02

ENDFIELD (M\_IMSI\_0010147114912, 13)

/\*

0x01, ...	mobile country code 122
-----------	-------------------------

\*/

FIELD (MCC\_122) 0x01, 0x02, 0x02

ENDFIELD (MCC\_122, 3)

FIELD (MCC\_001) 0x00, 0x00, 0x01

ENDFIELD (MCC\_001, 3)

/\*

0x01, ...	Mobile country code 123
-----------	-------------------------

\*/

FIELD (MCC\_123) 0x01, 0x02, 0x03

ENDFIELD (MCC\_123, 3)

FIELD (HANDOVER\_CMD\_ERROR) 0x60, 0x00,  
0x18, 0x00,  
0x00, 0x00, 0x00,  
0x06, /\* PD + TI \*/  
0x2b, /\* HANDOVER command \*/  
0x0b, 0x14, /\* Cell description \*/  
0x09, 0xa0, 0x14, /\* Channel description after \*/  
0x01, /\* Handover Reference \*/  
0x08, /\* Power Command and Access Type \*/

```

                                0x00, 0x01, 0x00 /* Unknown Tag : Comprehension Required */
ENDFIELD (HANDOVER_CMD_ERROR, 19)
FIELD (ASSIGNMENT_CMD_ERROR) 0x60, 0x00,
                                0x18, 0x00,
                                0x00, 0x00, 0x00,
                                0x06, /* PD + TI */
                                0x2e, /* ASSIGNMENT command */
                                0x09, 0xa0, 0x14, /* Channel description */
                                0x08, /* Power Command and Access Type */
                                0x00, 0x01, 0x00 /* Unknown Tag : Comprehension Required */
ENDFIELD (ASSIGNMENT_CMD_ERROR, 16)

```

/\*

3, 3	mobile network code 33
------	------------------------

\*/

```

FIELD (MNC_36)           0x03, 0x06, 0x0F
ENDFIELD (MNC_36, 3)
FIELD (MNC_35)           0x03, 0x05, 0x0F
ENDFIELD (MNC_35, 3)
FIELD (MNC_34)           0x03, 0x04, 0x0F
ENDFIELD (MNC_34, 3)
FIELD (MNC_33)           0x03, 0x03, 0x0F
ENDFIELD (MNC_33, 3)
FIELD (MNC_32)           0x03, 0x02, 0x0F
ENDFIELD (MNC_32, 3)

```

/\*

- \* MM hasn't the ability to distinguish the 3rd MNC digit from an artefact,
- \* but this doesn't matter as RR uses the comparison routines described in
- \* GSM 03.22 Annex A (normative) and can distinguish therefore.
- \* The '4' is an artefact from the SIM here, the MNC is "32".

\*/

```

FIELD (MNC_32X)          0x03, 0x02, 0x04
ENDFIELD (MNC_32X, 3)
FIELD (MNC_01)           0x00, 0x01, 0x0F
ENDFIELD (MNC_01, 3)
FIELD (MSG_MNC_36)       0x03, 0x06
ENDFIELD (MSG_MNC_36, 2)
FIELD (MSG_MNC_35)       0x03, 0x05
ENDFIELD (MSG_MNC_35, 2)
FIELD (MSG_MNC_34)       0x03, 0x04
ENDFIELD (MSG_MNC_34, 2)
FIELD (MSG_MNC_33)       0x03, 0x03
ENDFIELD (MSG_MNC_33, 2)
FIELD (MSG_MNC_32)       0x03, 0x02
ENDFIELD (MSG_MNC_32, 2)
FIELD (MSG_MNC_01)       0x00, 0x01
ENDFIELD (MSG_MNC_01, 2)

```

/\*

0x16	mobile allocation
------	-------------------

\*/

```

FIELD (MOB_ALLOC_1)      0x16
ENDFIELD (MOB_ALLOC_1, 1)
FIELD (MOB_ALLOC_EGSM)  0x1F
ENDFIELD (MOB_ALLOC_EGSM, 1)

```

/\*

0x14	mobile allocation
------	-------------------

\*/

FIELD (MOB\_ALLOC\_2) 0x14

ENDFIELD (MOB\_ALLOC\_2, 1)

/\*

0x3F	mobile allocation
------	-------------------

\*/

FIELD (MOB\_ALLOC\_3) 0x3F

ENDFIELD (MOB\_ALLOC\_3, 1)

/\*

	mobile allocation
--	-------------------

\*/

FIELD (MOB\_ALLOC\_4) 0x0F, 0xFF

ENDFIELD (MOB\_ALLOC\_4, 2)

/\*

33	size of list
3, 0	channel 3
32, 0	channel 24
99, 0	channel 99
124, 0	channel 124
0xFF, 0xFF	end of list

\*/

FIELD (MPH\_NCELL\_1) 33,  
 3,0,  
 32,0,  
 99,0,  
 124,0,  
 0xFF,0xFF

ENDFIELD (MPH\_NCELL\_1, 11)

FIELD (MPH\_NCELL\_5TER\_FTA) 33,

14,0,  
 20,0,  
 32,0,  
 44,0,  
 0xFF,0xFF

ENDFIELD (MPH\_NCELL\_5TER\_FTA, 11)

FIELD (MPH\_NCELL\_5TER\_5\_FTA) 33,

8,2,  
 0x0C,3,  
 0x70,3,  
 14,0,  
 20,0,  
 32,0,  
 44,0,  
 0xFF,0xFF

ENDFIELD (MPH\_NCELL\_5TER\_5\_FTA, 17)

FIELD (MPH\_NCELL\_5TER) 33,  
 3,0,  
 32,0,  
 99,0,  
 124,0,  
 0xFF,0xFF

ENDFIELD (MPH\_NCELL\_5TER, 11)

FIELD (MPH\_NCELL\_5\_FTA\_A) 33,

0xde, 3,  
 0xeb, 3,  
 0xed, 3,  
 0xFF,0xFF

ENDFIELD (MPH\_NCELL\_5\_FTA\_A, 9)

```

FIELD (MPH_NCELL_5_FTA_B)                33,
    26, 0,
    38, 0,
    0, 0,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_FTA_B, 9)
FIELD (MPH_NCELL_5_FTA_C)                33,
    8, 2,
    0xde, 3,
    0xfc, 3,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_FTA_C, 9)
FIELD (MPH_NCELL_5_FTA_D)                33,
    26, 0,
    38, 0,
    0xde, 3,
    0xED, 3,
    0xFC, 3,
    0x0, 0,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_FTA_D, 15)
FIELD (MPH_NCELL_5_FTA_E)                33,
    38, 0,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_FTA_E, 5)
FIELD (MPH_NCELL_5_5TER_FTA_C)           33,
    8,2,
    0xde, 3,
    0xfc, 3,
    26, 0,
    0xeb, 3,
    0xed, 3,
    0x00, 0,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_5TER_FTA_C, 17)
FIELD (MPH_NCELL_5_5TER_FTA_D)           33,
    26, 0,
    38, 0,
    0xde, 3,
    0xED, 3,
    0xFC, 3,
    0x0, 0,
    0xE8, 3,
    0xEB, 3,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_5TER_FTA_D, 19)
FIELD (MPH_NCELL_5_5TER_FTA_E)           33,
    38, 0,
    26, 0,
    0xeb, 3,
    0xFC, 3,
    0xFF,0xFF
ENDFIELD (MPH_NCELL_5_5TER_FTA_E, 11)
FIELD (MPH_NCELL_5_5BIS_FTA_A)           33,
    0x1A, 0,
    0x26, 0,
    0xde, 3,
    0xeb, 3,
  
```

```

                                0xed, 3,
                                0x00, 0,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_5_5BIS_FTA_A, 15)
FIELD (MPH_NCELL_5_5BIS_FTA_B)      33,
                                26, 0,
                                38, 0,
                                0x74, 3,
                                0xd4, 3,
                                0xe1, 3,
                                0xe3, 3,
                                0x0, 0,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_5_5BIS_FTA_B, 17)
FIELD (MPH_NCELL_1B)                33,
                                3,0,
                                24,0,
                                99,0,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_1B, 9)
FIELD (MPH_NCELL_2)                 33,
                                3,0,
                                32,0,
                                99,0,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_2, 9)
FIELD (MPH_NCELL_DG_186) 33,
                                115,02,
                                123,02,
                                131,02,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_DG_186, 9)
FIELD (MPH_NCELL_528_31) 33,
                                0x10,0x02,
                                0x11,0x02,
                                0x12,0x02,
                                0x13,0x02,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_528_31, 11)
FIELD (MPH_NCELL_EMPTY) 33,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_EMPTY, 3)

```

/\*

33	size of list
32, 0	channel 32
67, 0	channel 67
124, 0	channel 124
0xFF, 0xFF	end of list

\*/

```

FIELD (MPH_NCELL_1_LIM) 33,
                                0x20, 0,
                                0x43, 0,
                                124, 0,
                                0xFF,0xFF
ENDFIELD (MPH_NCELL_1_LIM, 9)

```

/\*

33	size of list
----	--------------

2, 0	channel 2
9, 0	channel 9
10, 0	channel 10
80,0	channel 80
90, 0	channel 90
100, 0	channel 100
110, 0	channel 110
120, 0	channel 120
123, 0	channel 113
124, 0	channel 124
0xFF, 0xFF	end of list

\*/

```
FIELD (MPH_NCELL_8)      33,
                        2,0,
                        9,0,
                        10,0,
                        80,0,
                        90,0,
                        100,0,
                        110,0,
                        120,0,
                        123,0,
                        124,0,
                        0xFF, 0xFF
```

ENDFIELD (MPH\_NCELL\_8, 23)

/\*

15	Length IMSI
0,0,...	IMSI (max 15 digits)
1	TMSI valid flag
142, ...	TMSI (4 bytes)

\*/

```
FIELD (MS_ID_IMSI_HPLMN_TMSI)      13,
                        1,2,3,3,2,4,7,1,1,4,9,1,2,0,0,
                        1,
                        0x42,1,0,0
```

ENDFIELD (MS\_ID\_IMSI\_HPLMN\_TMSI, 21)

```
FIELD (MS_ID_IMSI_TEST_TMSI)      13,
                        0,0,1,0,1,4,7,1,1,4,9,1,2,0,0,
                        1,
                        0x42,1,0,0
```

ENDFIELD (MS\_ID\_IMSI\_TEST\_TMSI, 21)

```
FIELD (MS_ID_NO_IMSI_NO_TMSI)      0,
                        0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
                        0,
                        0,0,0,0
```

ENDFIELD (MS\_ID\_NO\_IMSI\_NO\_TMSI, 21)

```
FIELD (MS_ID_IMSI_HPLMN_NO_TMSI)   13,
                        1,2,3,3,2,4,7,1,1,4,9,1,2,0,0,
                        0,
                        0,0,0,0
```

ENDFIELD (MS\_ID\_IMSI\_HPLMN\_NO\_TMSI, 21)

/\*

\* sys info 3 with rest octets

\*/

```
FIELD (SYS_INFO_3_A)      0xB8, 0x00,
                        0x18, 0x00,
```

```

                                0x00, 0x00, 0x00,
                                0x06, 0x1B, 0x37, 0x48, 0x21, 0xF3, 0x23, 0x21, 0x47,
                                0x68, 0x02, 0x06, 0x5F, 0x42, 0x56, 0x00, 0x00, 0x40,
                                0x2b, 0x2b, 0x2B, 0x2B, 0x2B, 0x2b
ENDFIELD (SYS_INFO_3_A, 31)
/*
 *   system information messages for testcase 15 (FTA)
 */
FIELD (SYS_INFO_1_15)           0xB0, 0x00,
                                0x18, 0x00,
                                0x00, 0x00, 0x00,
                                0x06, 0x19,
                                0x08, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0xCD, 0x00, 0x00, 0x2B
ENDFIELD (SYS_INFO_1_15, 29)
FIELD (SYS_INFO_2_15)           0xB0, 0x00,
                                0x18, 0x00,
                                0x00, 0x00, 0x00,
                                0x06, 0x1A, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                                0x02, 0xCD, 0x00, 0x00
ENDFIELD (SYS_INFO_2_15, 29)
FIELD (SYS_INFO_3_15)           0xB0, 0x00,
                                0x18, 0x00,
                                0x00, 0x00, 0x00,
                                0x06, 0x1B, 0x00, 0x01, 0x00, 0xF1, 0x10, 0x00, 0x01,
                                0x01, 0x03, 0x00, 0x21, 0xCD, 0x00, 0xCD, 0x00, 0x00,
                                0x4B, 0x2b, 0x2b, 0x2B
ENDFIELD (SYS_INFO_3_15, 29)
FIELD (SYS_INFO_4_15)           0xB0, 0x00,
                                0x18, 0x00,
                                0x00, 0x00, 0x00,
                                0x06, 0x1C, 0x00, 0xF1, 0x10, 0x00, 0x01, 0xCD, 0x00,
                                0xCD, 0x00, 0x00, 0x2B, 0x2B, 0x2B, 0x2B, 0x2B, 0x2B,
                                0x2b, 0x2b, 0x2B, 0x2B
ENDFIELD (SYS_INFO_4_15, 29)
/*
 *   Assignment command for 13.1
 */
FIELD (ASSIGN_CMD)              0x50, 0x01,
                                0x18, 0x00,
                                0x00, 0x00, 0x00,
                                0x06, 0x2E, 0x81, 0xB0, 0x00, 0x07, 0x05, 0x20, 0x80,
                                17, 240, 7,61,60,67,131,125,250,251,232,64,129,97,61,251,
                                223,188,243,207,65,8,16,129,16,64,185,206,115,
                                221,224,0x63,0x01
ENDFIELD (ASSIGN_CMD, 49)
*/
/*

```

2	number of neighbour cells
3, 0	Channel 3
18, 0	Channel 18
0, ...	other channels (not used)

0x20	rxlevel channel 3
0x2A	rxlevel channel 18
0, ...	other rxlevel (not used)
6	bsic channel 3
5	bsic channel 18
0, ...	other bsic not used
2,0,....	timing advance channel 3
4,0,....	timing advance channel 18
0, ...	other timing advance (not used)

\*/

FIELD (NCELLS\_6\_FTA) 6,

44, 0,  
0x70,3,  
32, 0,  
0x0c, 3,  
20, 0,  
14, 0,  
63,  
63,  
60,  
55,  
35,  
31,  
9,  
15,  
13,  
11,  
9,  
15,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0

ENDFIELD (NCELLS\_6\_FTA, 73)

FIELD (NCELLS\_4) 1,

0x43, 0,  
00, 0,  
0, 0, 0, 0, 0, 0, 0, 0,  
45,  
0,  
0, 0, 0, 0,  
6,  
0,  
0, 0, 0, 0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0

ENDFIELD (NCELLS\_4, 73)

FIELD (NCELLS\_3) 2,

0x03, 0,  
0x20, 0,  
0, 0, 0, 0, 0, 0, 0, 0,





```
0,  
63,  
1,  
15,  
0,  
57,  
0,  
11,  
0,  
38,  
6,  
9,  
0,  
32,  
5,  
15,  
0,  
28,  
3,  
13,  
0,  
ENDFIELD (NCELLS_FTA_B, 24)  
FIELD (MPH_NCELLS_FTA_C)6,  
0xeb, 3,  
0xfc, 3,  
26,0,  
0, 0,  
0xed, 3,  
0xde, 3,  
63,  
63,  
57,  
38,  
32,  
28,  
9,  
13,  
11,  
9,  
15,  
13,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
ENDFIELD (MPH_NCELLS_FTA_C, 73)  
FIELD (NCELLS_FTA_C) 63,  
4,  
9,  
0,  
63,  
2,  
13,  
0,  
57,  
3,
```

```
11,  
0,  
38,  
6,  
9,  
0,  
32,  
5,  
15,  
0,  
28,  
1,  
13,  
0,  
ENDFIELD (NCELLS_FTA_C, 24)  
FIELD (MPH_NCELLS_FTA_D)6,  
0xeb, 3,  
38, 0,  
0xfc,3,  
26,0,  
0, 0,  
0xed, 3,  
63,  
60,  
59,  
51,  
34,  
31,  
9,  
15,  
13,  
11,  
9,  
15,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
0,0,0,0,0,0,0,0,  
ENDFIELD (MPH_NCELLS_FTA_D, 73)  
FIELD (NCELLS_FTA_D) 63,  
7,  
9,  
0,  
60,  
1,  
15,  
0,  
59,  
4,  
13,  
0,  
51,  
0,  
11,  
0,  
34,
```



0,  
 ENDFIELD (NCELLS\_FTA\_E, 24)

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x00, ...	content (16 byte)
format	0
neighbour cells	

\*/

```

FIELD (NCELL_DESC_1)      0x80, 0x00,
                          0x00, 0x00,
                          0x08, 0x00, 0x00, 0x04,
                          0x00, 0x00, 0x00, 0x00,
                          0x00, 0x00, 0x00, 0x00,
                          0x80, 0x00, 0x00, 0x04

ENDFIELD (NCELL_DESC_1, 20)
FIELD (NCELL_DESC_1_EMO)      0x80, 0x00,
                              0x00, 0x00,
                              0x08, 0x00, 0x00, 0x04,
                              0x00, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x00, 0x01,
                              0x80, 0x00, 0x00, 0x04

ENDFIELD (NCELL_DESC_1_EMO, 20)
FIELD (NCELL_DESC_1_V)      0x80, 0x00,
                              0x00, 0x00,
                              0x00, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x00, 0x00,
                              0x00, 0x0F, 0x00, 0x00

ENDFIELD (NCELL_DESC_1_V, 20)

```

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x00, ...	Content (16 byte)

\*/

```

FIELD (NCELL_DESC_5TER)      0x80, 0x00,
                              0x00, 0x00,
                              0xDF, 0x39, 0x80, 0x80,
                              0x80, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x00, 0x00

ENDFIELD (NCELL_DESC_5TER, 20)
/*26.11.2.3 bitmap 0 GSM 900
  14,20,32,44*/
FIELD (NCELL_DESC_5_FTA)      0x80, 0x00,
                              0x00, 0x00,
                              0x10, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x00, 0x00,
                              0x00, 0x00, 0x08, 0x00,
                              0x80, 0x08, 0x20, 0x00

ENDFIELD (NCELL_DESC_5_FTA, 20)
/*26.11.2.3 1800 in 512 format, multiband_reporting = 3
  520,780,880 */
FIELD (NCELL_DESC_5TER_FTA)      0x80, 0x00,
                              0x00, 0x00,
                              0xF9, 0x04, 0x5A, 0x27,

```

```
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5TER_FTA, 20)

FIELD (NCELL_DESC_5_FTA_A)          0x80, 0x00,
0x00, 0x00,
0xBB, 0xEF, 0x07, 0xFE,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5_FTA_A, 20)
FIELD (NCELL_DESC_5BIS_FTA_A)      0x80, 0x00,
0x00, 0x00,
0xBC, 0x00, 0x26, 0xD0,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5BIS_FTA_A, 20)
FIELD (NCELL_DESC_5_FTA_B)        0x80, 0x00,
0x00, 0x00,
0xBE, 0x00, 0x00, 0x00,
0x00, 0x20, 0x02, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5_FTA_B, 20)
FIELD (NCELL_DESC_5BIS_FTA_B)     0x80, 0x00,
0x00, 0x00,
0xBF, 0xBA, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x80, 0x05
ENDFIELD (NCELL_DESC_5BIS_FTA_B, 20)
FIELD (NCELL_DESC_5_FTA_C)        0x80, 0x00,
0x00, 0x00,
0x99, 0x04, 0x7d, 0x38,
0x80, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5_FTA_C, 20)
FIELD (NCELL_DESC_5TER_FTA_C)     0x80, 0x00,
0x00, 0x00,
0x97, 0xED, 0xFF, 0x0B,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5TER_FTA_C, 20)
FIELD (NCELL_DESC_5_FTA_D)        0x80, 0x00,
0x00, 0x00,
0x97, 0xFC, 0xF8, 0x8a,
0x7c, 0x7d, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5_FTA_D, 20)
FIELD (NCELL_DESC_5TER_FTA_D)     0x80, 0x00,
0x00, 0x00,
0x9F, 0xF4, 0x10, 0x00,
0x00, 0x00, 0x00, 0x00,
```

```

                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_5TER_FTA_D, 20)
FIELD (NCELL_DESC_5_FTA_E)      0x80, 0x00,
                                0x00, 0x00,
                                0x9A, 0x13, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00

```

```

ENDFIELD (NCELL_DESC_5_FTA_E, 20)
FIELD (NCELL_DESC_5TER_FTA_E)  0x80, 0x00,
                                0x00, 0x00,
                                0x93, 0xFC, 0xF7, 0x87,
                                0x40, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00

```

```

ENDFIELD (NCELL_DESC_5TER_FTA_E, 20)

```

```

/*

```

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x00, ...	content (16 byte)

```

*/

```

```

FIELD (NCELL_DESC_2)          0x80, 0x00,
                                0x00, 0x00,
                                0x00, 0x00, 0x00, 0x04,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x80, 0x00, 0x00, 0x04

```

```

ENDFIELD (NCELL_DESC_2, 20)

```

```

/*

```

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x0C, ...	content (16 byte)

```

*/

```

```

FIELD (NCELL_DESC_8)         0x80, 0x00,
                                0x00, 0x00,
                                0x0C, 0x80, 0x20, 0x08,
                                0x02, 0x00, 0x80, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x03, 0x02

```

```

ENDFIELD (NCELL_DESC_8, 20)

```

```

/*

```

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x8C, ...	content (16 byte)

```

*/

```

```

FIELD (NCELL_DESC_128)      0x80, 0x00,
                                0x00, 0x00,
                                0x8C, 0x01, 0x95, 0x30,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00

```

```

ENDFIELD (NCELL_DESC_128, 20)

```

```

/*

```

0x80, 0x00	length in bits
0x00, 0x00	offset in bits

0x8A, ...	content (16 byte)
-----------	-------------------

\*/

```
FIELD (NCELL_DESC_256) 0x80, 0x00,
                      0x00, 0x00,
                      0x8A, 0x01, 0xB0, 0x35,
                      0x00, 0x00, 0x00, 0x00,
                      0x00, 0x00, 0x00, 0x00,
                      0x00, 0x00, 0x00, 0x00
```

ENDFIELD (NCELL\_DESC\_256, 20)

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x88, ...	content (16 byte)

\*/

```
FIELD (NCELL_DESC_512) 0x80, 0x00,
                      0x00, 0x00,
                      0x88, 0x01, 0x98, 0x2D,
                      0x40, 0x00, 0x00, 0x00,
                      0x00, 0x00, 0x00, 0x00,
                      0x00, 0x00, 0x00, 0x00
```

ENDFIELD (NCELL\_DESC\_512, 20)

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x80, ...	content (16 byte)

\*/

```
FIELD (NCELL_DESC_1024) 0x80, 0x00,
                       0x00, 0x00,
                       0x80, 0x18, 0xF5, 0x92,
                       0xC0, 0x00, 0x00, 0x00,
                       0x00, 0x00, 0x00, 0x00,
                       0x00, 0x00, 0x00, 0x00
```

ENDFIELD (NCELL\_DESC\_1024, 20)

/\*

0x80, 0x00	length in bits
0x00, 0x00	offset in bits
0x80, ..	content (16 byte)
Cells	3/18/63

\*/

```
FIELD (NCELL_DESC_VAR) 0x80, 0x00,
                      0x00, 0x00,
                      0x8E, 0x01, 0x80, 0x00,
                      0x04, 0x00, 0x00, 0x00,
                      0x00, 0x00, 0x00, 0x00,
                      0x00, 0x00, 0x80, 0x00
```

ENDFIELD (NCELL\_DESC\_VAR, 20)

```
FIELD (NCELL_DESC_528_31) 0x80, 0x00,
                          0x00, 0x00,
                          0x8F, 0x08, 0x70, 0x00,
                          0x00, 0x00, 0x00, 0x00,
                          0x00, 0x00, 0x00, 0x00,
                          0x00, 0x00, 0x00, 0x00
```

ENDFIELD (NCELL\_DESC\_528\_31, 20)

/\*

0x0c	size of list
0x01	present flag

1,2,2	mobile country code 122
3, 3	mobile network code 33

\*/

```
FIELD (PLMN_122_FOUND) 0x0c,
                       V_PLMN_PRES,
                       1,2,2,
                       3,3
```

ENDFIELD (PLMN\_122\_FOUND, 7)

```
FIELD (PLMN_123_FOUND) 0x0c,
                       V_PLMN_PRES,
                       1,2,3,
                       3,3
```

ENDFIELD (PLMN\_123\_FOUND, 7)

```
FIELD (PLMN_123_123V_FOUND) 0x0c,
                             V_PLMN_PRES,
                             1,2,3,
                             3,3,
                             V_PLMN_PRES,
                             1,2,3,
                             3,2
```

ENDFIELD (PLMN\_123\_123V\_FOUND, 13)

```
FIELD (PLMN_123_32_FOUND) 0x0c,
                          V_PLMN_PRES,
                          1,2,3,
                          3,2
```

ENDFIELD (PLMN\_123\_32\_FOUND, 7)

/\*

0x20, 0	channel 32
0x34, 0	channel 52
0x52, 0	channel 82
0xFF, 0xFF	end of hopping list
0x00, ...	rest of empty list

\*/

```
FIELD (PRR_HOPPING_1) 0x20, 0x00,
                     0x34, 0x00,
                     0x52, 0x00,
                     0xFF, 0xFF,
                     0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                     0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
```

ENDFIELD (PRR\_HOPPING\_1, 128)

/\*

0x34, 0	channel 52
0x52, 0	channel 82

0xFF, 0xFF	end of hopping list
0x00, ...	rest of empty list

\*/

```

FIELD (PRR_HOPPING_2)  0x34, 0x00,
                       0x52, 0x00,
                       0xFF, 0xFF,
                       0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                       0x00, 0x00
  
```

ENDFIELD (PRR\_HOPPING\_2, 128)

```

FIELD (PRR_HOPPING_EGSM)  0x00, 0x00,
                          0x03, 0x00,
                          0x18, 0x00,
                          0x63, 0x00,
                          0xFF, 0xFF,
                          0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                          0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
  
```

ENDFIELD (PRR\_HOPPING\_EGSM, 128)

/\*

0x19, 0	channel 25
0x20, 0	channel 32
0x34, 0	channel 52
0x41, 0	channel 65
0x52, 0	channel 82
0x73, 0	channel 115
0xFF, 0xFF	end of hopping list
0x00, ...	rest of empty list

\*/

```

FIELD (PRR_HOPPING_3)  0x19, 0,
                       0x20, 0,
                       0x34, 0,
  
```



```

0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00

```

ENDFIELD (PRR\_HOPPING\_4, 128)

/\*

0x01, 0	channel 1
0x02, 0	channel 2
0x03, 0	channel 3
0x04, 0	channel 4
0x19, 0	channel 25
0x20, 0	channel 32
0xFF, 0xFF	end of hopping list
0x00, ...	rest of empty list

\*/

```

FIELD (PRR_HOPPING_5)  0x01, 0,
                        0x02, 0,
                        0x03, 0,
                        0x04, 0,
                        0x19, 0,
                        0x20, 0,
                        0xFF, 0xFF,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
                        0x00, 0x00

```

ENDFIELD (PRR\_HOPPING\_5, 128)

/\*

0x01, 0	channel 1
...	thru
0x20, 0	channel 32
0x5D, 0	channel 93
...	thru
0x7C, 0	channel 124
0xFF, 0xFF	end of hopping list

\*/

```

FIELD (PRR_HOPPING_6)
  0x01, 0x00, 0x02, 0x00, 0x03, 0x00, 0x04, 0x00,
  0x05, 0x00, 0x06, 0x00, 0x07, 0x00, 0x08, 0x00,
  0x09, 0x00, 0x0A, 0x00, 0x0B, 0x00, 0x0C, 0x00,
  0x0D, 0x00, 0x0E, 0x00, 0x0F, 0x00, 0x10, 0x00,

```



\*/

FIELD (TMSI\_1)                    0x20, 0x00,  
    0x00, 0x00,  
    0x00, 0x00, 0x01, 0x42

ENDFIELD (TMSI\_1, 8)

/\*

0x20, 0x00	length of content
0x00, 0x00.	offset of content
0xAA, ...	TMSI = 0xDDCCBBAA

\*/

FIELD (TMSI\_2)                    0x20, 0x00,  
    0x00, 0x00,  
    0xAA, 0xBB, 0xCC, 0xDD

ENDFIELD (TMSI\_2, 8)

/\*

24, 0	24 bit length
0, 0	0 bit offset
0x82	P = 2, length = 2
0x10	maio
0x14	mac

\*/

FIELD (IA\_REST\_1)                24, 0,  
    0, 0,  
    0x82,  
    0x10,  
    0x14

ENDFIELD (IA\_REST\_1, 7)

/\*

16, 0	16 bit length
0, 0	0 bit offset
0xC0	PI = 1, CBQ=1, Cell Reselect Off = 0
0x1F	temp off = 0, penalty = 31

\*/

FIELD (S11\_REST\_4\_LOW)        16, 0,  
    0, 0,  
    0xC0,  
    0x1F

ENDFIELD (S11\_REST\_4\_LOW, 6)

/\*

24, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x14	message = test interface
0x00	tested device = 0

\*/

FIELD (TEST\_INTERFACE\_0)      24, 0,  
    24, 0,  
    0,0,0,  
    0x0F,  
    0x14,  
    0x00

ENDFIELD (TEST\_INTERFACE\_0, 10)

/\*

24, 0	24 bit length
-------	---------------

24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x14	message = test interface
0x01	tested device = 1

\*/

```
FIELD (TEST_INTERFACE_1)    24, 0,
                             24, 0,
                             0,0,0,
                             0x0F,
                             0x14,
                             0x01
```

ENDFIELD (TEST\_INTERFACE\_1, 10)

/\*

24, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x14	message = test interface
0x02	tested device = 2

\*/

```
FIELD (TEST_INTERFACE_2)    24, 0,
                             24, 0,
                             0,0,0,
                             0x0F,
                             0x14,
                             0x02
```

ENDFIELD (TEST\_INTERFACE\_2, 10)

/\*

24, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x14	message = test interface
0x04	tested device = 4

\*/

```
FIELD (TEST_INTERFACE_4)    24, 0,
                             24, 0,
                             0,0,0,
                             0x0F,
                             0x14,
                             0x04
```

ENDFIELD (TEST\_INTERFACE\_4, 10)

/\*

24, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x00	message = close tch loop cmd
0x01	subchannel = 1

\*/

```
FIELD (CLOSE_TCH_LOOP_A)    24, 0,
                             24, 0,
                             0,0,0,
                             0x0F,
```

```

                                0x00,
                                0x01
ENDFIELD (CLOSE_TCH_LOOP_A, 10)
/*

```

24, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x00	message = close tch loop cmd
0x06	subchannel = 6

```

*/
FIELD (CLOSE_TCH_LOOP_C) 24, 0,
                        24, 0,
                        0,0,0,
                        0x0F,
                        0x00,
                        0x06
ENDFIELD (CLOSE_TCH_LOOP_C, 10)
/*

```

16, 0	16 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x01	message = close tch loop ack

```

*/
FIELD (CLOSE_TCH_LOOP_ACK) 16, 0,
                          24, 0,
                          0,0,0,
                          0x0F,
                          0x01
ENDFIELD (CLOSE_TCH_LOOP_ACK, 9)
/*

```

16, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x06	message = open tch loop cmd

```

*/
FIELD (OPEN_TCH_LOOP_CMD) 16, 0,
                          24, 0,
                          0,0,0,
                          0x0F,
                          0x06
ENDFIELD (OPEN_TCH_LOOP_CMD, 9)
/*

```

24, 0	24 bit length
24, 0	24 bit offset
0,0,0	layer 2 header
0x0F	ti = 0, pd = test
0x06	message = close tch loop ack
0x81	acknowledge

```

*/
FIELD (OPEN_TCH_LOOP_ACK) 24, 0,
                          24, 0,
                          0,0,0,

```

0x0F,  
0x06,  
0x81

ENDFIELD (OPEN\_TCH\_LOOP\_ACK, 10)

/\*

32, 0	l_buf
0, 0	o_buf
0xc0	c2par = 1 cbq = 1
0x00	temp off & penalty time
0x2b	rest octets
0x2b	rest octest

\*/

FIELD (S14\_REST\_LOW) 32, 0,  
0, 0,  
0xc0,  
0x00,  
0x2b,  
0x2b

ENDFIELD (S14\_REST\_LOW, 8)

FIELD (S13\_REST\_LOW) 32, 0,  
0, 0,  
0xc0,  
0x00,  
0x2b,  
0x2b

ENDFIELD (S13\_REST\_LOW, 8)

FIELD (S13\_REST\_NO\_2TER) 0x08,  
0x00,  
0x00,  
0x00,  
0x20,  
0x00,  
0x00,  
0x00

ENDFIELD (S13\_REST\_NO\_2TER, 8)

FIELD (S13\_REST\_DEF) 0x2b,  
0x2b,  
0x2b,  
0x2b,  
0x2b,  
0x2b,  
0x2b,  
0x2b

ENDFIELD (S13\_REST\_DEF, 8)

FIELD (S13\_REST\_OPT\_SEL\_PAR) 0x80,  
0x00,  
0x2b,  
0x2b,  
0x2b,  
0x2b,  
0x2b,  
0x2b

ENDFIELD (S13\_REST\_OPT\_SEL\_PAR, 8)

FIELD (S13\_REST\_EMPTY) 0x00,  
0x00,  
0x00,  
0x00,

```

                                0x00,
                                0x00
ENDFIELD (SI3_REST_EMPTY, 18)
/*
 * CHM
 */
FIELD (CHM_SPEECH_FULL)
                                1,1
ENDFIELD (CHM_SPEECH_FULL, 2)

FIELD (CHM_DG_629)
                                0,0xFF
ENDFIELD (CHM_DG_629, 2)

FIELD (NCELL_DESC_EMPTY)
                                0x80, 0x00,
                                0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00,
                                0x00, 0x00, 0x00, 0x00
ENDFIELD (NCELL_DESC_EMPTY, 20)

/*
 * power cnf
 */
FIELD (ARFCN_24_527)
                                24, 0,
                                15, 2,
ENDFIELD (ARFCN_24_527, 4)
FIELD (ARFCN_67_32_124)
                                67, 0,
                                32, 0,
                                124, 0
ENDFIELD (ARFCN_67_32_124, 6)
FIELD (ARFCN_67_64_32_26_124)
                                67, 0,
                                64, 0,
                                32, 0,
                                26, 0,
                                124, 0
ENDFIELD (ARFCN_67_64_32_26_124, 10)
FIELD (ARFCN_64_DCS832_PCS640MSB)
                                64, 0,
                                0x40, 0x03,
                                0x80, 0x82,
ENDFIELD (ARFCN_64_DCS832_PCS640MSB, 6)

```

```

FIELD (ARFCN_DCS832_PCS640MSB_64)
    0x40, 0x03,
    0x80, 0x82,
    0x40, 0
ENDFIELD (ARFCN_DCS832_PCS640MSB_64, 6)
FIELD (ARFCN_PCS640MSB_64_DCS832)
    0x80, 0x82,
    0x40, 0,
    0x40, 0x03
ENDFIELD (ARFCN_PCS640MSB_64_DCS832, 6)
FIELD (RXLEV_22_21)
    0x22,0x21
ENDFIELD (RXLEV_22_21, 2)
FIELD(MM_MESSAGE)
    24,0,
    24,0,
    0,0,0,
    3,4,5
ENDFIELD(MM_MESSAGE,10)
FIELD (RXLEV_22_21_20)
    0x22,0x21,0x20
ENDFIELD (RXLEV_22_21_20, 3)
FIELD (RXLEV_24_23_22_13_10)
    0x24,0x23,0x22,0x13,0x10
ENDFIELD (RXLEV_24_23_22_13_10, 5)
FIELD (RXLEV_10_8_4)
    0x10,8,4
ENDFIELD (RXLEV_10_8_4, 3)
FIELD (RXLEVEL_22)
    0x0c, 0x22
ENDFIELD (RXLEVEL_22, 2)
FIELD (RXLEVEL_21)
    0x0c, 0x21
ENDFIELD (RXLEVEL_21, 2)
FIELD (RXLEVEL_20)
    0x0c, 0x20
ENDFIELD (RXLEVEL_20, 2)
FIELD (RXLEVEL_22_21)
    0x0c, 0x22, 0x21
ENDFIELD (RXLEVEL_22_21, 3)

FIELD (EXT_MEAS_FREQ_000)
    0x80,0x00,
    0x00,0x00,
    0x18,0x00,0x00,0x00,
    0x00,0x00,0x00,0x00,
    0x00,0x00,0x60,0x00,
    0x00,0x00,0x00,0x01
ENDFIELD (EXT_MEAS_FREQ_000,20)
FIELD (EXT_MEAS_FREQ_001)
    0x80,0x00,
    0x00,0x00,
    0x83,0x00,0xFF,0xC0,
    0x00,0x00,0x00,0x00,
    0x00,0x00,0x00,0x00,
    0x00,0x00,0x00,0x00
ENDFIELD (EXT_MEAS_FREQ_001,20)

```

FIELD (EXT\_MEAS\_FREQ\_002)

```

0x80,0x00,
0x00,0x00,
0x87,0x00,0xFF,0xC0,
0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,
0x00,0x00,0x00,0x00

```

ENDFIELD (EXT\_MEAS\_FREQ\_002,20)

FIELD (EXT\_MEAS\_FREQ\_003)

```

0x80,0x00,
0x00,0x00,
0x1F,0xFF,0xFF,0xFF,
0xFF,0xFF,0xFF,0xFF,
0xFF,0xFF,0xFF,0xFF,
0xFF,0xFF,0xFF,0xFF

```

ENDFIELD (EXT\_MEAS\_FREQ\_003,20)

FIELD (EXT\_MEAS\_FREQ\_004)

```

0x80,0x00,
0x00,0x00,
0x08,0x00,0x00,0x00,
0x00,0x00,0x00,0x00,
0x00,0x00,0x60,0x00,
0x00,0x00,0x00,0x01

```

ENDFIELD (EXT\_MEAS\_FREQ\_004,20)

/\*

\* APDU with 247 Bytes, 1976 Bits, 0x7B8 bits

\*/

FIELD (APDU\_MSG\_RRRLP\_820)

```

0xB8,0x07,
0x00,0x00,
0xAA, 0xBB, 0xCC, 0xDD,
0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,
0x66, 0x77, 0x88

```

ENDFIELD (APDU\_MSG\_RRRLP\_820, 252)

/\*

\* Layer 2 Frame with 251 Bytes, 2008 Bits, 0x7D8 bits

\* PD=0x06, msg type=0x038, flags: c/r=1 first=!0 last=!0 -&gt; 0x40, len=0xF7

\*/

FIELD (APDU\_MSG\_DL\_820)

```

0xD8,0x07,
0x00,0x00,
0x06, 0x38, 0x40, 0xF7,
0xAA, 0xBB, 0xCC, 0xDD,
0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,

```

```

0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

0x66, 0x77, 0x88

ENDFIELD (APDU\_MSG\_DL\_820, 255)

/\*

\* APDU with 248 Bytes, 1984 Bits, 0x7C0 bits

\*/

FIELD (APDU\_MSG\_RRRLP\_821)

0xC0, 0x07,

0x00, 0x00,

0xAA, 0xBB, 0xCC, 0xDD,

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

0x66, 0x77, 0x88, 0x99

ENDFIELD (APDU\_MSG\_RRRLP\_821, 253)

/\*

\* Layer 2 Frame with 251 Bytes, 2008 Bits, 0x7D8 bits

\* PD=0x06, msg type=0x038, flags: c/r=0 first=10 last=11 ->0x10, len=0xF7

\*/

FIELD (APDU\_MSG\_DL\_821a)

0xD8, 0x07,

0x00, 0x00,

0x06, 0x38, 0x10, 0xF7,

0xAA, 0xBB, 0xCC, 0xDD,

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,

```

```

0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

```
0x66, 0x77, 0x88
```

```
ENDFIELD (APDU_MSG_DL_821a, 255)
```

```
/*
```

```
* Layer 2 Frame with 5 Byte, 40 Bits, 0x28 bits
```

```
* PD=0x06, msg type=0x038, flags: c/r=1 first=!1 last=!0 -> 0x60, len=0x01
```

```
*/
```

```
FIELD (APDU_MSG_DL_821b)
```

```
0x28,0x00,
```

```
0x00,0x00,
```

```
0x06, 0x38, 0x60, 0x01,
```

```
0x99
```

```
ENDFIELD (APDU_MSG_DL_821b, 9)
```

```
/*
```

```
* APDU with 741 Bytes, 5928 Bits, 0x1728 bits
```

```
*/
```

```
FIELD (APDU_MSG_RRRLP_822)
```

```
0x28,0x17,
```

```
0x00,0x00,
```

```
0xAA, 0xBB, 0xCC, 0xDD,
```

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

```
0x66, 0x77, 0x88,
```

```
0xAA, 0xBB, 0xCC, 0xDD,
```

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

```
0x66, 0x77, 0x88,
```

```
0xAA, 0xBB, 0xCC, 0xDD,
```

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

0x66, 0x77, 0x88,

ENDFIELD (APDU\_MSG\_RRRLP\_822, 745)

/\*

\* First of 3 Layer 2 Frames:

\* Layer 2 Frame with 251 Bytes, 2008 Bits, 0x7D8 bits

\* PD=0x06, msg type=0x038, flags: c/r=0 first=10 last= !1 ->0x10, len=0xF7

\*/

FIELD (APDU\_MSG\_DL\_822a)

0xD8,0x07,

0x00,0x00,

0x06, 0x38, 0x10, 0xF7,

0xAA, 0xBB, 0xCC, 0xDD,

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

0x66, 0x77, 0x88

ENDFIELD (APDU\_MSG\_DL\_822a, 255)

/\*

\* Second of 3 Layer 2 Frames:

\* Layer 2 Frame with 251 Bytes, 2008 Bits, 0x7D8 bits

\* PD=0x06, msg type=0x038, flags: c/r=0 first=!1 last= !1 ->0x30, len=0xF7

\*/

FIELD (APDU\_MSG\_DL\_822b)

0xD8,0x07,

0x00,0x00,

0x06, 0x38, 0x30, 0xF7,

0xAA, 0xBB, 0xCC, 0xDD,

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,

```

```

0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

```
0x66, 0x77, 0x88
```

```
ENDFIELD (APDU_MSG_DL_822b, 255)
```

```
/*
```

- \* Second of 3 Layer 2 Frames:
- \* Layer 2 Frame with 251 Bytes, 2008 Bits, 0x7D8 bits
- \* PD=0x06, msg type=0x038, flags: c/r=1 first=!1 last=!0 ->0x60, len=0xF7

```
*/
```

```
FIELD (APDU_MSG_DL_822c)
```

```
0xD8,0x07,
```

```
0x00,0x00,
```

```
0x06, 0x38, 0x60, 0xF7,
```

```
0xAA, 0xBB, 0xCC, 0xDD,
```

```

0x00, 0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x07, 0x08, 0x09, 0x0A, 0x0B, 0x0C, 0x0D, 0x0E, 0x0F,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0x50, 0x51, 0x52, 0x53, 0x54, 0x55, 0x56, 0x57, 0x58, 0x59, 0x5A, 0x5B, 0x5C, 0x5D, 0x5E, 0x5F,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0x90, 0x91, 0x92, 0x93, 0x94, 0x95, 0x96, 0x97, 0x98, 0x99, 0x9A, 0x9B, 0x9C, 0x9D, 0x9E, 0x9F,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,
0xD0, 0xD1, 0xD2, 0xD3, 0xD4, 0xD5, 0xD6, 0xD7, 0xD8, 0xD9, 0xDA, 0xDB, 0xDC, 0xDD, 0xDE, 0xDF,
0xE0, 0xE1, 0xE2, 0xE3, 0xE4, 0xE5, 0xE6, 0xE7, 0xE8, 0xE9, 0xEA, 0xEB, 0xEC, 0xED, 0xEE, 0xEF,

```

```
0x66, 0x77, 0x88
```

```
ENDFIELD (APDU_MSG_DL_822c, 255)
```

```
/*
```

- \* First frame containing a segmented APDU (copied and modified from APDU\_MSG\_DL\_822a)
- \* Layer 2 Frame with 251 Bytes, 2008 Bits, 0x7D8 bits
- \* PD=0x06, msg type=0x038, flags: c/r=0 first=!0 last=!1 ->0x10, len=0xF7

```
*/
```

```
FIELD (APDU_MSG_DL_827)
```

```
0xD8,0x07,
```

```
0x00,0x00,
```

```
0x06, 0x38, 0x10, 0xF7,
```

```
0x11, 0x22, 0x33, 0x44,
```

```

0xaa, 0xaa,
0x10, 0x11, 0x12, 0x13, 0x14, 0x15, 0x16, 0x17, 0x18, 0x19, 0x1A, 0x1B, 0x1C, 0x1D, 0x1E, 0x1F,
0x20, 0x21, 0x22, 0x23, 0x24, 0x25, 0x26, 0x27, 0x28, 0x29, 0x2A, 0x2B, 0x2C, 0x2D, 0x2E, 0x2F,
0x30, 0x31, 0x32, 0x33, 0x34, 0x35, 0x36, 0x37, 0x38, 0x39, 0x3A, 0x3B, 0x3C, 0x3D, 0x3E, 0x3F,
0x40, 0x41, 0x42, 0x43, 0x44, 0x45, 0x46, 0x47, 0x48, 0x49, 0x4A, 0x4B, 0x4C, 0x4D, 0x4E, 0x4F,
0xaa, 0xaa,
0x60, 0x61, 0x62, 0x63, 0x64, 0x65, 0x66, 0x67, 0x68, 0x69, 0x6A, 0x6B, 0x6C, 0x6D, 0x6E, 0x6F,
0x70, 0x71, 0x72, 0x73, 0x74, 0x75, 0x76, 0x77, 0x78, 0x79, 0x7A, 0x7B, 0x7C, 0x7D, 0x7E, 0x7F,
0x80, 0x81, 0x82, 0x83, 0x84, 0x85, 0x86, 0x87, 0x88, 0x89, 0x8A, 0x8B, 0x8C, 0x8D, 0x8E, 0x8F,
0xaa, 0xaa,
0xA0, 0xA1, 0xA2, 0xA3, 0xA4, 0xA5, 0xA6, 0xA7, 0xA8, 0xA9, 0xAA, 0xAB, 0xAC, 0xAD, 0xAE, 0xAF,
0xB0, 0xB1, 0xB2, 0xB3, 0xB4, 0xB5, 0xB6, 0xB7, 0xB8, 0xB9, 0xBA, 0xBB, 0xBC, 0xBD, 0xBE, 0xBF,
0xC0, 0xC1, 0xC2, 0xC3, 0xC4, 0xC5, 0xC6, 0xC7, 0xC8, 0xC9, 0xCA, 0xCB, 0xCC, 0xCD, 0xCE, 0xCF,

```

```

0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,0xaa,
0xE0,0xE1,0xE2,0xE3,0xE4,0xE5,0xE6,0xE7,0xE8,0xE9,0xEA,0xEB,0xEC,0xED,0xEE,0xEF,
0xAA, 0xBB, 0xCC
ENDFIELD (APDU_MSG_DL_827, 255)

```

```

/*
* Layer 2 Frame with 11 Bytes, 88 Bits, 0x58 bits
* PD=0x06, msg type=0x038, flags: c/r=0 first=!1 last= !1 ->0x30, len=0x07
*/

```

```

FIELD (APDU_MSG_DL_828a)
0x58,0x00,
0x00,0x00,
0x06, 0x38, 0x30, 0x07,
0xAA, 0xBB, 0xCC, 0xDD,
0x66, 0x77, 0x88
ENDFIELD (APDU_MSG_DL_828a, 15)

```

```

/*
* Layer 2 Frame with 11 Bytes, 88 Bits, 0x58 bits ( same like APDU_MSG_DL_828b with diff. c/r )
* PD=0x06, msg type=0x038, flags: c/r=0 first=!1 last= !0 ->0x20, len=0x07
*/

```

```

FIELD (APDU_MSG_DL_828b)
0x58,0x00,
0x00,0x00,
0x06, 0x38, 0x30, 0x07,
0xAA, 0xBB, 0xCC, 0xDD,
0x66, 0x77, 0x99
ENDFIELD (APDU_MSG_DL_828b, 15)

```

```

FIELD (IMM_ASS_152)
0xB0, 0x00, 0x18, 0x00,
0x00, 0x00, 0x00,
0x06, 0x3F, 0x00, 0x2C, 0x40, 0x73, 0x91, 0x21,
0x06, 0x1B, 0x01, 0x16, 0x2B, 0x2B, 0x2B, 0x2B,
0x2B, 0x2B, 0x2B, 0x2B, 0x2B, 0x2B
ENDFIELD (IMM_ASS_152, 29)

```

```

FIELD (IMM_ASS_152_SPARE_900)
0xB0, 0x00, 0x18, 0x00,
0x00, 0x00, 0x00,
0x06, 0x3F, 0x8C, 0x2C, 0x4C, 0x73, 0x91, 0x21,
0x06, 0xDB, 0x00, 0x29, 0xAB, 0xAB, 0xAB, 0xAB,
0xAB, 0xAB, 0xAB, 0xAB, 0xAB, 0xAB
ENDFIELD (IMM_ASS_152_SPARE_900,29)

```

```

FIELD (IMM_ASS_152_SPARE_1900_CONQUEST_8479)
0xB0, 0x00, 0x18, 0x00,
0x00, 0x00, 0x00,
0x06, 0x3F, 0x84, 0x20, 0xA6, 0x4E, 0x91, 0x21,
0x06, 0x40, 0x00, 0x29, 0xAB, 0xAB, 0xAB, 0xAB,
0xAB, 0xAB, 0xAB, 0xAB, 0xAB, 0xAB

```

ENDFIELD (IMM\_ASS\_152\_SPARE\_1900\_CONQUEST\_8479,29)

/\*

## 2.1 Declarations

\*/

DECLARATION (A\_MPH\_NCELL\_1F)  
DECLARATION (A\_MAC\_IA)  
DECLARATION (A\_MPH\_NCELL\_1E)  
DECLARATION (S\_COD\_PROP\_9\_ALC)  
DECLARATION (S\_COD\_PROP\_8\_ALC)  
DECLARATION (S\_COD\_PROP\_7\_ALC)  
DECLARATION (S\_COD\_PROP\_6\_ALC)  
DECLARATION (S\_COD\_PROP\_5\_ER)  
DECLARATION (S\_COD\_PROP\_4\_ER)  
DECLARATION (SA\_COD\_PROP\_M2\_ALC)  
DECLARATION (SA\_COD\_PROP\_M4\_ALC)  
DECLARATION (SA\_COD\_PROP\_M4\_ER)  
DECLARATION (SA\_COD\_PROP\_M3\_ER)  
DECLARATION (SA\_COD\_PROP\_M2\_ALC\_ALR)  
DECLARATION (SA\_COD\_PROP\_M4\_ALC\_ALR)  
DECLARATION (SA\_COD\_PROP\_M4\_ER\_ALR)  
DECLARATION (SA\_COD\_PROP\_M3\_ER\_ALR)  
DECLARATION (S\_MULTIRATE\_CONF\_ER\_AHS)  
DECLARATION (S\_MULTIRATE\_CONF\_ER\_AFS)  
DECLARATION (S\_MULTIRATE\_CONF\_ALC\_AHS)  
DECLARATION (S\_MULTIRATE\_CONF\_ALC\_AFS)  
DECLARATION (S\_AMR\_CONF\_5\_ER\_AFS)  
DECLARATION (S\_AMR\_CONF\_6\_ALC\_AFS)  
DECLARATION (S\_AMR\_CONF\_6\_ALC\_AFS2)  
DECLARATION (S\_AMR\_CONF\_7\_ER\_AHS)  
DECLARATION (S\_AMR\_CONF\_8\_ALC\_AHS)  
DECLARATION (CHANNEL\_DESC\_FACCH3\_HALF)  
DECLARATION (PRR\_CHANNEL\_TYPE\_HALF)  
DECLARATION (PRR\_CHANNEL\_TYPE\_HOP\_HALF)  
DECLARATION (PRR\_CHANNEL\_TYPE\_HOP\_HALF2)  
DECLARATION (CHANNEL\_DESC\_FACCH4\_HALF)  
DECLARATION (MOBILE\_ALLOCATION\_1800\_FAIL)  
DECLARATION (A\_RXLEVEL\_20)  
DECLARATION (MOB\_ALLOC\_ONE\_CHAN)  
DECLARATION (MOBILE\_ALLOCATION\_ONE\_CHAN)  
DECLARATION (CHANNEL\_DESC\_SDCCH2\_1900\_1)  
DECLARATION (PRR\_CHANNEL\_TYPE\_3\_1900)  
DECLARATION(A\_BCCH\_INFO\_DG\_629a)  
DECLARATION(S\_BCCH\_INFO\_DG\_629a)  
DECLARATION (S\_NCELL\_63\_8\_1)  
DECLARATION (S\_NCELL\_63\_3\_7)  
DECLARATION (S\_NCELL\_61\_6\_5)  
DECLARATION (S\_NCELL\_56\_7\_3)  
DECLARATION (S\_NCELL\_36\_5\_1)

DECLARATION (S\_NCELL\_32\_1\_3)  
DECLARATION (S\_NCELL\_63\_3\_9)  
DECLARATION (S\_NCELL\_63\_6\_15)  
DECLARATION (S\_NCELL\_61\_5\_11)  
DECLARATION (S\_NCELL\_45\_1\_9)  
DECLARATION (S\_NCELL\_45\_1\_913)  
DECLARATION (S\_NCELL\_35\_4\_13)  
DECLARATION (A\_ARFCN\_NCELLS\_1900)  
DECLARATION (A\_RXLEV\_NCELLS\_1900)  
DECLARATION (A\_BSIC\_NCELLS\_1900)  
DECLARATION (AS\_NCELLS\_3\_SACCH\_1900)  
DECLARATION (S\_NCELLS\_6)  
DECLARATION (MEAS\_RESULT\_NCELL\_1900)  
DECLARATION (A\_MPH\_NCELL\_1900)  
DECLARATION (A\_MPH\_NCELL\_1900a)  
DECLARATION (BCCH\_FREQ\_LIST\_1900)  
DECLARATION (BCCH\_FREQ\_LIST\_1900\_bis)  
DECLARATION (MOB\_ALLOC\_1800\_FAIL)  
DECLARATION (MOB\_CLASS\_1800)  
DECLARATION (MOB\_CLASS\_1900)  
DECLARATION (PRR\_CHANNEL\_TYPE\_7\_1800)  
DECLARATION (PRR\_CHANNEL\_TYPE\_6\_1800)  
DECLARATION (PRR\_HOPPING\_2\_1800)  
DECLARATION (PRR\_CHANNEL\_TYPE\_3\_CB\_1800)  
DECLARATION (PRR\_CHANNEL\_TYPE\_3\_1800)  
DECLARATION (CHANNEL\_DESC\_SDCCH2\_1800\_1)  
DECLARATION (CELL\_DESC\_1)  
DECLARATION (POW\_CMD\_7)  
DECLARATION (MOBILE\_ALLOCATION\_1800)  
DECLARATION (MOB\_ALLOC\_1800)  
DECLARATION (CHAN\_DESC\_13\_1)  
DECLARATION (CHAN\_LIST\_13\_1)  
DECLARATION (FREQ\_LIST\_AFTER\_13\_1)  
DECLARATION (CELL\_DESC\_BAD\_BCCH)  
DECLARATION (CLASS\_MS)  
DECLARATION (CLASS\_MS\_DUALBAND)  
DECLARATION (CLASS\_MS\_DG\_081C)  
DECLARATION (CLASS\_MS\_1800)  
DECLARATION (CIPHERING\_2)  
DECLARATION (CIPHERING\_3)  
DECLARATION (FRAME\_NUMBER\_1)  
DECLARATION (HO\_PARAM\_0)  
DECLARATION (HO\_PARAM\_1)  
DECLARATION (KCV\_EMPTY)  
DECLARATION (KCV\_00112233)  
DECLARATION (KCV\_12345678)  
DECLARATION (MM\_INFO\_1)  
DECLARATION (MM\_INFO\_2)  
DECLARATION (MM\_INFO\_3)  
DECLARATION (MM\_INFO\_15)  
DECLARATION (CHANNEL\_DESC\_SDCCH2\_1800)  
DECLARATION (MM\_INFO\_4\_DG\_629)  
DECLARATION (MOBILE\_ID\_IMSI\_HPLMN)  
DECLARATION (MOBILE\_ID\_NOT\_SET)  
DECLARATION (MOBILE\_ID\_TMSI)  
DECLARATION (MOBILE\_ID\_IMSI\_TEST)  
DECLARATION (NO\_CIPHERING)  
DECLARATION (NO\_STARTING\_TIME)

DECLARATION (PAGING\_NORMAL)  
DECLARATION (PLMN\_ID\_EMPTY)  
DECLARATION (PLMN\_ID\_123)  
DECLARATION (PLMN\_ID\_123X)  
DECLARATION (PLMN\_ID\_TEST)  
DECLARATION (PLMN\_ID\_123\_V)  
DECLARATION (PLMN\_ID\_122)  
DECLARATION (PRR\_CHANNEL\_TYPE\_0)  
DECLARATION (PRR\_CHANNEL\_TYPE\_2)  
DECLARATION (PRR\_CHANNEL\_TYPE\_3)  
DECLARATION (PRR\_CHANNEL\_TYPE\_3\_CB)  
DECLARATION (PRR\_CHANNEL\_TYPE\_4)  
DECLARATION (PRR\_CHANNEL\_TYPE\_5)  
DECLARATION (PRR\_CHANNEL\_TYPE\_6)  
DECLARATION (PRR\_CHANNEL\_TYPE\_7)  
DECLARATION (PRR\_CHANNEL\_TYPE\_8)  
DECLARATION (PRR\_CHANNEL\_TYPE\_9)  
DECLARATION (PRR\_CHANNEL\_TYPE\_10)  
DECLARATION (PRR\_CHANNEL\_TYPE\_11)  
DECLARATION (PRR\_CHANNEL\_TYPE\_EGSM)  
DECLARATION (PRR\_TR\_PARA\_2)  
DECLARATION (PRR\_TR\_PARA\_2B)  
DECLARATION (PRR\_TR\_PARA\_3)  
DECLARATION (PRR\_TR\_PARA\_13)  
DECLARATION (PRR\_TR\_PARA\_HO)  
DECLARATION (PRR\_TR\_PARA\_ASY\_HO)  
DECLARATION (CELL\_ALLOC\_1024)  
DECLARATION (PRR\_TR\_PARA\_AMR)  
DECLARATION (PRR\_TR\_PARA\_AMR\_1)  
DECLARATION (SEND\_MODE\_2\_BURSTS)  
DECLARATION (SEND\_MODE\_2\_BURSTS2)  
DECLARATION (SEND\_MODE\_8\_BURSTS)  
DECLARATION (SEND\_MODE\_NO\_BURSTS)  
DECLARATION (STARTING\_TIME\_1)  
DECLARATION (OP\_MODE\_EMPTY)  
DECLARATION (OP\_MODE\_EMPTY\_NO\_SERV)  
DECLARATION (OP\_MODE\_NORMAL)  
DECLARATION (OP\_MODE\_NORMAL\_NO\_SERV)  
DECLARATION (OP\_MODE\_TEST\_SIM)  
DECLARATION (OP\_MODE\_TEST\_SIM\_NO\_SERV)  
DECLARATION (OP\_MODE\_TEST\_SIM\_LIM\_SERV)  
DECLARATION (OP\_MODE\_NET\_SRCH\_MMI\_NO\_SRV)  
DECLARATION (OP\_MODE\_NET\_SRCH\_MMI\_LIM\_SRV)  
DECLARATION (OP\_MODE\_NET\_SRCH\_MMI)  
DECLARATION (OP\_MODE\_NO\_SIM\_LIM\_SERV)  
DECLARATION (CELL\_OPT\_BCCH\_1)  
DECLARATION (CELL\_SELECT\_1)  
DECLARATION (CELL\_SELECT\_2)  
DECLARATION (CELL\_SELECT\_3)  
DECLARATION (CHANNEL\_DESC\_SDCCH)  
DECLARATION (CHANNEL\_DESC\_SDCCH2)  
DECLARATION (CHANNEL\_DESC\_BAD)  
DECLARATION (CHANNEL\_DESC\_FACCH2)  
DECLARATION (CHANNEL\_DESC\_HALFRATE)  
DECLARATION (CHANNEL\_DESC\_FACCH3)  
DECLARATION (CHANNEL\_DESC\_FACCH4)  
DECLARATION (CHANNEL\_NEEDED\_1)  
DECLARATION (CIPH\_MODE\_ON)

```
DECLARATION (CIPH_MODE_OFF)
DECLARATION (CIPH_RESP_NO_IMEI)
DECLARATION (CIPH_RESP_WITH_IMEI)
DECLARATION (CKSN_RESERVED)
DECLARATION (CTRL_CHAN_DESC_1)
DECLARATION (FREQ_CHAN_SEQ_1)
DECLARATION (LOC_AREA_IDENT_122_36_2147)
DECLARATION (LOC_AREA_IDENT_122_35_2147)
DECLARATION (LOC_AREA_IDENT_122_34_2147)
DECLARATION (LOC_AREA_IDENT_122_2147)
DECLARATION (LOC_AREA_IDENT_122_2147_V)
DECLARATION (LOC_AREA_IDENT_123_2147)
DECLARATION (LOC_AREA_IDENT_123_2147_V)
DECLARATION (LOC_AREA_IDENT_123_2148)
DECLARATION (MEAS_RESULT_NCELL_0)
DECLARATION (MEAS_RESULT_NCELL_3)
DECLARATION (MEAS_RESULT_NCELL_3_DG_186)
DECLARATION (MEAS_RESULT_NCELL_6_FTA)
DECLARATION (MEAS_RESULT_NCELL_FTA_B)
DECLARATION (MEAS_RESULT_NCELL_FTA_C)
DECLARATION (MEAS_RESULT_NCELL_FTA_D)
DECLARATION (MEAS_RESULT_NCELL_FTA_E)
DECLARATION (MOB_CLASS2_NORMAL)
DECLARATION (MOB_CLASS2_900)
DECLARATION (MOB_CLASS2_EGSM)
DECLARATION (MOB_CLASS2_212)
DECLARATION (MOBILE_ALLOCATION_1)
DECLARATION (MOBILE_ALLOCATION_2)
DECLARATION (MOBILE_ALLOCATION_3)
DECLARATION (MOBILE_ALLOCATION_4)
DECLARATION (MOBILE_ALLOCATION_EGSM)
DECLARATION (MOBILE_IDENTITY_TMSI)
DECLARATION (MOBILE_IDENTITY_IMEISV)
DECLARATION (MOBILE_IDENTITY_IMSI2)
DECLARATION (MOBILE_IDENTITY_IMSI_HPLMN)
DECLARATION (MOBILE_IDENTITY_IMSI_TEST)
DECLARATION (POW_05_HO)
DECLARATION (POWER_COMMAND_05)
DECLARATION (RACH_CTRL_1)
DECLARATION (RACH_CTRL_2)
DECLARATION (REQUEST_REFERENCE_1)
DECLARATION (REQUEST_REFERENCE_2)
DECLARATION (REQUEST_REFERENCE_3)
DECLARATION (START_TIME_1)
DECLARATION (SYNCH_IND_0)
DECLARATION (SYNCH_IND_1)
DECLARATION (SYNCH_IND_2)
DECLARATION (TIMING_ADVANCE_10)
DECLARATION (TIMING_ADVANCE_27)
/* new declarations */
/* using old names + a prefix */
/* S_ to denote the new element as a struct */
/* A_ to denote the new element as an array */
/* SA_ to denote the new element as an array of structs */
DECLARATION (S_BCCH_INFO_EMPTY)
DECLARATION (A_BCCH_INFO_EMPTY)
DECLARATION (S_BCCH_INFO_CLEAR)
DECLARATION (S_BCCH_INFO_32)
```

DECLARATION (A\_BCCH\_INFO\_32)  
DECLARATION (S\_BCCH\_INFO\_NO\_24)  
DECLARATION (S\_BCCH\_INFO\_24)  
DECLARATION (A\_BCCH\_INFO\_24)  
DECLARATION (S\_BCCH\_INFO\_DG\_081)  
DECLARATION (S\_BCCH\_INFO\_DG\_091)  
DECLARATION (S\_BCCH\_INFO\_DG\_629)  
DECLARATION (A\_BCCH\_INFO\_DG\_081)  
DECLARATION (A\_BCCH\_INFO\_DG\_629)  
DECLARATION (S\_BCCH\_INFO\_NCELL\_DESC\_1)  
DECLARATION (A\_BCCH\_INFO\_NCELL\_DESC\_1)  
DECLARATION (S\_SI3\_REST\_EMPTY)  
DECLARATION (S\_SI4\_REST\_EMPTY)  
DECLARATION (S\_SI3\_REST\_LOW)  
DECLARATION (S\_SI4\_REST\_LOW)  
DECLARATION (S\_SI34\_OPT\_SEL\_PAR)  
DECLARATION (A\_LAC\_LIST1)  
DECLARATION (A\_LAC\_LIST1A)  
DECLARATION (A\_LAC\_LIST5)  
DECLARATION (A\_MPH\_NCELL\_1)  
DECLARATION (A\_MPH\_NCELL\_1\_V)  
DECLARATION (A\_MPH\_NCELL\_1B)  
DECLARATION (A\_MPH\_NCELL\_1C)  
DECLARATION (A\_MPH\_NCELL\_1D)  
DECLARATION (A\_MPH\_NCELL\_1D\_EMO)  
DECLARATION (A\_MPH\_NCELL\_2)  
DECLARATION (A\_MPH\_NCELL\_8)  
DECLARATION (S\_MS\_ID\_IMSI\_HPLMN\_TMSI)  
DECLARATION (S\_MS\_ID\_NO\_IMSI\_NO\_TMSI)  
DECLARATION (S\_MS\_ID\_IMSI\_HPLMN\_NO\_TMSI)  
DECLARATION (S\_MS\_ID\_IMSI\_TEST\_TMSI)  
DECLARATION (A\_IMSI\_CONTENT)  
DECLARATION (S\_BCCH\_INFO\_1\_PLUS\_43\_V)  
DECLARATION (A\_BCCH\_INFO\_1\_PLUS\_43\_V)  
DECLARATION (S\_PLMN\_122\_FOUND)  
DECLARATION (S\_PLMN\_EMPTY)  
DECLARATION (AS\_PLMN)  
DECLARATION (A\_RXLEVEL\_22)  
DECLARATION (S\_CHM\_DG\_629)  
DECLARATION (A\_MPH\_NCELL\_528\_31)  
DECLARATION (S\_NCELLS\_3)  
DECLARATION (S\_NCELLS\_667\_0)  
DECLARATION (S\_NCELLS\_4)

DECLARATION (A\_ARFCN\_NCELLS\_3)  
DECLARATION (A\_RX\_NCELLS\_3)  
DECLARATION (A\_BSIC\_NCELLS\_3)  
DECLARATION (A\_TIME\_NCELLS\_3)  
DECLARATION (A\_FRAME\_NCELLS\_3)

DECLARATION (A\_ARFCN\_NCELLS\_667\_0)  
DECLARATION (A\_RX\_NCELLS\_667\_0)  
DECLARATION (A\_BSIC\_NCELLS\_667\_0)  
DECLARATION (A\_TIME\_NCELLS\_667\_0)  
DECLARATION (A\_FRAME\_NCELLS\_667\_0)

DECLARATION (A\_ARFCN\_NCELLS\_6\_FTA)  
DECLARATION (A\_RX\_NCELLS\_6\_FTA)  
DECLARATION (A\_BSIC\_NCELLS\_6\_FTA)  
DECLARATION (A\_TIME\_NCELLS\_6\_FTA)  
DECLARATION (S\_IA\_REST\_1)  
DECLARATION (S\_IA\_REST\_OCT\_PAR)  
DECLARATION (S\_IA\_FREQ\_PAR)  
DECLARATION (AS\_NCELLS\_3\_SACCH)  
DECLARATION (AS\_NCELLS\_6\_SACCH)  
DECLARATION (A\_MPH\_NCELL\_DG\_186)  
DECLARATION (AS\_NCELLS\_3\_SACCH\_DG\_186)  
DECLARATION (A\_MPH\_NCELL\_5TER\_FTA)  
DECLARATION (A\_MPH\_NCELL\_5TER\_5\_FTA)  
DECLARATION (S\_NCELLS\_6\_FTA)  
DECLARATION (A\_MPH\_NCELL\_5\_FTA)  
DECLARATION (A\_MPH\_NCELL\_5\_FTA\_A)  
DECLARATION (A\_MPH\_NCELL\_5\_5BIS\_FTA\_A)  
DECLARATION (A\_MPH\_NCELL\_5\_FTA\_B)  
DECLARATION (A\_MPH\_NCELL\_5\_5BIS\_FTA\_B)  
DECLARATION (A\_MPH\_NCELL\_5\_FTA\_C)  
DECLARATION (A\_MPH\_NCELL\_5\_5TER\_FTA\_C)  
DECLARATION (A\_MPH\_NCELL\_5\_FTA\_D)  
DECLARATION (A\_MPH\_NCELL\_5\_5TER\_FTA\_D)  
DECLARATION (A\_MPH\_NCELL\_5\_FTA\_E)  
DECLARATION (A\_MPH\_NCELL\_5\_5TER\_FTA\_E)  
DECLARATION (S\_MPH\_NCELLS\_FTA\_B)  
DECLARATION (S\_MPH\_NCELLS\_FTA\_D)  
DECLARATION (S\_MPH\_NCELLS\_FTA\_E)  
DECLARATION (A\_ARFCN\_MPH\_NCELLS\_FTA\_B)  
DECLARATION (A\_RX\_MPH\_NCELLS\_FTA\_B)  
DECLARATION (A\_BSIC\_MPH\_NCELLS\_FTA\_B)  
DECLARATION (A\_TIME\_MPH\_NCELLS\_FTA\_B)  
DECLARATION (AS\_NCELLS\_FTA\_B)  
DECLARATION (S\_NCELL\_63\_2\_9)  
DECLARATION (S\_NCELL\_63\_0\_15)  
DECLARATION (S\_NCELL\_63\_3\_13)  
DECLARATION (S\_NCELL\_63\_6\_9)  
DECLARATION (S\_NCELL\_63\_2\_15)  
DECLARATION (S\_NCELL\_63\_4\_9)  
DECLARATION (S\_NCELL\_63\_1\_15)  
DECLARATION (S\_NCELL\_63\_2\_13)  
DECLARATION (S\_NCELL\_63\_7\_9)  
DECLARATION (S\_NCELL\_60\_5\_13)  
DECLARATION (S\_NCELL\_60\_1\_15)  
DECLARATION (S\_NCELL\_59\_4\_13)  
DECLARATION (S\_NCELL\_57\_1\_11)  
DECLARATION (S\_NCELL\_57\_0\_11)  
DECLARATION (S\_NCELL\_57\_3\_11)  
DECLARATION (S\_NCELL\_55\_1\_11)  
DECLARATION (S\_NCELL\_51\_0\_11)  
DECLARATION (S\_NCELL\_42\_1\_5)  
DECLARATION (S\_NCELL\_42\_0\_5)  
DECLARATION (S\_NCELL\_38\_6\_9)  
DECLARATION (S\_NCELL\_35\_4\_9)  
DECLARATION (S\_NCELL\_34\_5\_9)  
DECLARATION (S\_NCELL\_32\_5\_15)  
DECLARATION (S\_NCELL\_32\_0\_6)  
DECLARATION (S\_NCELL\_31\_3\_15)

DECLARATION (S\_NCELL\_28\_1\_13)  
DECLARATION (S\_NCELL\_28\_3\_13)  
DECLARATION (S\_NCELL\_0\_0\_0)  
DECLARATION (S\_MPH\_NCELLS\_FTA\_C)  
DECLARATION (A\_ARFCN\_MPH\_NCELLS\_FTA\_C)  
DECLARATION (A\_BSIC\_MPH\_NCELLS\_FTA\_C)  
DECLARATION (A\_ARFCN\_MPH\_NCELLS\_FTA\_D)  
DECLARATION (A\_RX\_MPH\_NCELLS\_FTA\_D)  
DECLARATION (A\_BSIC\_MPH\_NCELLS\_FTA\_D)  
DECLARATION (A\_ARFCN\_MPH\_NCELLS\_FTA\_E)  
DECLARATION (A\_RX\_MPH\_NCELLS\_FTA\_E)  
DECLARATION (A\_BSIC\_MPH\_NCELLS\_FTA\_E)  
DECLARATION (AS\_NCELLS\_FTA\_C)  
DECLARATION (AS\_NCELLS\_FTA\_D)  
DECLARATION (AS\_NCELLS\_FTA\_E)  
DECLARATION (S\_NCELLS\_0)  
DECLARATION (A\_ARFCN\_NCELLS\_0)  
DECLARATION (A\_RX\_NCELLS\_0)  
DECLARATION (A\_BSIC\_NCELLS\_0)  
DECLARATION (A\_ARFCN\_NCELLS\_4)  
DECLARATION (A\_RX\_NCELLS\_4)  
DECLARATION (A\_BSIC\_NCELLS\_4)  
DECLARATION (S\_CHM\_SPEECH\_FULL)  
DECLARATION (S\_CHM\_SPEECH\_AMR\_FULL)  
DECLARATION (S\_BCCH\_INFO\_DG\_212)  
DECLARATION (S\_BCCH\_INFO\_DG\_213)  
DECLARATION (A\_BCCH\_INFO\_DG\_212)  
DECLARATION (A\_BCCH\_INFO\_DG\_213)  
DECLARATION (A\_FREQ\_LIST\_AFTER\_2)  
DECLARATION (S\_FREQ\_LIST\_AFTER\_2)  
DECLARATION (A\_FREQ\_LIST\_BEFORE\_1)  
DECLARATION (S\_FREQ\_LIST\_BEFORE\_1)  
DECLARATION (A\_MPH\_NCELL\_EMPTY)  
DECLARATION (A\_IMSI\_CONTENT\_TEST\_TMSI)  
DECLARATION (A\_RXLEVEL\_21)  
DECLARATION (AS\_PLMN\_123\_32\_FOUND)  
DECLARATION (S\_PLMN\_123\_32\_FOUND)  
DECLARATION (SA\_COD\_PROP\_M1)  
DECLARATION (SA\_COD\_PROP\_M2)  
DECLARATION (SA\_COD\_PROP\_M3)  
DECLARATION (SA\_COD\_PROP\_M4)  
DECLARATION (SA\_COD\_PROP\_1)  
DECLARATION (SA\_COD\_PROP\_2)  
DECLARATION (SA\_COD\_PROP\_3)  
DECLARATION (SA\_COD\_PROP\_4)  
DECLARATION (SA\_COD\_PROP\_702D)  
DECLARATION (SA\_COD\_PROP\_702E)  
DECLARATION (S\_MULTIRATE\_CONF\_1)  
DECLARATION (S\_MULTIRATE\_CONF\_2)  
DECLARATION (S\_MULTIRATE\_CONF\_3)  
DECLARATION (S\_MULTIRATE\_CONF\_4)  
DECLARATION (S\_MULTIRATE\_CONF\_4\_ICMI)  
DECLARATION (S\_MULTIRATE\_CONF\_4\_702A)  
DECLARATION (S\_MULTIRATE\_CONF\_4\_702B)  
DECLARATION (S\_MULTIRATE\_CONF\_4\_702C)  
DECLARATION (S\_MULTIRATE\_CONF\_4\_702D)  
DECLARATION (S\_MULTIRATE\_CONF\_4\_702E)  
DECLARATION (S\_AMR\_CONF\_0)

DECLARATION (S\_AMR\_CONF\_1)  
DECLARATION (S\_AMR\_CONF\_2)  
DECLARATION (S\_AMR\_CONF\_3)  
DECLARATION (S\_AMR\_CONF\_4)  
DECLARATION (S\_AMR\_CONF\_4\_ICMI)  
DECLARATION (S\_COD\_PROP\_0)  
DECLARATION (S\_COD\_PROP\_1)  
DECLARATION (S\_COD\_PROP\_2)  
DECLARATION (S\_COD\_PROP\_3)  
DECLARATION (A\_ARFCN\_527\_601)

/\* DL/26.09.02: EOTD \*/  
/\* DECLARATIONS: arrays \*/  
DECLARATION (EOTD\_CROSSCOR\_12)  
/\* DECLARATIONS: structs – primitives \*/  
DECLARATION (ARFCN\_14\_EOTD)  
DECLARATION (ARFCN\_124\_EOTD)  
DECLARATION (ARFCN\_1\_EOTD)  
DECLARATION (ARFCN\_32\_EOTD)  
DECLARATION (ARFCN\_26\_EOTD)  
DECLARATION (ARFCN\_64\_EOTD)  
DECLARATION (EOTD\_SC\_RES\_OK)  
DECLARATION (EOTD\_SC\_RES1\_OK)  
DECLARATION (EOTD\_NC\_RES\_14)  
DECLARATION (EOTD\_NC\_RES\_124)  
DECLARATION (EOTD\_NC\_RES\_1)  
DECLARATION (EOTD\_NC\_RES\_32)  
DECLARATION (EOTD\_NC\_RES\_26)  
DECLARATION (EOTD\_NC\_RES\_64)  
/\* DECLARATIONS: struct arrays \*/  
DECLARATION (NCELL\_EOTD\_6)  
DECLARATION (EOTD\_RESULT\_6)

DECLARATION (S\_PLMN\_SEARCH\_RES)  
DECLARATION (S\_PLMN\_SEARCH\_RES\_123\_32)  
DECLARATION (S\_PLMN\_SEARCH\_RES\_123\_33)  
DECLARATION (S\_PLMN\_SEARCH\_RES\_VOID)  
DECLARATION (A\_SEARCH\_RES\_MCC\_123)  
DECLARATION (A\_SEARCH\_RES\_MNC\_32)  
DECLARATION (A\_SEARCH\_RES\_MNC\_33)  
DECLARATION (A\_SEARCH\_RES\_RXLEV)

DECLARATION (A\_ARFCN\_EMO\_000)  
DECLARATION (A\_ARFCN\_EMO\_001)  
DECLARATION (A\_ARFCN\_EMO\_002)  
DECLARATION (A\_ARFCN\_EMO\_003)  
DECLARATION (S\_EMO\_MEAS\_RES\_000)  
DECLARATION (S\_EMO\_MEAS\_RES\_001)  
DECLARATION (S\_EMO\_MEAS\_RES\_002)  
DECLARATION (S\_EMO\_MEAS\_RES\_003)  
DECLARATION (S\_EMO\_MEAS\_RES\_000\_000)  
DECLARATION (S\_EMO\_MEAS\_RES\_001\_000)  
DECLARATION (S\_EMO\_MEAS\_RES\_002\_000)  
DECLARATION (S\_EMO\_MEAS\_RES\_002\_001)  
DECLARATION (S\_EMO\_MEAS\_RES\_000\_001)  
DECLARATION (S\_EMO\_MEAS\_RES\_000\_002)  
DECLARATION (S\_EMO\_MEAS\_RES\_000\_003)

DECLARATION (S\_EMO\_MEAS\_RES\_003\_000)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_001)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_002)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_003)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_004)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_005)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_006)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_007)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_008)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_009)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_010)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_011)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_012)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_013)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_014)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_015)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_016)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_017)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_018)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_019)  
DECLARATION (S\_EMO\_MEAS\_RES\_003\_020)  
DECLARATION (S\_EXT\_MEAS\_RES\_000)  
DECLARATION (S\_EXT\_MEAS\_RES\_001)  
DECLARATION (S\_EXT\_MEAS\_RES\_002)  
DECLARATION (S\_EXT\_MEAS\_RES\_003)  
DECLARATION (A\_EXT\_MEAS\_RES\_000\_LEV)  
DECLARATION (A\_EXT\_MEAS\_RES\_001\_LEV)  
DECLARATION (A\_EXT\_MEAS\_RES\_002\_LEV)  
DECLARATION (A\_EXT\_MEAS\_RES\_003\_LEV)  
/\*DECLARATION(EXT\_MEAS\_FREQ\_000)\*/

/\*

## 2.2 Basic Types

\*/

SHORT	ACC_CTRL_CLASS_0000	0x0000	
SHORT	ACC_CTRL_CLASS_0008	0x0008	
SHORT	ACC_CTRL_CLASS_4000	0x4000	
SHORT	ACC_0005	0x0040	
BYTE	ALGO_0	0	
SHORT	ARFCN_3	3	
SHORT	ARFCN_24	24	
SHORT	ARFCN_26	26	
SHORT	ARFCN_32	32	
SHORT	ARFCN_64	64	
SHORT	ARFCN_67	67	
SHORT	ARFCN_115	115	
SHORT	ARFCN_124	124	
SHORT	ARFCN_527	527	
SHORT	ARFCN_612	612	
SHORT	ARFCN_811	811	
SHORT	ARFCN_812	812	
SHORT	ARFCN_800	800	
SHORT	ARFCN_DCS832	832	
SHORT	ARFCN_PCS640	640	
SHORT	ARFCN_PCS640MSB	0x8280	
BYTE	ATC_1	1	
BYTE	BA_0	0	
BYTE	BA_1	1	
BYTE	BCC_0_DG_629	0	
BYTE	BCC_5	5	
BYTE	BCC_6	6	
BYTE	BCCH_ARFCN_CELL_DESC_HI		0
BYTE	BCCH_ARFCN_CELL_DESC_LO		0x20
BYTE	BCCH_ARFCN_CELL_DESC_HI_BAD		3
BYTE	BCCH_ARFCN_CELL_DESC_LO_BAD		0x20
BYTE	BS_AG_BLKs_RES_0	0x00	
BYTE	BS_AG_BLKs_RES_5	0x05	
BYTE	BND_VAL_DG_629	0x00	
BYTE	BS_PA_MFRMS_2	0x02	
BYTE	BS_PA_MFRMS_3	0x03	
BYTE	BS_PA_MFRMS_7	0x07	
BYTE	BSIC_0	0x00	
BYTE	BSIC_5	0x05	
BYTE	BSIC_6	0x06	
BYTE	BSIC_CELL_DESC_NCC	0x0	
BYTE	BSIC_CELL_DESC_BCC	0x5	
BYTE	CBQ_1	0x01	
SHORT	CELL_IDENT_3748	0x3748	
SHORT	CELL_IDENT_0001	0x0001	
BYTE	CELL_RESEL_OFF_0	0x00	
BYTE	CHANNEL_MODE_SPEECH	1	
BYTE	CHANNEL_MODE_AMR	0x41	
BYTE	CHANNEL_MODE_UNDEF	26	
BYTE	CHANNELS_2	2	

BYTE	CHANNELS_3	3	
BYTE	CHANNELS_5	5	
BYTE	CKSN_6	6	
BYTE	CKSN_7	7	
BYTE	CONST_0	0	
BYTE	CONST_1	1	
BYTE	CONST_0	0	
BYTE	CONST_1	1	
BYTE	CONST_2	2	
BYTE	CONST_3	3	
BYTE	CONST_4	4	
BYTE	CONST_5	5	
BYTE	CONST_6	6	
BYTE	CONST_7	7	
BYTE	CONST_8	8	
BYTE	CONST_9	9	
BYTE	CONST_10	10	
BYTE	CONST_11	11	
BYTE	CONST_12	12	
BYTE	CONST_13	13	
BYTE	CONST_14	14	
BYTE	CONST_15	15	
BYTE	CONST_16	16	
BYTE	CONST_17	17	
BYTE	CONST_18	18	
BYTE	CONST_19	19	
BYTE	CONST_20	20	
BYTE	CONST_21	21	
BYTE	CONST_22	22	
BYTE	CONST_23	23	
BYTE	CONST_24	24	
BYTE	CONST_25	25	
BYTE	CONST_26	26	
BYTE	CONST_27	27	
BYTE	CONST_28	28	
BYTE	CONST_29	29	
BYTE	CONST_30	30	
BYTE	CONST_31	31	
BYTE	CONST_32	32	
BYTE	CONST_46	46	
BYTE	CONST_47	47	
BYTE	CONST_53	53	
BYTE	CONST_75	75	
BYTE	CONST_124	124	
SHORT	CONST_129	129	
SHORT	CONST_130	130	
BYTE	DLT_10	10	
BYTE	DLT_18	18	
BYTE	DLT_23	23	
BYTE	DLT_LIMITED	10	
SHORT	FN_OFFSET_1_SEC	1000	
BYTE	FREQ_CHAN_SEQ_1_LOW_ARFCN		1
BYTE	HANDOV_REF_1	0xA5	
BYTE	HSN_4	0x04	
BYTE	HSN_14	0x14	
BYTE	HSN_0	0x0	
BYTE	HSN_1	0x1	
SHORT	LAC_0001	0x0001	

SHORT	LAC_2147	0x2147
SHORT	LAC_2148	0x2148
BYTE	LEN_2	2
BYTE	LOOP_A	1
BYTE	LOOP_C	6
BYTE	MAIO_0	0
BYTE	MAIO_2	0x02
BYTE	MAIO_12	0x12
BYTE	MAIO_10	0x10
BYTE	MS_TXPWR_MAX_CCH_02	0x02
BYTE	MS_TXPWR_MAX_CCH_0D	0x0D
BYTE	NCL_1	1
BYTE	NCL_0	0
BYTE	NCC_0	0
BYTE	NCC_A_DG_629	0x0A
BYTE	NCC_PERMITTED_1	0x01
BYTE	NCC_PERMITTED_2	0x02
BYTE	NCC_PERMITTED_FF	255
BYTE	NO_PLMN_AVAILABLE	0
BYTE	NO_BURSTS	0
SHORT	NOT_PRESENT_16BIT_MIN1	0xFFFFE
BYTE	ONE_PLMN_AVAILABLE	1
BYTE	TWO_PLMN_AVAILABLE	2
BYTE	THREE_PLMN_AVAILABLE	3
BYTE	FOUR_PLMN_AVAILABLE	4
BYTE	FIVE_PLMN_AVAILABLE	5
BYTE	P2	2
BYTE	PAGE_NORMAL	0
BYTE	PENALTY_31	31
BYTE	PG_0	0
BYTE	PG_12	12
BYTE	PI_1	0x01
BYTE	POI_0	0x00
BYTE	POW_01_DG_629	1
BYTE	POW_05	5
BYTE	POW_05_HO_ATC	1
BYTE	POW_7	7
BYTE	POW_05_HO_POW	5
BYTE	RA_1	0x91
BYTE	RA_2	0x10
BYTE	RA_3	0x0B
BYTE	RF_CLASS_0	0
BYTE	RLT_64	0x0F
BYTE	ROT_0	0
BYTE	ROT_1	1
BYTE	RR_CAUSE_0	0x00
BYTE	RR_CAUSE_1	0x01
BYTE	RR_CAUSE_2	0x02
BYTE	RR_CAUSE_09	0x09
BYTE	RR_CAUSE_0A	0x0A
BYTE	RR_CAUSE_6F	0x6F
BYTE	RR_CAUSE_96	96
BYTE	RX_LEV_0	0x0
BYTE	RX_LEV_10	0x10
BYTE	RX_LEV_20	0x20
BYTE	RX_LEV_35	0x2D
BYTE	RX_LEV_ACCESS_MIN_16	0x16
BYTE	RX_LEV_ACCESS_MIN_22	0x22

BYTE	RX_LEV_ACCESS_MIN_24	0x24
BYTE	RX_QUAL_1	1
BYTE	SS_SCREEN_1	0x01
BYTE	T1	4
BYTE	T2	6
BYTE	T3	8
BYTE	T3212_0_MIN	0x00
BYTE	T3212_30_MIN_DG_629	0x05
BYTE	T3212_36_MIN	0x06
BYTE	TEMP_OFF_0	0x00
BYTE	TAV_1	1
BYTE	TI_0	0x00
BYTE	TIME_ADV_27	27
BYTE	TIME_ADV_10	10
BYTE	TIME_HPLMN_EMPTY	0x00
BYTE	TIME_HPLMN_VALID	0x05
SHORT	TMSI_142	0x0142
BYTE	TN_0	0
BYTE	TN_1	1
BYTE	TN_3	3
BYTE	TN_4	4
BYTE	TSC_2	2
BYTE	TSC_5	5
BYTE	TWO_BURSTS	2
BYTE	EIGHT_BURSTS	8
BYTE	TWO_NCELLS	2
BYTE	TWO_NCELLS_7	7
BYTE	FOUR_NCELLS	4
BYTE	SIX_NCELLS	6
BYTE	NO_NCELLS	0
BYTE	NO_NCELLS_7	7
BYTE	V_START_NOT_PRES	0
BYTE	V_START_PRES	1
BYTE	WAIT_INDICATION_0A	10
BYTE	TLV_LEN_1	0x02
BYTE	TLV_LEN_2	0x04
BYTE	TLV_LEN_3	0x05
BYTE	TLV_LEN_4	0x06
BYTE	MR_VERS	0x00
BYTE	NSCB	0x00
BYTE	ICMI	0x00
BYTE	ICMI_S	0x01
BYTE	ST_MODE_0	0x00
BYTE	ST_MODE_1	0x01
BYTE	ST_MODE_4	0x04
BYTE	SET_AMR_0	0x00
BYTE	SET_AMR_1	0x01
BYTE	SET_AMR_2	0x03
BYTE	SET_AMR_3	0x07
BYTE	SET_AMR_4	0x0F
BYTE	SET_AMR_5	0x1F
BYTE	ACS_0	0x00
BYTE	ACS_1	0x01
BYTE	ACS_2	0x03
BYTE	ACS_3	0x07
BYTE	ACS_4	0x0F
BYTE	V_COD_PROP_NV	0x00
BYTE	V_COD_PROP	0x01

BYTE	C_COD_PROP_1	0x00
BYTE	C_COD_PROP_2	0x01
BYTE	C_COD_PROP_3	0x02
BYTE	C_COD_PROP_4	0x03
<b>LONG</b>	<b>Bitm_L</b>	<b>0x240000</b>
<b>SHORT</b>	<b>Bitm_H</b>	<b>0x0000</b>
<b>BYTE</b>	<b>EM_ENTITY</b>	<b>0x03</b>
/* DL/26.09.02: EOTD */		
BYTE	TAV_EOTD	0x20
BYTE	MFRM_OFFSET_44	0x2C
BYTE	NO_NCELLS_6	0x06
BYTE	SB_TRUE	0x01
SHORT	REQ_ID_0	0x0000
SHORT	ARFCN_14	0x000E
SHORT	ARFCN_1	0x0001
SHORT	OTD_666	0x029A
SHORT	ARFCN_23	0x0017
LONG	TIME_ALIGNMENT_1000	0x000003E8
LONG	RSSI_61440	0x0000F000
LONG	NOM_POS_1000	0x000003E8

/\*

## 2.3 Bit Buffers

\*/

/\*

Let us take the following subset of 16 elements of the set [0..1023] : [13, 71, 122, 191, 251, 321, 402, 476,

521,575, 635, 701, 765, 831, 906, 981]

Encoding is then: 122 on 10 bits,

then 2 and 69 on 9 bits each,

then 204, 75, 66 and 60 on 8 bits each,

then 70, 83, 3, 24, 67, 54, 64 and 70 on 7 bits each,

and finally 9 on 6 bits.

\*/

```
SET_BITBUF("cell_chan_desc", CELL_ALLOC_1024,128)
```

```
0x80, 0x7A, 0x01, 0x11, 0x73, 0x12, 0xD0, 0x8F, 0x23, 0x53, 0x06, 0x62, 0x1B, 0x68,0x11,0x89
```

```
ENDBITBUF
```

/\*

```
SET_BITBUF ("ext_meas_freq", EXT_MEAS_FREQ_000, 128)
```

```
0x18,0x00,0x00,0x00,
```

```
0x00,0x00,0x00,0x00,
```

```
0x00,0x00,0x60,0x00,
```

```
0x00,0x00,0x00,0x01
```

```
ENDBITBUF
```

\*/

/\*

Neighbour cells description for SYTEM INFORMATION 5 for PCS 1900 measurement testing.

BA list = {549,602,665, 686, 810}. Format is range 1024. IE carries only part of the BA.

\*/

```
SET_BITBUF("neigh_cell_desc", BCCH_FREQ_LIST_1900, 16*8)
```

```
0xB2, 0x99, 0xE0, 0xA4, 0x72, 0xE1, 0x00, 0x00,
```

```
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
```

```
ENDBITBUF
```

/\*

Neighbour cells description for SYTEM INFORMATION 5bis for PCS 1900 measurement testing.

BA list = {20,514,530,549,762}. Format is range 1024. IE carries only part of the BA.

\*/

```
SET_BITBUF("neigh_cell_desc", BCCH_FREQ_LIST_1900_bis, 16*8)
```

```
0xB0, 0x14, 0x73, 0xFF, 0x8A, 0xFC, 0x00, 0x00,
```

```
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
```

```
ENDBITBUF
```

/\*

## 2.4 Arrays

\*/

/\*

### 2.4.1 Arrays of Bytes

\*/

```
BEGINARRAY (A_BCCH_INFO_1_PLUS_43_V, 16)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x04,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x0F, 0x00, 0x00
ENDARRAY
BEGINARRAY(CHAN_LIST_13_1, 32)
    0x80,
    17, 240, 7,61,60,
    67,131,125,250,251,
    232,64,129,97,61,
    251,223,188,243,207,
    65,8,16,129,16,
    64,185,206,115,221,
    224
ENDARRAY
BEGINARRAY_PART(A_MAC_IA,1)
    0x14
ENDARRAY
/*
    from the cell channel description the following channels are allocated to the MS:
    521, 575, 635
*/

BEGINARRAY_PART(MOB_ALLOC_1800,2)
    0x00, 0x38
ENDARRAY
BEGINARRAY_PART(MOB_ALLOC_1800_FAIL,2)
    0x00, 0x3C
ENDARRAY
BEGINARRAY_PART(MOB_ALLOC_ONE_CHAN,1)
    0x1
ENDARRAY
BEGINARRAY (A_BCCH_INFO_EMPTY, 16)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BCCH_INFO_32, 16)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BCCH_INFO_24, 16)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BCCH_INFO_DG_081, 16)
    0x08, 0x00, 0x00, 0x04, 0x00, 0x00, 0x00, 0x00,
    0x80, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00, 0x04
ENDARRAY
BEGINARRAY (A_BCCH_INFO_DG_212, 16)
    0x00, 0x00, 0x00, 0x04, 0x00, 0x00, 0x00, 0x04,
    0x00, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00, 0x04
ENDARRAY
BEGINARRAY (A_BCCH_INFO_DG_629, 16)
    0x08, 0x00, 0x00, 0x04, 0x00, 0x00, 0x00, 0x04,
    0x00, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00, 0x04
ENDARRAY
BEGINARRAY (A_BCCH_INFO_DG_629a, 16)
    0x08, 0x00, 0x00, 0x04, 0x00, 0x00, 0x00, 0x00,
```

```
0x00, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00, 0x04
ENDARRAY
BEGINARRAY (A_BCCH_INFO_DG_213, 16)
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x04,
0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BCCH_INFO_NCELL_DESC_1, 16)
0x08, 0x00, 0x00, 0x04, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00, 0x80, 0x00, 0x00, 0x04
ENDARRAY

BEGINARRAY (A_IMSI_CONTENT_TEST_TMSI, 15)
0x00, 0x00, 0x01, 0x00, 0x01, 0x04, 0x07, 0x01,
0x01, 0x04, 0x09, 0x01, 0x02, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_IMSI_CONTENT, 15)
0x01, 0x02, 0x03, 0x03, 0x02, 0x04, 0x07, 0x01,
0x01, 0x04, 0x09, 0x01, 0x02, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_RXLEVEL_22, 12)
0x22, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_RX_NCELLS_0, 6)
0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BSIC_NCELLS_0, 6)
0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_RX_NCELLS_3, 6)
0x20, 0x2A, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_RX_NCELLS_667_0, 6)
0x5, 0x8, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BSIC_NCELLS_3, 6)
0x06, 0x05, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BSIC_NCELLS_667_0, 6)
0x06, 0x05, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_RX_NCELLS_4, 6)
0x2D, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BSIC_NCELLS_4, 6)
0x06, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY(A_RXLEV_NCELLS_1900,6)
63, 63, 61, 56, 36, 0x20
ENDARRAY
BEGINARRAY(A_BSIC_NCELLS_1900,6)
1,7,5,3,1,3
ENDARRAY
BEGINARRAY (A_RX_NCELLS_6_FTA, 6)
63, 63, 63, 61, 45, 35
ENDARRAY
```

```
BEGINARRAY (A_BSIC_NCELLS_6_FTA, 6)
    9, 15, 13, 11, 9, 13
ENDARRAY
BEGIN_LONG_ARRAY (A_TIME_NCELLS_6_FTA, 6)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_RX_MPH_NCELLS_FTA_B, 6)
    0x3F, 0x3F, 0x39, 0x26, 0x20, 0x1C
ENDARRAY
BEGINARRAY (A_BSIC_MPH_NCELLS_FTA_B, 6)
    0x09, 0x0F, 0x0B, 0x09, 0x0F, 0x0D
ENDARRAY
BEGINARRAY (A_BSIC_MPH_NCELLS_FTA_C, 6)
    0x09, 0x0D, 0x0B, 0x09, 0x0F, 0x0D
ENDARRAY
BEGINARRAY (A_RX_MPH_NCELLS_FTA_D, 6)
    0x3F, 0x3C, 0x3B, 0x33, 0x22, 0x1F
ENDARRAY
BEGINARRAY (A_BSIC_MPH_NCELLS_FTA_D, 6)
    0x09, 0x0F, 0x0D, 0x0B, 0x09, 0x0F
ENDARRAY
BEGINARRAY (A_RX_MPH_NCELLS_FTA_E, 6)
    0x3F, 0x3F, 0x3F, 0x39, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_BSIC_MPH_NCELLS_FTA_E, 6)
    0x09, 0x0F, 0x0D, 0x0B, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_FREQ_LIST_AFTER_2, 16)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x02, 0x00, 0x00,
    0x00, 0x08, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGINARRAY (A_FREQ_LIST_BEFORE_1, 16)
    0x0F, 0xFF, 0xFF, 0xFF, 0xF0, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00, 0xFF, 0xFF, 0xFF, 0xFF
ENDARRAY
BEGINARRAY (A_RXLEVEL_21, 12)
    0x21, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00
ENDARRAY

/* DL/26.09.02: EOTD */
BEGIN_SHORT_ARRAY (EOTD_CROSSCOR_12, 18)
    0x000F, 0x001F, 0x003F, 0x007F, 0x00FF, 0x01FF, 0x03FF, 0x07FF,
    0x0FFF, 0x1FFF, 0x3FFF, 0x7FFF, 0,0,0,0,0,0
ENDARRAY

BEGINARRAY (A_SEARCH_RES_MCC_123, 3)
    1,2,3
ENDARRAY
BEGINARRAY (A_SEARCH_RES_MNC_32, 3)
    3,2,0xF
ENDARRAY
BEGINARRAY (A_SEARCH_RES_MNC_33, 3)
    3,3,0xF
ENDARRAY
BEGINARRAY (A_SEARCH_RES_RXLEV, 12)
    0x2D,0x21,0,0,0,0,0,0,0,0,0,0
```

ENDARRAY

BEGINARRAY (A\_RXLEVEL\_20, 12)  
 0x20, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,  
 0x00, 0x00, 0x00, 0x00

ENDARRAY

BEGINARRAY (A\_EXT\_MEAS\_RES\_000\_LEV , 21)  
 CONST\_30,  
 CONST\_6,  
 CONST\_53,  
 CONST\_13,  
 0,0

ENDARRAY

BEGINARRAY (A\_EXT\_MEAS\_RES\_001\_LEV , 21)  
 CONST\_53,  
 0,0

ENDARRAY

BEGINARRAY (A\_EXT\_MEAS\_RES\_002\_LEV , 21)  
 CONST\_46,0,0,CONST\_53,  
 0,0

ENDARRAY

BEGINARRAY (A\_EXT\_MEAS\_RES\_003\_LEV , 21)  
 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21

ENDARRAY

/\*

## 2.4.2 Arrays of Shorts

\*/

BEGIN\_SHORT\_ARRAY\_PART(A\_ARFCN\_527\_601, 2)  
 527,601

ENDARRAY

BEGIN\_SHORT\_ARRAY (A\_MPH\_NCELL\_EMPTY, 33)  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF

ENDARRAY

BEGIN\_SHORT\_ARRAY (A\_MPH\_NCELL\_1, 33)  
 0x7C, 0x20, 0x63, 0x03, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF

ENDARRAY

BEGIN\_SHORT\_ARRAY (A\_MPH\_NCELL\_1\_V, 33)  
 0x11, 0x12, 0x13, 0x14, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF

ENDARRAY

BEGIN\_SHORT\_ARRAY (A\_MPH\_NCELL\_1B, 33)  
 0x03, 0x18, 0x63, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,  
 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,

```
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY (A_MPH_NCELL_1F, 33)
```

```
32, 3, 99, 124, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY_PART (PRR_HOPPING_2_1800,4)
```

```
521,575,635,0xFFFF
```

```
ENDARRAY
```

```
/*
```

```
from SI5 and SI5bis the BA list is
BA list = {20, 514, 530,549,602,665, 686, 762, 810}
but the MS is configured as 1900 only so the 20 is removed
```

```
*/
```

```
BEGIN_SHORT_ARRAY_PART(A_MPH_NCELL_1900, 8)
```

```
514, 530, 549, 602, 665, 686, 762, 810
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY_PART(A_MPH_NCELL_1900a,5)
```

```
549, 602, 665, 686, 810
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY(A_ARFCN_NCELLS_1900,6)
```

```
810, 549, 686, 762, 665, 514
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY (A_MPH_NCELL_1C, 33)
```

```
0x20, 0x7C, 0x63, 0x03, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY (A_MPH_NCELL_1D, 33)
```

```
0x03, 0x20, 0x63, 0x7C, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY (A_MPH_NCELL_1D_EMO, 33)
```

```
0x03, 0x20, 0x21, 0x63, 0x7C, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
ENDARRAY
```

```
BEGIN_SHORT_ARRAY (A_MPH_NCELL_1E, 33)
```

```
0x7C, 0x20, 0x63, 0x03, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
0xFFFF
ENDARRAY

BEGIN_SHORT_ARRAY (A_MPH_NCELL_2, 33)
0x20, 0x03, 0x63, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_8, 33)
0x7C, 0x09, 0x0A, 0x50, 0x5A, 0x64, 0x6E, 0x78,
0x7B, 0x02, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_DG_186, 33)
0x0273, 0x027B, 0x0283, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_528_31, 33)
0x0210, 0x0211, 0x0212, 0x0213, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_FTA, 33)
0x000E, 0x0014, 0x0020, 0x002C, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5TER_5_FTA, 33)
0x000E, 0x0014, 0x0020, 0x002C, 0x0208, 0x030C, 0x0370, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_FTA_A, 33)
0x03DE, 0x03EB, 0x03ED, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_5BIS_FTA_A, 33)
0x001A, 0x0026, 0x03DE, 0x03EB, 0x03ED, 0x0000, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
```

```
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_FTA_B, 33)
0x001A, 0x0026, 0x0000, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_5BIS_FTA_B, 33)
0x001A, 0x0026, 0x0374, 0x03D4, 0x03E1, 0x03E3, 0x0000, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_FTA_C, 33)
0x0208, 0x03DE, 0x03FC, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_5TER_FTA_C, 33)
0x0208, 0x03DE, 0x03FC, 0x001A, 0x03EB, 0x03ED, 0x0000, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_FTA_D, 33)
0x001A, 0x0026, 0x03DE, 0x03ED, 0x03FC, 0x0000, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_5TER_FTA_D, 33)
0x001A, 0x0026, 0x03DE, 0x03ED, 0x03FC, 0x0000, 0x03E8, 0x03EB,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_FTA_E, 33)
0x0026, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
BEGIN_SHORT_ARRAY (A_MPH_NCELL_5_5TER_FTA_E, 33)
0x0026, 0x001A, 0x03EB, 0x03FC, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF, 0xFFFF,
0xFFFF
ENDARRAY
```

```
BEGIN_SHORT_ARRAY (A_ARFCN_MPH_NCELLS_FTA_C, 6)
    0x03EB, 0x03FC, 0x1A, 0x00, 0x03ED, 0x03DE
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_MPH_NCELLS_FTA_D, 6)
    0x03EB, 0x26, 0x03FC, 0x1A, 0x0000, 0x03ED
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_MPH_NCELLS_FTA_E, 6)
    0x03EB, 0x26, 0x03FC, 0x1A, 0x00, 0x00
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_MPH_NCELLS_FTA_B, 6)
    0x03E1, 0x26, 0x1A, 0x00, 0x03E3, 0x03D4
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_NCELLS_0, 6)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_NCELLS_3, 6)
    0x03, 0x20, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_NCELLS_667_0, 6)
    0x14, 0x11, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_NCELLS_4, 6)
    0x43, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_NCELLS_6_FTA, 6)
    44, 880, 32, 780, 20, 520
ENDARRAY

BEGIN_SHORT_ARRAY (A_ARFCN_EMO_000,4)
    1,46,47,124
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_EMO_001,1)
    1
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_EMO_002,2)
    1,0
ENDARRAY
BEGIN_SHORT_ARRAY (A_ARFCN_EMO_003,21)
    1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21
ENDARRAY
BEGIN_SHORT_ARRAY_PART (A_LAC_LIST1, 1)
    LAC_2147
ENDARRAY
BEGIN_SHORT_ARRAY_PART (A_LAC_LIST1A, 1)
    LAC_2148
ENDARRAY
BEGIN_SHORT_ARRAY_PART (A_LAC_LIST5, 5)
    LAC_2147, LAC_2147, LAC_2147, LAC_2147, LAC_2147
ENDARRAY

/*

2.4.3 Arrays of Longs

*/
```

```

BEGIN_LONG_ARRAY (A_TIME_NCELLS_3, 6)
    0x02, 0x04, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_LONG_ARRAY (A_TIME_NCELLS_667_0, 6)
    0x02, 0x04, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_LONG_ARRAY (A_FRAME_NCELLS_3, 6)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_LONG_ARRAY (A_FRAME_NCELLS_667_0, 6)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY
BEGIN_LONG_ARRAY (A_TIME_MPH_NCELLS_FTA_B, 6)
    0x00, 0x00, 0x00, 0x00, 0x00, 0x00
ENDARRAY

```

/\*

## 2.5 Primitive Structures

\*/

```

BEGIN_PSTRUCT ("cod_prop",          S_COD_PROP_4_ER)
    SET_COMP ("codec_thr", 0x12)
    SET_COMP ("codec_hyst", 0x02)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",          S_COD_PROP_5_ER)
    SET_COMP ("codec_thr", 0x21)
    SET_COMP ("codec_hyst", 0x03)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",          S_COD_PROP_6_ALC)
    SET_COMP ("codec_thr", 0x22)
    SET_COMP ("codec_hyst", 0x04)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",          S_COD_PROP_7_ALC)
    SET_COMP ("codec_thr", 0x27)
    SET_COMP ("codec_hyst", 0x04)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",          S_COD_PROP_8_ALC)
    SET_COMP ("codec_thr", 0x32)
    SET_COMP ("codec_hyst", 0x04)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",          S_COD_PROP_9_ALC)
    SET_COMP ("codec_thr", 0x00)
    SET_COMP ("codec_hyst", 0x00)
ENDSTRUCT

BEGIN_PSTRUCT ("classmark",        CLASS_MS_DG_081C)
    SET_COMP ("pclass", CLASS_4)
    SKIP_COMP ("pclass2")
ENDSTRUCT
BEGIN_PSTRUCT ("classmark",        CLASS_MS)
    SET_COMP ("pclass", CLASS_4)
    SKIP_COMP ("pclass2")
ENDSTRUCT
BEGIN_PSTRUCT ("classmark",        CLASS_MS_1800)
    SET_COMP ("pclass", CLASS_1)

```

```

        SKIP_COMP ("pclass2")
    ENDSTRUCT
    BEGIN_PSTRUCT ("classmark",          CLASS_MS_DUALBAND)
        SET_COMP ("pclass",              CLASS_4)
        SET_COMP ("pclass2",             CLASS_1)
    ENDSTRUCT
    BEGIN_PSTRUCT ("frame_no",          FRAME_NUMBER_1)
        SET_COMP ("t1",                  T1)
        SET_COMP ("t2",                  T2)
        SET_COMP ("t3",                  T3)
    ENDSTRUCT
    BEGIN_PSTRUCT ("kcv",                KCV_00112233)
        SET_COMP ("v_kc",                 V_KC_PRES)
        SET_COMP ("kc",                   KC_00112233)
    ENDSTRUCT
    BEGIN_PSTRUCT ("kcv",                KCV_12345678)
        SET_COMP ("v_kc",                 V_KC_PRES)
        SET_COMP ("kc",                   KC_12345678)
    ENDSTRUCT
    BEGIN_PSTRUCT ("kcv",                KCV_EMPTY)
        SET_COMP ("v_kc",                 V_KC_NOT_PRES)
        SKIP_COMP ("kc")
    ENDSTRUCT
    BEGIN_PSTRUCT ("mm_info",           MM_INFO_1)
        SET_COMP ("valid",               MM_INFO_PRES)
        SET_COMP ("la",                  LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",                  ATT_ALLOW)
        SET_COMP ("re",                  REESTAB_YES)
        SET_COMP ("band",                 BND_DMY_VAL)
        SET_COMP ("ncc",                  NCC_0)
        SET_COMP ("bcc",                  BCC_6)
        SET_COMP ("t3212",                T3212_36_MIN)
    ENDSTRUCT
    BEGIN_PSTRUCT ("mm_info",           MM_INFO_2)
        SET_COMP ("valid",               MM_INFO_PRES)
        SET_COMP ("la",                  LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",                  ATT_ALLOW)
        SET_COMP ("re",                  REESTAB_YES)
        SET_COMP ("band",                 BND_DMY_VAL)
        SET_COMP ("ncc",                  NCC_0)
        SET_COMP ("bcc",                  BCC_5)
        SET_COMP ("t3212",                T3212_36_MIN)
    ENDSTRUCT
    BEGIN_PSTRUCT ("mm_info",           MM_INFO_15)
        SET_COMP ("valid",               MM_INFO_PRES)
        SET_COMP ("la",                  LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",                  ATT_NOT_ALLOW)
        SET_COMP ("re",                  REESTAB_NO)
        SET_COMP ("band",                 BND_DMY_VAL)
        SET_COMP ("ncc",                  NCC_0)
        SET_COMP ("bcc",                  BCC_5)
        SET_COMP ("t3212",                T3212_0_MIN)
    ENDSTRUCT
    BEGIN_PSTRUCT ("mm_info",           MM_INFO_3)
        SET_COMP ("valid",               MM_INFO_PRES)
        SET_COMP ("la",                  LA_NOT_IN_FRBD_LST_INCL)
        SET_COMP ("att",                  ATT_ALLOW)
        SET_COMP ("re",                  REESTAB_YES)

```

```

        SET_COMP ("band",      BND_DMY_VAL)
        SET_COMP ("ncc",       NCC_0)
        SET_COMP ("bcc",       BCC_6)
        SET_COMP ("t3212",     T3212_36_MIN)
    ENDSTRUCT
BEGIN_PSTRUCT ("mm_info",     MM_INFO_4_DG_629)
    SET_COMP ("valid",        MM_INFO_NOT_PRES)
    SET_COMP ("la",           LA_NOT_IN_FRBD_LST_INCL)
    SET_COMP ("att",          ATT_NOT_ALLOW)
    SET_COMP ("re",           REESTAB_YES)
    SET_COMP ("band",        BND_VAL_DG_629)
    SET_COMP ("ncc",          NCC_A_DG_629)
    SET_COMP ("bcc",          BCC_0_DG_629)
    SET_COMP ("t3212",        T3212_30_MIN_DG_629)
ENDSTRUCT
BEGIN_PSTRUCT ("imsi_struct", MOBILE_ID_NOT_SET)
    SET_COMP ("v_mid",        V_MID_PRES)
    SET_COMP ("id_type",      NOT_PRESENT_8BIT)
    SKIP_COMP ("id")
    SKIP_COMP ("tmsi_dig")
ENDSTRUCT
BEGIN_PSTRUCT ("imsi_struct", MOBILE_ID_IMSI_HPLMN)
    SET_COMP ("v_mid",        V_MID_PRES)
    SET_COMP ("id_type",      TYPE_IMSI)
    SET_COMP ("id",           IMSI_1233247114912)
    SKIP_COMP ("tmsi_dig")
ENDSTRUCT
BEGIN_PSTRUCT ("imsi_struct", MOBILE_ID_IMSI_TEST)
    SET_COMP ("v_mid",        V_MID_PRES)
    SET_COMP ("id_type",      TYPE_IMSI)
    SET_COMP ("id",           IMSI_0010147114912)
    SKIP_COMP ("tmsi_dig")
ENDSTRUCT
BEGIN_PSTRUCT ("tmsi_struct", MOBILE_ID_TMSI)
    SET_COMP ("v_mid",        V_MID_PRES)
    SET_COMP ("id_type",      TYPE_TMSI)
    SKIP_COMP ("id")
    SET_COMP ("tmsi_dig",     TMSI_142)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",    S_COD_PROP_0)
    SET_COMP ("codec_thr",    0x00)
    SET_COMP ("codec_hyst",   0x00)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",    S_COD_PROP_1)
    SET_COMP ("codec_thr",    0x01)
    SET_COMP ("codec_hyst",   0x01)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",    S_COD_PROP_2)
    SET_COMP ("codec_thr",    0x03)
    SET_COMP ("codec_hyst",   0x03)
ENDSTRUCT
BEGIN_PSTRUCT ("cod_prop",    S_COD_PROP_3)
    SET_COMP ("codec_thr",    0x05)
    SET_COMP ("codec_hyst",   0x05)
ENDSTRUCT
BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_0)
    SET_COMP ("nscb",         NSCB)
    SET_COMP ("icmi",         ICM1)

```

```

        SET_COMP ("st_mode",    ST_MODE_0)
        SET_COMP ("acs",       ACS_0)
        SET_COMP ("v_cod_prop", V_COD_PROP_NV)
        SET_COMP ("c_cod_prop", C_COD_PROP_1)
        SET_COMP ("cod_prop",  SA_COD_PROP_1)
    ENDSTRUCT
    BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_1)
        SET_COMP ("nscb",       NSCB)
        SET_COMP ("icmi",       ICMI)
        SET_COMP ("st_mode",    ST_MODE_1)
        SET_COMP ("acs",       ACS_1)
        SET_COMP ("v_cod_prop", V_COD_PROP_NV)
        SET_COMP ("c_cod_prop", C_COD_PROP_1)
        SET_COMP ("cod_prop",  SA_COD_PROP_1)
    ENDSTRUCT
    BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_2)
        SET_COMP ("nscb",       NSCB)
        SET_COMP ("icmi",       ICMI)
        SET_COMP ("st_mode",    ST_MODE_1)
        SET_COMP ("acs",       ACS_2)
        SET_COMP ("v_cod_prop", V_COD_PROP)
        SET_COMP ("c_cod_prop", C_COD_PROP_2)
        SET_COMP ("cod_prop",  SA_COD_PROP_2)
    ENDSTRUCT
    BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_3)
        SET_COMP ("nscb",       NSCB)
        SET_COMP ("icmi",       ICMI)
        SET_COMP ("st_mode",    ST_MODE_1)
        SET_COMP ("acs",       ACS_3)
        SET_COMP ("v_cod_prop", V_COD_PROP)
        SET_COMP ("c_cod_prop", C_COD_PROP_3)
        SET_COMP ("cod_prop",  SA_COD_PROP_3)
    ENDSTRUCT
    BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_4)
        SET_COMP ("nscb",       NSCB)
        SET_COMP ("icmi",       ICMI)
        SET_COMP ("st_mode",    ST_MODE_1)
        SET_COMP ("acs",       ACS_4)
        SET_COMP ("v_cod_prop", V_COD_PROP)
        SET_COMP ("c_cod_prop", C_COD_PROP_4)
        SET_COMP ("cod_prop",  SA_COD_PROP_4)
    ENDSTRUCT
    BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_4_ICMI)
        SET_COMP ("nscb",       NSCB)
        SET_COMP ("icmi",       ICMI_S)
        SET_COMP ("st_mode",    ST_MODE_1)
        SET_COMP ("acs",       ACS_4)
        SET_COMP ("v_cod_prop", V_COD_PROP)
        SET_COMP ("c_cod_prop", C_COD_PROP_4)
        SET_COMP ("cod_prop",  SA_COD_PROP_4)
    ENDSTRUCT
    BEGIN_PSTRUCT ("amr_conf",    S_AMR_CONF_5_ER_AFS)
        SET_COMP ("nscb",       NSCB)
        SET_COMP ("icmi",       ICMI)
        SET_COMP ("st_mode",    ST_MODE_1)
        SET_COMP ("acs",       0x4D)
        SET_COMP ("v_cod_prop", V_COD_PROP)
        SET_COMP ("c_cod_prop", C_COD_PROP_4)

```

```

      SET_COMP ("cod_prop", SA_COD_PROP_M4_ER_ALR)
ENDSTRUCT
BEGIN_PSTRUCT ("amr_conf", S_AMR_CONF_6_ALC_AFS)
  SET_COMP ("nscb", NSCB)
  SET_COMP ("icmi", ICMI)
  SET_COMP ("st_mode", ST_MODE_1)
  SET_COMP ("acs", 0xE1)
  SET_COMP ("v_cod_prop", V_COD_PROP)
  SET_COMP ("c_cod_prop", C_COD_PROP_4)
  SET_COMP ("cod_prop", SA_COD_PROP_M4_ALC_ALR)
ENDSTRUCT
BEGIN_PSTRUCT ("amr_conf", S_AMR_CONF_6_ALC_AFS2)
  SET_COMP ("nscb", 0)
  SET_COMP ("icmi", 0)
  SET_COMP ("st_mode", 0)
  SET_COMP ("acs", 0x80)
  SET_COMP ("v_cod_prop", 0)
  SKIP_COMP ("c_cod_prop")
  SKIP_COMP ("cod_prop")
ENDSTRUCT

BEGIN_PSTRUCT ("amr_conf", S_AMR_CONF_7_ER_AHS)
  SET_COMP ("nscb", NSCB)
  SET_COMP ("icmi", ICMI)
  SET_COMP ("st_mode", ST_MODE_1)
  SET_COMP ("acs", 0x25)
  SET_COMP ("v_cod_prop", V_COD_PROP)
  SET_COMP ("c_cod_prop", C_COD_PROP_3)
  SET_COMP ("cod_prop", SA_COD_PROP_M3_ER_ALR)
ENDSTRUCT
BEGIN_PSTRUCT ("amr_conf", S_AMR_CONF_8_ALC_AHS)
  SET_COMP ("nscb", NSCB)
  SET_COMP ("icmi", ICMI)
  SET_COMP ("st_mode", ST_MODE_1)
  SET_COMP ("acs", 0x18)
  SET_COMP ("v_cod_prop", V_COD_PROP)
  SET_COMP ("c_cod_prop", C_COD_PROP_2)
  SET_COMP ("cod_prop", SA_COD_PROP_M2_ALC_ALR)
ENDSTRUCT
BEGIN_PSTRUCT ("ciph", NO_CIPHERING)
  SET_COMP ("stat", STAT_CIPH_OFF)
  SKIP_COMP ("algo")
  SKIP_COMP ("kc")
ENDSTRUCT
BEGIN_PSTRUCT ("ciph", CIPHERING_2)
  SET_COMP ("stat", STAT_CIPH_ON)
  SET_COMP ("algo", ALGO_0)
  SET_COMP ("kc", KC_12345678)
ENDSTRUCT
BEGIN_PSTRUCT ("ciph", CIPHERING_3)
  SET_COMP ("stat", STAT_CIPH_ON)
  SET_COMP ("algo", ALGO_0)
  SET_COMP ("kc", KC_00112233)
ENDSTRUCT
BEGIN_PSTRUCT ("start", NO_STARTING_TIME)
  SET_COMP ("v_start", V_START_NOT_PRES)
  SKIP_COMP ("t1")
  SKIP_COMP ("t2")

```

```

        SKIP_COMP ("t3")
ENDSTRUCT
BEGIN_PSTRUCT ("start",          STARTING_TIME_1)
    SET_COMP ("v_start",        V_START_PRES)
    SET_COMP ("t1",            T1)
    SET_COMP ("t2",            T2)
    SET_COMP ("t3",            T3)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn",          PLMN_ID_EMPTY)
    SET_COMP ("v_plmn",        V_PLMN_NOT_PRES)
    SKIP_COMP ("mcc")
    SKIP_COMP ("mnc")
ENDSTRUCT
BEGIN_PSTRUCT ("plmn",          PLMN_ID_123)
    SET_COMP ("v_plmn",        V_PLMN_PRES)
    SET_COMP ("mcc",            MCC_123)
    SET_COMP ("mnc",            MNC_32)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn",          PLMN_ID_123X)
    SET_COMP ("v_plmn",        V_PLMN_PRES)
    SET_COMP ("mcc",            MCC_123)
    SET_COMP ("mnc",            MNC_32X)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn",          PLMN_ID_123_V)
    SET_COMP ("v_plmn",        V_PLMN_PRES)
    SET_COMP ("mcc",            MCC_123)
    SET_COMP ("mnc",            MNC_33)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn",          PLMN_ID_122)
    SET_COMP ("v_plmn",        V_PLMN_PRES)
    SET_COMP ("mcc",            MCC_122)
    SET_COMP ("mnc",            MNC_32)
ENDSTRUCT
BEGIN_PSTRUCT ("plmn",          PLMN_ID_TEST)
    SET_COMP ("v_plmn",        V_PLMN_PRES)
    SET_COMP ("mcc",            MCC_001)
    SET_COMP ("mnc",            MNC_01)
ENDSTRUCT
BEGIN_PSTRUCT ("op",            OP_MODE_EMPTY)
    SET_COMP ("v_op",          V_OP_PRES)
    SET_COMP ("ts",            TS_NO_AVAIL)
    SET_COMP ("m",             M_AUTO)
    SET_COMP ("sim_ins",       SIM_NO_INSRT)
    SET_COMP ("func",          FUNC_LIM_SERV_ST_SRCH)
    SET_COMP ("service",       LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op",            OP_MODE_EMPTY_NO_SERV)
    SET_COMP ("v_op",          V_OP_PRES)
    SET_COMP ("ts",            TS_NO_AVAIL)
    SET_COMP ("m",             M_AUTO)
    SET_COMP ("sim_ins",       SIM_NO_INSRT)
    SET_COMP ("func",          FUNC_LIM_SERV_ST_SRCH)
    SET_COMP ("service",       NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op",            OP_MODE_NORMAL)
    SET_COMP ("v_op",          V_OP_PRES)
    SET_COMP ("ts",            TS_NO_AVAIL)
    SET_COMP ("m",             M_AUTO)

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        SET_COMP ("sim_ins", SIM_INSRT)
        SET_COMP ("func", FUNC_PLMN_SRCH)
        SET_COMP ("service", FULL_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_NORMAL_NO_SERV)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_NO_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_PLMN_SRCH)
    SET_COMP ("service", NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_NET_SRCH_MMI_NO_SRV)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_NET_SRCH_BY_MMI)
    SET_COMP ("service", NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_NET_SRCH_MMI_LIM_SRV)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_NET_SRCH_BY_MMI)
    SET_COMP ("service", LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_NET_SRCH_MMI)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_NET_SRCH_BY_MMI)
    SET_COMP ("service", FULL_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_TEST_SIM)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_PLMN_SRCH)
    SET_COMP ("service", FULL_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_TEST_SIM_NO_SERV)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_PLMN_SRCH)
    SET_COMP ("service", NO_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_TEST_SIM_LIM_SERV)
    SET_COMP ("v_op", V_OP_PRES)
    SET_COMP ("ts", TS_AVAIL)
    SET_COMP ("m", M_AUTO)
    SET_COMP ("sim_ins", SIM_INSRT)
    SET_COMP ("func", FUNC_PLMN_SRCH)

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      SET_COMP ("service", LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("op", OP_MODE_NO_SIM_LIM_SERV)
  SET_COMP ("v_op", V_OP_PRES)
  SET_COMP ("ts", TS_NO_AVAIL)
  SET_COMP ("m", M_AUTO)
  SET_COMP ("sim_ins", SIM_NO_INSRT)
  SET_COMP ("func", FUNC_LIM_SERV_ST_SRCH)
  SET_COMP ("service", LIMITED_SERVICE)
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type", PRR_CHANNEL_TYPE_0)
  SKIP_COMP ("ch")
  SKIP_COMP ("tn")
  SKIP_COMP ("tsc")
  SKIP_COMP ("h")
  SKIP_COMP ("arfcn")
  SKIP_COMP ("maio")
  SKIP_COMP ("hsn")
  SKIP_COMP ("ma")
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type", PRR_CHANNEL_TYPE_2)
  SET_COMP ("ch", CH_SDCCH_4_1)
  SET_COMP ("tn", TN_3)
  SET_COMP ("tsc", TSC_2)
  SET_COMP ("h", HOP_YES)
  SKIP_COMP ("arfcn")
  SET_COMP ("maio", MAIO_12)
  SET_COMP ("hsn", HSN_14)
  SET_COMP ("ma", PRR_HOPPING_1)
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type", PRR_CHANNEL_TYPE_3)
  SET_COMP ("ch", CH_SDCCH_4_1)
  SET_COMP ("tn", TN_4)
  SET_COMP ("tsc", TSC_2)
  SET_COMP ("h", HOP_NO)
  SET_COMP ("arfcn", ARFCN_115)
  SKIP_COMP ("maio")
  SKIP_COMP ("hsn")
  SKIP_COMP ("ma")
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type", PRR_CHANNEL_TYPE_3_1800)
  SET_COMP ("ch", CH_SDCCH_4_1)
  SET_COMP ("tn", TN_4)
  SET_COMP ("tsc", TSC_2)
  SET_COMP ("h", HOP_NO)
  SET_COMP ("arfcn", ARFCN_812)
  SKIP_COMP ("maio")
  SKIP_COMP ("hsn")
  SKIP_COMP ("ma")
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type", PRR_CHANNEL_TYPE_3_1900)
  SET_COMP ("ch", CH_SDCCH_4_1)
  SET_COMP ("tn", TN_4)
  SET_COMP ("tsc", TSC_2)
  SET_COMP ("h", HOP_NO)
  SET_COMP ("arfcn", ARFCN_612)
  SKIP_COMP ("maio")
  SKIP_COMP ("hsn")

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        SKIP_COMP ("ma")
    ENDSTRUCT
    BEGIN_PSTRUCT ("cbch",          PRR_CHANNEL_TYPE_3_CB)
        SET_COMP ("stat",          TRUE)
        SET_COMP ("ch",            CH_SDCCH_4_1)
        SET_COMP ("tn",            TN_4)
        SET_COMP ("tsc",           TSC_2)
        SET_COMP ("h",             HOP_NO)
        SET_COMP ("arfcn",         ARFCN_115)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
        SKIP_COMP ("ma")
    ENDSTRUCT
    BEGIN_PSTRUCT ("cbch",          PRR_CHANNEL_TYPE_3_CB_1800)
        SET_COMP ("stat",          TRUE)
        SET_COMP ("ch",            CH_SDCCH_4_1)
        SET_COMP ("tn",            TN_4)
        SET_COMP ("tsc",           TSC_2)
        SET_COMP ("h",             HOP_NO)
        SET_COMP ("arfcn",         ARFCN_811)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
        SKIP_COMP ("ma")
    ENDSTRUCT
    BEGIN_PSTRUCT ("ch_type",       PRR_CHANNEL_TYPE_4)
        SET_COMP ("ch",            CH_TCH_F)
        SET_COMP ("tn",            TN_4)
        SET_COMP ("tsc",           TSC_2)
        SET_COMP ("h",             HOP_NO)
        SET_COMP ("arfcn",         ARFCN_115)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
        SKIP_COMP ("ma")
    ENDSTRUCT
    BEGIN_PSTRUCT ("ch_type",       PRR_CHANNEL_TYPE_5)
        SKIP_COMP ("ch")
        SKIP_COMP ("tn")
        SKIP_COMP ("tsc")
        SKIP_COMP ("h")
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",          MAIO_10)
        SKIP_COMP ("hsn")
        SET_COMP ("ma",            PRR_HOPPING_2)
    ENDSTRUCT
    BEGIN_PSTRUCT ("ch_type",       PRR_CHANNEL_TYPE_HALF)
        SET_COMP ("ch",            CH_TCH_H_2)
        SET_COMP ("tn",            TN_4)
        SET_COMP ("tsc",           TSC_2)
        SET_COMP ("h",             HOP_NO)
        SET_COMP ("arfcn",         ARFCN_115)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
        SKIP_COMP ("ma")
    ENDSTRUCT
    BEGIN_PSTRUCT ("ch_type",       PRR_CHANNEL_TYPE_HOP_HALF)
        SET_COMP ("ch",            CH_TCH_H_2)
        SET_COMP ("tn",            TN_4)
        SET_COMP ("tsc",           TSC_2)

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        SET_COMP ("h",           HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",        MAIO_2)
        SET_COMP ("hsn",        HSN_4)
        SHOW_COMP ("ma")
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type",      PRR_CHANNEL_TYPE_HOP_HALF2)
        SET_COMP ("ch",         CH_TCH_H_2)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("h",         HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",        MAIO_12)
        SET_COMP ("hsn",        HSN_14)
        SET_COMP ("ma",        PRR_HOPPING_2)
ENDSTRUCT

BEGIN_PSTRUCT ("ch_type",      PRR_CHANNEL_TYPE_6)
        SET_COMP ("ch",         CH_TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("h",         HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",        MAIO_12)
        SET_COMP ("hsn",        HSN_14)
        SET_COMP ("ma",        PRR_HOPPING_2)
ENDSTRUCT

BEGIN_PSTRUCT ("ch_type",      PRR_CHANNEL_TYPE_6_1800)
        SET_COMP ("ch",         CH_TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("h",         HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",        MAIO_12)
        SET_COMP ("hsn",        HSN_14)
        SET_COMP ("ma",        PRR_HOPPING_2_1800)
ENDSTRUCT

BEGIN_PSTRUCT ("ch_type",      PRR_CHANNEL_TYPE_7)
        SET_COMP ("ch",         CH_TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("h",         HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",        MAIO_2)
        SET_COMP ("hsn",        HSN_4)
        SET_COMP ("ma",        PRR_HOPPING_3)
ENDSTRUCT

BEGIN_PSTRUCT ("ch_type",      PRR_CHANNEL_TYPE_7_1800)
        SET_COMP ("ch",         CH_TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("h",         HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",        MAIO_2)
        SET_COMP ("hsn",        HSN_4)
        SET_COMP ("ma",        PRR_HOPPING_2_1800)
ENDSTRUCT

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BEGIN_PSTRUCT ("ch_type",          PRR_CHANNEL_TYPE_8)
  SET_COMP ("ch",                  CH_TCH_F)
  SET_COMP ("tn",                  TN_4)
  SET_COMP ("tsc",                 TSC_2)
  SET_COMP ("h",                  HOP_YES)
  SKIP_COMP ("arfcn")
  SET_COMP ("maio",                MAIO_12)
  SET_COMP ("hsn",                 HSN_14)
  SET_COMP ("ma",                 PRR_HOPPING_4)
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type",          PRR_CHANNEL_TYPE_9)
  SET_COMP ("ch",                  CH_TCH_F)
  SET_COMP ("tn",                  TN_4)
  SET_COMP ("tsc",                 TSC_2)
  SET_COMP ("h",                  HOP_YES)
  SKIP_COMP ("arfcn")
  SET_COMP ("maio",                MAIO_2)
  SET_COMP ("hsn",                 HSN_4)
  SET_COMP ("ma",                 PRR_HOPPING_5)
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type",          PRR_CHANNEL_TYPE_10)
  SET_COMP ("ch",                  CH_TCH_F)
  SET_COMP ("tn",                  TN_4)
  SET_COMP ("tsc",                 TSC_2)
  SET_COMP ("h",                  HOP_YES)
  SKIP_COMP ("arfcn")
  SET_COMP ("maio",                MAIO_2)
  SET_COMP ("hsn",                 HSN_4)
  SET_COMP ("ma",                 PRR_HOPPING_6)
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type",          PRR_CHANNEL_TYPE_11)
  SET_COMP ("ch",                  CH_TCH_F)
  SET_COMP ("tn",                  TN_4)
  SET_COMP ("tsc",                 TSC_2)
  SET_COMP ("h",                  HOP_YES)
  SKIP_COMP ("arfcn")
  SET_COMP ("maio",                MAIO_2)
  SET_COMP ("hsn",                 HSN_4)
  SET_COMP ("ma",                 PRR_HOPPING_7)
ENDSTRUCT
BEGIN_PSTRUCT ("ch_type",          PRR_CHANNEL_TYPE_EGSM)
  SET_COMP ("ch",                  CH_TCH_F)
  SET_COMP ("tn",                  TN_4)
  SET_COMP ("tsc",                 TSC_2)
  SET_COMP ("h",                  HOP_YES)
  SKIP_COMP ("arfcn")
  SET_COMP ("maio",                MAIO_12)
  SET_COMP ("hsn",                 HSN_14)
  SET_COMP ("ma",                 PRR_HOPPING_EGSM)
ENDSTRUCT
BEGIN_PSTRUCT ("ho_param",         HO_PARAM_1)
  SET_COMP ("ho_ref",              HANDOV_REF_1)
  SET_COMP ("ho_pow",              POW_05)
  SET_COMP ("ho_acc_type",         ATC_1)
  SET_COMP ("ho_nci",              NCI_1)
ENDSTRUCT
BEGIN_PSTRUCT ("ho_param",         HO_PARAM_0)
  SET_COMP ("ho_ref",              HANDOV_REF_1)

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        SET_COMP ("ho_pow",      POW_05)
        SET_COMP ("ho_acc_type",  ATC_1)
        SET_COMP ("ho_nci",      NCI_0)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_2)
        SET_COMP ("power",      MS_TXPWR_MAX_CCH_02)
        SET_COMP ("dtx",      DTX_USED)
        SET_COMP ("rlt",      RLT_64)
        SET_COMP ("tav",      TIME_ADV_27)
        SET_COMP ("pwrc",      POW_CTRL_YES)
        SET_COMP ("mode",      CHM_SIG_ONLY)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_2B)
        SET_COMP ("power",      MS_TXPWR_MAX_CCH_02)
        SET_COMP ("dtx",      DTX_USED)
        SET_COMP ("rlt",      RLT_64)
        SET_COMP ("tav",      TIME_ADV_10)
        SET_COMP ("pwrc",      POW_CTRL_YES)
        SET_COMP ("mode",      CHM_SIG_ONLY)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_3)
        SET_COMP ("power",      POW_05)
        SET_COMP ("dtx",      DTX_USED)
        SET_COMP ("rlt",      RLT_64)
        SKIP_COMP ("tav")
        SET_COMP ("pwrc",      POW_CTRL_YES)
        SET_COMP ("mode",      CHM_SIG_ONLY)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_13)
        SET_COMP ("power",      POW_05)
        SET_COMP ("dtx",      DTX_USED)
        SET_COMP ("rlt",      RLT_64)
        SKIP_COMP ("tav")
        SET_COMP ("pwrc",      POW_CTRL_YES)
        SET_COMP ("mode",      CHM_SPEECH)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_HO)
        SKIP_COMP ("power")
        SKIP_COMP ("dtx")
        SKIP_COMP ("rlt")
        SET_COMP ("tav",      TAV_1)
        SKIP_COMP ("pwrc")
        SET_COMP ("mode",      CHM_SPEECH)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_ASY_HO)
        SKIP_COMP ("power")
        SKIP_COMP ("dtx")
        SKIP_COMP ("rlt")
        SKIP_COMP ("tav")
        SKIP_COMP ("pwrc")
        SET_COMP ("mode",      CHM_SPEECH)
    ENDSTRUCT
    BEGIN_PSTRUCT ("tr_para",      PRR_TR_PARA_AMR)
        SET_COMP ("power",      POW_05)
        SET_COMP ("dtx",      DTX_USED)
        SET_COMP ("rlt",      RLT_64)
        SKIP_COMP ("tav")
        SET_COMP ("pwrc",      POW_CTRL_YES)

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        SET_COMP ("mode",          CHANNEL_MODE_AMR)
ENDSTRUCT
BEGIN_PSTRUCT ("tr_para",        PRR_TR_PARA_AMR_1)
    SKIP_COMP ("power")
    SKIP_COMP ("dtx")
    SKIP_COMP ("rlt")
    SKIP_COMP ("tav")
    SKIP_COMP ("pwrc")
    SET_COMP ("mode",          CHANNEL_MODE_AMR)
ENDSTRUCT
BEGIN_PSTRUCT ("send_mode",      SEND_MODE_2_BURSTS)
    SKIP_COMP ("c")
    SET_COMP ("no",            TWO_BURSTS)
    SET_COMP ("delta",        DELTA_TWO_BURSTS)
    SET_COMP ("rach",        RACH_2_BURSTS)
ENDSTRUCT
BEGIN_PSTRUCT ("send_mode",      SEND_MODE_2_BURSTS2)
    SKIP_COMP ("c")
    SET_COMP ("no",            TWO_BURSTS)
    SET_COMP ("delta",        DELTA_TWO_BURSTS)
    SET_COMP ("rach",        RACH_2_BURSTS2)
ENDSTRUCT
BEGIN_PSTRUCT ("send_mode",      SEND_MODE_8_BURSTS)
    SKIP_COMP ("c")
    SET_COMP ("no",            EIGHT_BURSTS)
    SET_COMP ("delta",        DELTA_EIGHT_BURSTS)
    SET_COMP ("rach",        RACH_8_BURSTS)
ENDSTRUCT
BEGIN_PSTRUCT ("send_mode",      SEND_MODE_NO_BURSTS)
    SKIP_COMP ("c")
    SET_COMP ("no",            NO_BURSTS)
    SKIP_COMP ("delta")
    SKIP_COMP ("rach")
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",      S_BCCH_INFO_EMPTY)
    SET_COMP ("v_bcch",        V_BCCH_NOT_PRES)
    SET_COMP ("bcch",        A_BCCH_INFO_EMPTY)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",      S_BCCH_INFO_CLEAR)
    SET_COMP ("v_bcch",        V_BCCH_PRES)
    SET_COMP ("bcch",        A_BCCH_INFO_EMPTY)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",      S_BCCH_INFO_32)
    SET_COMP ("v_bcch",        V_BCCH_PRES)
    SET_COMP ("bcch",        A_BCCH_INFO_32)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",      S_BCCH_INFO_NO_24)
    SET_COMP ("v_bcch",        V_BCCH_PRES)
    SET_COMP ("bcch",        A_BCCH_INFO_32)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",      S_BCCH_INFO_24)
    SET_COMP ("v_bcch",        V_BCCH_PRES)
    SET_COMP ("bcch",        A_BCCH_INFO_24)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",      S_BCCH_INFO_DG_081)
    SET_COMP ("v_bcch",        V_BCCH_PRES)
    SET_COMP ("bcch",        A_BCCH_INFO_DG_081)
ENDSTRUCT

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BEGIN_PSTRUCT ("bcch_info",          S_BCCH_INFO_DG_091)
    SET_COMP ("v_bcch",              V_BCCH_PRES)
    SET_COMP ("bcch",                A_BCCH_INFO_EMPTY)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",          S_BCCH_INFO_DG_212)
    SET_COMP ("v_bcch",              V_BCCH_PRES)
    SET_COMP ("bcch",                A_BCCH_INFO_DG_212)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",          S_BCCH_INFO_DG_629)
    SET_COMP ("v_bcch",              V_BCCH_PRES)
    SET_COMP ("bcch",                A_BCCH_INFO_DG_629)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",          S_BCCH_INFO_DG_629a)
    SET_COMP ("v_bcch",              V_BCCH_PRES)
    SET_COMP ("bcch",                A_BCCH_INFO_DG_629a)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",          S_BCCH_INFO_DG_213)
    SET_COMP ("v_bcch",              V_BCCH_PRES)
    SET_COMP ("bcch",                A_BCCH_INFO_DG_213)
ENDSTRUCT
BEGIN_PSTRUCT ("bcch_info",          S_BCCH_INFO_NCELL_DESC_1)
    SET_COMP ("v_bcch",              V_BCCH_PRES)
    SET_COMP ("bcch",                A_BCCH_INFO_NCELL_DESC_1)
ENDSTRUCT
BEGIN_PSTRUCT ("mid",                S_MS_ID_NO_IMSI_NO_TMSI)
    SET_COMP ("len_imsi",            0x00)
    SKIP_COMP ("imsi")
    SET_COMP ("v_tmsi",              0)
    SKIP_COMP ("tmsi")
    SET_COMP ("v_ptmsi",              0)
    SKIP_COMP ("ptmsi")
    SET_COMP ("v_ptmsi2",            0)
    SKIP_COMP ("ptmsi2")
ENDSTRUCT
BEGIN_PSTRUCT ("mid",                S_MS_ID_IMSI_TEST_TMSI)
    SET_COMP ("len_imsi",            0x0D)
    SET_COMP ("imsi",                A_IMSI_CONTENT_TEST_TMSI)
    SET_COMP ("v_tmsi",              1)
    SET_COMP ("tmsi",                0x142)
    SET_COMP ("v_ptmsi",              0)
    SKIP_COMP ("ptmsi")
    SET_COMP ("v_ptmsi2",            0)
    SKIP_COMP ("ptmsi2")
ENDSTRUCT
BEGIN_PSTRUCT ("mid",                S_MS_ID_IMSI_HPLMN_NO_TMSI)
    SET_COMP ("len_imsi",            0x0D)
    SET_COMP ("imsi",                A_IMSI_CONTENT)
    SET_COMP ("v_tmsi",              0)
    SKIP_COMP ("tmsi")
    SET_COMP ("v_ptmsi",              0)
    SKIP_COMP ("ptmsi")
    SET_COMP ("v_ptmsi2",            0)
    SKIP_COMP ("ptmsi2")
ENDSTRUCT
BEGIN_PSTRUCT ("mid",                S_MS_ID_IMSI_HPLMN_TMSI)
    SET_COMP ("len_imsi",            0x0D)
    SET_COMP ("imsi",                A_IMSI_CONTENT)
    SET_COMP ("v_tmsi",              1)

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        SET_COMP ("tmsi",          0x142)
        SET_COMP ("v_ptmsi",      0)
        SKIP_COMP ("ptmsi")
        SET_COMP ("v_ptmsi2",     0)
        SKIP_COMP ("ptmsi2")
    ENDSTRUCT
    BEGIN_PSTRUCT ("plmn",        S_PLMN_122_FOUND)
        SET_COMP ("v_plmn",       V_PLMN_PRES)
        SET_COMP ("mcc",          MCC_122)
        SET_COMP ("mnc",          MNC_33)
    ENDSTRUCT
    BEGIN_PSTRUCT ("plmn",        S_PLMN_123_32_FOUND)
        SET_COMP ("v_plmn",       V_PLMN_PRES)
        SET_COMP ("mcc",          MCC_123)
        SET_COMP ("mnc",          MNC_32)
    ENDSTRUCT
    BEGIN_PSTRUCT ("plmn",        S_PLMN_EMPTY)
        SET_COMP ("v_plmn",       V_PLMN_NOT_PRES)
        SKIP_COMP ("mcc")         )
        SKIP_COMP ("mnc")         )
    ENDSTRUCT
    BEGIN_PSTRUCT ("chm",         S_CHM_DG_629)
        SET_COMP ("ch_type",      CH_SDCCH)
        SET_COMP ("ch_mode",      0xFF)
    ENDSTRUCT
    BEGIN_PSTRUCT ("chm",         S_CHM_SPEECH_FULL)
        SET_COMP ("ch_type",      CH_TCH_F)
        SET_COMP ("ch_mode",      CHM_SPEECH)
    ENDSTRUCT
    BEGIN_PSTRUCT ("chm",         S_CHM_SPEECH_AMR_FULL)
        SET_COMP ("ch_type",      CH_TCH_F)
        SET_COMP ("ch_mode",      CHANNEL_MODE_AMR)
    ENDSTRUCT
    BEGIN_PSTRUCT ("ncells",      S_NCELLS_0)
        SET_COMP ("no_of_ncells", 0x00)
        SET_COMP ("arfcn",        A_ARFCN_NCELLS_0) /* array of 6 short */
        SET_COMP ("rx_lev",       A_RX_NCELLS_0) /* array of 6 byte */
        SET_COMP ("bsic",        A_BSIC_NCELLS_0) /* array of 6 byte */
        SET_COMP ("time_alignmt", A_TIME_MPH_NCELLS_FTA_B) /* array of 6 long */
        SET_COMP ("frame_offset", A_FRAME_NCELLS_3) /* array of 6 long */
    ENDSTRUCT
    BEGIN_PSTRUCT ("ncells",      S_NCELLS_3)
        SET_COMP ("no_of_ncells", 0x02)
        SET_COMP ("arfcn",        A_ARFCN_NCELLS_3) /* array of 6 short */
        SET_COMP ("rx_lev",       A_RX_NCELLS_3) /* array of 6 byte */
        SET_COMP ("bsic",        A_BSIC_NCELLS_3) /* array of 6 byte */
        SET_COMP ("time_alignmt", A_TIME_NCELLS_3) /* array of 6 long */
        SET_COMP ("frame_offset", A_FRAME_NCELLS_3) /* array of 6 long */
    ENDSTRUCT
    BEGIN_PSTRUCT ("ncells",      S_NCELLS_667_0)
        SET_COMP ("no_of_ncells", 0x02)
        SET_COMP ("arfcn",        A_ARFCN_NCELLS_667_0)
        SET_COMP ("rx_lev",       A_RX_NCELLS_667_0)
        SET_COMP ("bsic",        A_BSIC_NCELLS_667_0)
        SET_COMP ("time_alignmt", A_TIME_NCELLS_667_0)
        SET_COMP ("frame_offset", A_FRAME_NCELLS_667_0)
    ENDSTRUCT

```

```

BEGIN_PSTRUCT ("ncells",          S_NCELLS_6)
  SET_COMP ("no_of_ncells",0x06)
  SET_COMP ("arfcn",          A_ARFCN_NCELLS_1900) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RXLEV_NCELLS_1900) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_NCELLS_1900)
  SKIP_COMP ("time_alignmt")
  SKIP_COMP ("frame_offset")
ENDSTRUCT

BEGIN_PSTRUCT ("ncells",          S_NCELLS_4)
  SET_COMP ("no_of_ncells",0x01)
  SET_COMP ("arfcn",          A_ARFCN_NCELLS_4) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RX_NCELLS_4) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_NCELLS_4) /* array of 6 byte */
  SET_COMP ("time_alignmt",  A_TIME_NCELLS_6_FTA)/* array of 6 long */
  SET_COMP ("frame_offset",A_FRAME_NCELLS_3) /* array of 6 long */
ENDSTRUCT
BEGIN_PSTRUCT ("ncells",          S_NCELLS_6_FTA)
  SET_COMP ("no_of_ncells",0x06)
  SET_COMP ("arfcn",          A_ARFCN_NCELLS_6_FTA) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RX_NCELLS_6_FTA) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_NCELLS_6_FTA) /* array of 6 byte */
  SET_COMP ("time_alignmt",  A_TIME_NCELLS_6_FTA)/* array of 6 long */
  SET_COMP ("frame_offset",A_FRAME_NCELLS_3) /* array of 6 long */
ENDSTRUCT
BEGIN_PSTRUCT ("ncells",          S_MPH_NCELLS_FTA_B)
  SET_COMP ("no_of_ncells",0x06)
  SET_COMP ("arfcn",          A_ARFCN_MPH_NCELLS_FTA_B) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RX_MPH_NCELLS_FTA_B) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_MPH_NCELLS_FTA_B) /* array of 6 byte */
  SET_COMP ("time_alignmt",  A_TIME_MPH_NCELLS_FTA_B) /* array of 6 long */
  SET_COMP ("frame_offset",A_FRAME_NCELLS_3) /* array of 6 long */
ENDSTRUCT
BEGIN_PSTRUCT ("ncells",          S_MPH_NCELLS_FTA_C)
  SET_COMP ("no_of_ncells",0x06)
  SET_COMP ("arfcn",          A_ARFCN_MPH_NCELLS_FTA_C) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RX_MPH_NCELLS_FTA_B) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_MPH_NCELLS_FTA_C) /* array of 6 byte */
  SET_COMP ("time_alignmt",  A_TIME_MPH_NCELLS_FTA_B) /* array of 6 long */
  SET_COMP ("frame_offset",A_FRAME_NCELLS_3) /* array of 6 long */
ENDSTRUCT
BEGIN_PSTRUCT ("ncells",          S_MPH_NCELLS_FTA_D)
  SET_COMP ("no_of_ncells",0x06)
  SET_COMP ("arfcn",          A_ARFCN_MPH_NCELLS_FTA_D) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RX_MPH_NCELLS_FTA_D) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_MPH_NCELLS_FTA_D) /* array of 6 byte */
  SET_COMP ("time_alignmt",  A_TIME_MPH_NCELLS_FTA_B) /* array of 6 long */
  SET_COMP ("frame_offset",A_FRAME_NCELLS_3) /* array of 6 long */
ENDSTRUCT
BEGIN_PSTRUCT ("ncells",          S_MPH_NCELLS_FTA_E)
  SET_COMP ("no_of_ncells",0x04)
  SET_COMP ("arfcn",          A_ARFCN_MPH_NCELLS_FTA_E) /* array of 6 short */
  SET_COMP ("rx_lev",        A_RX_MPH_NCELLS_FTA_E) /* array of 6 byte */
  SET_COMP ("bsic",          A_BSIC_MPH_NCELLS_FTA_E) /* array of 6 byte */
  SET_COMP ("time_alignmt",  A_TIME_MPH_NCELLS_FTA_B) /* array of 6 long */
  SET_COMP ("frame_offset",A_FRAME_NCELLS_3) /* array of 6 long */
ENDSTRUCT

```

```

/* DL/26.09.02: EOTD */
BEGIN_PSTRUCT ("assist_data",
  SET_COMP ("arfcn",
    SET_COMP ("bsic",
      SET_COMP ("mfrm_offset",
        SET_COMP ("otd_type",
          SET_COMP ("exp_otd",
            SET_COMP ("uncertainty",
              SET_COMP ("rough_rtd",
                ARFCN_14_EOTD)
                ARFCN_14)
                BSIC_0)
                MFRM_OFFSET_44)
                EXPECTED_OTD)
                OTD_666)
                UNC_MAX_2BIT)
                OTD_666)
            ENDSTRUCT
        BEGIN_PSTRUCT ("assist_data",
          SET_COMP ("arfcn",
            SET_COMP ("bsic",
              SET_COMP ("mfrm_offset",
                SET_COMP ("otd_type",
                  SET_COMP ("exp_otd",
                    SET_COMP ("uncertainty",
                      SET_COMP ("rough_rtd",
                        ARFCN_124_EOTD)
                        ARFCN_124)
                        BSIC_0)
                        MFRM_OFFSET_44)
                        EXPECTED_OTD)
                        OTD_666)
                        UNC_MAX_2BIT)
                        OTD_666)
                    ENDSTRUCT
                BEGIN_PSTRUCT ("assist_data",
                  SET_COMP ("arfcn",
                    SET_COMP ("bsic",
                      SET_COMP ("mfrm_offset",
                        SET_COMP ("otd_type",
                          SET_COMP ("exp_otd",
                            SET_COMP ("uncertainty",
                              SET_COMP ("rough_rtd",
                                ARFCN_1_EOTD)
                                ARFCN_1)
                                BSIC_0)
                                MFRM_OFFSET_44)
                                EXPECTED_OTD)
                                OTD_666)
                                UNC_MAX_2BIT)
                                OTD_666)
                            ENDSTRUCT
                        BEGIN_PSTRUCT ("assist_data",
                          SET_COMP ("arfcn",
                            SET_COMP ("bsic",
                              SET_COMP ("mfrm_offset",
                                SET_COMP ("otd_type",
                                  SET_COMP ("exp_otd",
                                    SET_COMP ("uncertainty",
                                      SET_COMP ("rough_rtd",
                                        ARFCN_32_EOTD)
                                        ARFCN_32)
                                        BSIC_0)
                                        MFRM_OFFSET_44)
                                        EXPECTED_OTD)
                                        OTD_666)
                                        UNC_MAX_2BIT)
                                        OTD_666)
                                    ENDSTRUCT
                                BEGIN_PSTRUCT ("assist_data",
                                  SET_COMP ("arfcn",
                                    SET_COMP ("bsic",
                                      SET_COMP ("mfrm_offset",
                                        SET_COMP ("otd_type",
                                          SET_COMP ("exp_otd",
                                            SET_COMP ("uncertainty",
                                              SET_COMP ("rough_rtd",
                                                ARFCN_26_EOTD)
                                                ARFCN_26)
                                                BSIC_0)
                                                MFRM_OFFSET_44)
                                                EXPECTED_OTD)
                                                OTD_666)
                                                UNC_MAX_2BIT)
                                                OTD_666)
                                              ENDSTRUCT
                                BEGIN_PSTRUCT ("assist_data",
                                  SET_COMP ("arfcn",
                                    SET_COMP ("bsic",
                                      SET_COMP ("mfrm_offset",
                                        SET_COMP ("otd_type",
                                          SET_COMP ("exp_otd",
                                            SET_COMP ("uncertainty",
                                              SET_COMP ("rough_rtd",
                                                ARFCN_64_EOTD)
                                                ARFCN_64)
                                                BSIC_0)
                                                MFRM_OFFSET_44)
                                                EXPECTED_OTD)
                                                OTD_666)
                                                UNC_MAX_2BIT)
                                                OTD_666)
                                              ENDSTRUCT
                                BEGIN_PSTRUCT ("eotd_sc_res",
                                  SET_COMP ("sb_flag",
                                    SET_COMP ("bsic",
                                      EOTD_SC_RES_OK)
                                      SB_TRUE)
                                      BSIC_0)

```

```

        SET_COMP ("arfcn",          ARFCN_23)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_sc_res1",  EOTD_SC_RES1_OK)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_23)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_nc_res",   EOTD_NC_RES_14)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_14)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_nc_res",   EOTD_NC_RES_124)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_124)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_nc_res",   EOTD_NC_RES_1)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_1)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_nc_res",   EOTD_NC_RES_32)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_32)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_nc_res",   EOTD_NC_RES_26)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_26)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)
        SET_COMP ("d_eotd_nrj",     RSSI_61440)
        SET_COMP ("time_tag",       NOM_POS_1000)
    ENDSTRUCT
    BEGIN_PSTRUCT ("eotd_nc_res",   EOTD_NC_RES_64)
        SET_COMP ("sb_flag",        SB_TRUE)
        SET_COMP ("bsic",            BSIC_0)
        SET_COMP ("arfcn",          ARFCN_64)
        SET_COMP ("eotd_crosscor",  EOTD_CROSSCOR_12)

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        SET_COMP ("d_eotd_nrf",
        SET_COMP ("time_tag",
ENDSTRUCT

        RSSI_61440)
        NOM_POS_1000)

BEGIN_PSTRUCT ("plmn",
        SET_COMP ("v_plmn",
        SET_COMP ("mcc",
        SET_COMP ("mnc",
ENDSTRUCT
        S_PLMN_SEARCH_RES_123_32)
        V_PLMN_PRE)
        A_SEARCH_RES_MCC_123)
        A_SEARCH_RES_MNC_32)
BEGIN_PSTRUCT ("plmn",
        SET_COMP ("v_plmn",
        SET_COMP ("mcc",
        SET_COMP ("mnc",
ENDSTRUCT
        S_PLMN_SEARCH_RES_123_33)
        V_PLMN_PRE)
        A_SEARCH_RES_MCC_123)
        A_SEARCH_RES_MNC_33)
BEGIN_PSTRUCT ("plmn",
        SKIP_COMP ("v_plmn")
        SKIP_COMP ("mcc")
        SKIP_COMP ("mnc")
ENDSTRUCT
        S_PLMN_SEARCH_RES_VOID)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_000_000)
        CONST_47)
        CONST_53)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_000_001)
        CONST_1)
        CONST_30)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_000_002)
        CONST_124)
        CONST_13)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_000_003)
        CONST_46)
        CONST_6)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_001_000)
        CONST_1)
        CONST_53)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_002_000)
        CONST_0)
        CONST_53)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_002_001)
        CONST_1)
        CONST_46)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_003_000)
        CONST_1)
        CONST_1)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",
        SET_COMP ("rx_lev",
ENDSTRUCT
        S_EMO_MEAS_RES_003_001)
        CONST_2)
        CONST_2)
BEGIN_PSTRUCT ("meas_results",
        SET_COMP ("arfcn",

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```
        SET_COMP ("rx_lev",          CONST_3)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_003)
    SET_COMP ("arfcn",              CONST_4)
    SET_COMP ("rx_lev",              CONST_4)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_004)
    SET_COMP ("arfcn",              CONST_5)
    SET_COMP ("rx_lev",              CONST_5)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_005)
    SET_COMP ("arfcn",              CONST_6)
    SET_COMP ("rx_lev",              CONST_6)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_006)
    SET_COMP ("arfcn",              CONST_7)
    SET_COMP ("rx_lev",              CONST_7)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_007)
    SET_COMP ("arfcn",              CONST_8)
    SET_COMP ("rx_lev",              CONST_8)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_008)
    SET_COMP ("arfcn",              CONST_9)
    SET_COMP ("rx_lev",              CONST_9)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_009)
    SET_COMP ("arfcn",              CONST_10)
    SET_COMP ("rx_lev",              CONST_10)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_010)
    SET_COMP ("arfcn",              CONST_11)
    SET_COMP ("rx_lev",              CONST_11)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_011)
    SET_COMP ("arfcn",              CONST_12)
    SET_COMP ("rx_lev",              CONST_12)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_012)
    SET_COMP ("arfcn",              CONST_13)
    SET_COMP ("rx_lev",              CONST_13)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_013)
    SET_COMP ("arfcn",              CONST_14)
    SET_COMP ("rx_lev",              CONST_14)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_014)
    SET_COMP ("arfcn",              CONST_15)
    SET_COMP ("rx_lev",              CONST_15)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_015)
    SET_COMP ("arfcn",              CONST_16)
    SET_COMP ("rx_lev",              CONST_16)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",      S_EMO_MEAS_RES_003_016)
    SET_COMP ("arfcn",              CONST_17)
    SET_COMP ("rx_lev",              CONST_17)
ENDSTRUCT
```

```
BEGIN_PSTRUCT ("meas_results",          S_EMO_MEAS_RES_003_017)
    SET_COMP ("arfcn",                   CONST_18)
    SET_COMP ("rx_lev",                   CONST_18)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",          S_EMO_MEAS_RES_003_018)
    SET_COMP ("arfcn",                   CONST_19)
    SET_COMP ("rx_lev",                   CONST_19)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",          S_EMO_MEAS_RES_003_019)
    SET_COMP ("arfcn",                   CONST_20)
    SET_COMP ("rx_lev",                   CONST_20)
ENDSTRUCT
BEGIN_PSTRUCT ("meas_results",          S_EMO_MEAS_RES_003_020)
    SET_COMP ("arfcn",                   CONST_21)
    SET_COMP ("rx_lev",                   CONST_21)
ENDSTRUCT
```

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## 2.6 Arrays of Structures

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```

BEGIN_STRUCT_ARRAY (SA_COD_PROP_M3_ER, 2)
    S_COD_PROP_4_ER,
    S_COD_PROP_5_ER
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M4_ER, 3)
    S_COD_PROP_4_ER,
    S_COD_PROP_5_ER,
    S_COD_PROP_5_ER
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M4_ALC, 3)
    S_COD_PROP_6_ALC,
    S_COD_PROP_7_ALC,
    S_COD_PROP_8_ALC
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M2_ALC, 1)
    S_COD_PROP_6_ALC
ENDARRAY

BEGIN_STRUCT_ARRAY (SA_COD_PROP_M3_ER_ALR, 3)
    S_COD_PROP_4_ER,
    S_COD_PROP_5_ER,
    S_COD_PROP_0
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M4_ER_ALR, 3)
    S_COD_PROP_4_ER,
    S_COD_PROP_5_ER,
    S_COD_PROP_5_ER
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M4_ALC_ALR, 3)
    S_COD_PROP_6_ALC,
    S_COD_PROP_7_ALC,
    S_COD_PROP_8_ALC
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M2_ALC_ALR, 3)
    S_COD_PROP_6_ALC,
    S_COD_PROP_0,
    S_COD_PROP_0
ENDARRAY

BEGIN_MSTRUCT ("multirate_conf",    S_MULTIRATE_CONF_ER_AFS)
    SET_COMP ("tlv_len",    TLV_LEN_4)
    SET_COMP ("mr_vers",    MR_VERS)
    SET_COMP ("nscb",    NSCB)
    SET_COMP ("icmi",    ICMI)
    SET_COMP ("st_mode",    ST_MODE_1)
    SET_COMP ("set_amr",    0x4D)
    SET_COMP ("cod_prop",    SA_COD_PROP_M4_ER)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",    S_MULTIRATE_CONF_ER_AHS)
    SET_COMP ("tlv_len",    TLV_LEN_3)
    SET_COMP ("mr_vers",    MR_VERS)

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        SET_COMP ("nscb",      NSCB)
        SET_COMP ("icmi",     ICM1)
        SET_COMP ("st_mode",  ST_MODE_1)
        SET_COMP ("set_amr",  0x25)
        SET_COMP ("cod_prop", SA_COD_PROP_M3_ER)
    ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf", S_MULTIRATE_CONF_ALC_AFS)
    SET_COMP ("tlv_len",      TLV_LEN_4)
    SET_COMP ("mr_vers",     MR_VERS)
    SET_COMP ("nscb",        NSCB)
    SET_COMP ("icmi",        ICM1)
    SET_COMP ("st_mode",     ST_MODE_1)
    SET_COMP ("set_amr",     0xE1)
    SET_COMP ("cod_prop",    SA_COD_PROP_M4_ALC)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf", S_MULTIRATE_CONF_ALC_AHS)
    SET_COMP ("tlv_len",      TLV_LEN_2)
    SET_COMP ("mr_vers",     MR_VERS)
    SET_COMP ("nscb",        NSCB)
    SET_COMP ("icmi",        ICM1)
    SET_COMP ("st_mode",     ST_MODE_1)
    SET_COMP ("set_amr",     0x18)
    SET_COMP ("cod_prop",    SA_COD_PROP_M2_ALC)
ENDSTRUCT

BEGIN_STRUCT_ARRAY (SA_COD_PROP_M1, 3)
    S_COD_PROP_0,
    S_COD_PROP_0,
    S_COD_PROP_0
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M2, 1)
    S_COD_PROP_1
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M3, 2)
    S_COD_PROP_1,
    S_COD_PROP_2
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_M4, 3)
    S_COD_PROP_1,
    S_COD_PROP_2,
    S_COD_PROP_3
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_1, 3)
    S_COD_PROP_0,
    S_COD_PROP_0,
    S_COD_PROP_0
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_2, 3)
    S_COD_PROP_1,
    S_COD_PROP_0,
    S_COD_PROP_0
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_3, 3)
    S_COD_PROP_1,
    S_COD_PROP_2,

```

```
        S_COD_PROP_0
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_4, 3)
    S_COD_PROP_1,
    S_COD_PROP_2,
    S_COD_PROP_3
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_702D, 3)
    S_COD_PROP_3,
    S_COD_PROP_2,
    S_COD_PROP_1
ENDARRAY
BEGIN_STRUCT_ARRAY (SA_COD_PROP_702E, 2)
    S_COD_PROP_1,
    S_COD_PROP_2
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_PLMN, 12)
    S_PLMN_122_FOUND,
    S_PLMN_EMPTY,
    S_PLMN_EMPTY
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_PLMN_123_32_FOUND, 12)
    S_PLMN_123_32_FOUND,
    S_PLMN_EMPTY,
    S_PLMN_EMPTY
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_3_SACCH, 6)
    S_NCELL_32_0_6,
    S_NCELL_42_1_5,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_3_SACCH_1900, 6)
    S_NCELL_63_8_1,
    S_NCELL_63_3_7,
    S_NCELL_61_6_5,
    S_NCELL_56_7_3,
    S_NCELL_36_5_1,
```

```
        S_NCELL_32_1_3
ENDARRAY

BEGIN_STRUCT_ARRAY (AS_NCELLS_3_SACCH_DG_186, 6)
    S_NCELL_32_0_6,
    S_NCELL_42_0_5,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_6_SACCH, 6)
    S_NCELL_63_3_9,
    S_NCELL_63_6_15,
    S_NCELL_63_2_13,
    S_NCELL_61_5_11,
    S_NCELL_45_1_9,
    S_NCELL_35_4_13
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_FTA_B, 6)
    S_NCELL_63_4_9,
    S_NCELL_63_1_15,
    S_NCELL_57_0_11,
    S_NCELL_38_6_9,
    S_NCELL_32_5_15,
    S_NCELL_28_3_13
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_FTA_C, 6)
    S_NCELL_63_4_9,
    S_NCELL_63_2_13,
    S_NCELL_57_3_11,
    S_NCELL_38_6_9,
    S_NCELL_32_5_15,
    S_NCELL_28_1_13
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_FTA_D, 6)
    S_NCELL_63_7_9,
    S_NCELL_60_1_15,
    S_NCELL_59_4_13,
    S_NCELL_51_0_11,
    S_NCELL_34_5_9,
    S_NCELL_31_3_15
ENDARRAY
BEGIN_STRUCT_ARRAY (AS_NCELLS_FTA_E, 6)
    S_NCELL_63_2_9,
    S_NCELL_63_0_15,
    S_NCELL_63_3_13,
    S_NCELL_57_1_11,
    S_NCELL_0_0_0,
    S_NCELL_0_0_0
ENDARRAY
/*AS_NCELLS_FTA_E maybe S_NCELL_31_3_5*/
/* DL/26.09.02: EOTD */
BEGIN_STRUCT_ARRAY (NCELL_EOTD_6, 6)
    ARFCN_14_EOTD,
    ARFCN_124_EOTD,
    ARFCN_1_EOTD,
    ARFCN_32_EOTD,
```

```
        ARFCN_26_EOTD,
        ARFCN_64_EOTD
ENDARRAY
BEGIN_STRUCT_ARRAY (EOTD_RESULT_6, 6)
    EOTD_NC_RES_14,
    EOTD_NC_RES_124,
    EOTD_NC_RES_1,
    EOTD_NC_RES_32,
    EOTD_NC_RES_26,
    EOTD_NC_RES_64
ENDARRAY
BEGIN_STRUCT_ARRAY (S_PLMN_SEARCH_RES, 12)
    S_PLMN_SEARCH_RES_123_33,
    S_PLMN_SEARCH_RES_123_32,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID,
    S_PLMN_SEARCH_RES_VOID
ENDARRAY
BEGIN_STRUCT_ARRAY (S_EMO_MEAS_RES_000,4)
    S_EMO_MEAS_RES_000_000,
    S_EMO_MEAS_RES_000_001,
    S_EMO_MEAS_RES_000_002,
    S_EMO_MEAS_RES_000_003
ENDARRAY
BEGIN_STRUCT_ARRAY (S_EMO_MEAS_RES_001,1)
    S_EMO_MEAS_RES_001_000
ENDARRAY
BEGIN_STRUCT_ARRAY (S_EMO_MEAS_RES_002,2)
    S_EMO_MEAS_RES_002_000,
    S_EMO_MEAS_RES_002_001
ENDARRAY
BEGIN_STRUCT_ARRAY (S_EMO_MEAS_RES_003,21)
    S_EMO_MEAS_RES_003_000,
    S_EMO_MEAS_RES_003_001,
    S_EMO_MEAS_RES_003_002,
    S_EMO_MEAS_RES_003_003,
    S_EMO_MEAS_RES_003_004,
    S_EMO_MEAS_RES_003_005,
    S_EMO_MEAS_RES_003_006,
    S_EMO_MEAS_RES_003_007,
    S_EMO_MEAS_RES_003_008,
    S_EMO_MEAS_RES_003_009,
    S_EMO_MEAS_RES_003_010,
    S_EMO_MEAS_RES_003_011,
    S_EMO_MEAS_RES_003_012,
    S_EMO_MEAS_RES_003_013,
    S_EMO_MEAS_RES_003_014,
    S_EMO_MEAS_RES_003_015,
    S_EMO_MEAS_RES_003_016,
    S_EMO_MEAS_RES_003_017,
    S_EMO_MEAS_RES_003_018,
```

S\_EMO\_MEAS\_RES\_003\_019,  
S\_EMO\_MEAS\_RES\_003\_020  
ENDARRAY

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## 2.7 Message Structures

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BEGIN_MSTRUCT ("ncell",          S_NCELL_31_3_15)
    SET_COMP ("rx_lev_ncell", 31)
    SET_COMP ("bcch_ncell", 3)
    SET_COMP ("bsic", 15)
ENDSTRUCT

BEGIN_MSTRUCT ("multirate_conf", S_MULTIRATE_CONF_1)
    SET_COMP ("tlv_len", TLV_LEN_1)
    SET_COMP ("mr_vers", MR_VERS)
    SET_COMP ("nscb", NSCB)
    SET_COMP ("icmi", ICMI)
    SET_COMP ("st_mode", ST_MODE_1)
    SET_COMP ("set_amr", SET_AMR_1)
    SKIP_COMP ("cod_prop")
ENDSTRUCT

BEGIN_MSTRUCT ("pow_cmd", POW_CMD_7)
    SET_COMP ("pow", 7)
ENDSTRUCT

BEGIN_MSTRUCT ("chan_desc", CHAN_DESC_13_1)
    SET_COMP ("chan_type", TCH_F_NO_ADD)
    SET_COMP ("tn", TN_1)
    SET_COMP ("tsc", TSC_5)
    SET_COMP ("hop", HOP_YES)
    SKIP_COMP ("arfcn")
    SET_COMP ("maio", MAIO_0)
    SET_COMP ("hsn", HSN_1)
ENDSTRUCT

BEGIN_MSTRUCT ("chan_desc", CHANNEL_DESC_FACCH3_HALF)
    SET_COMP ("chan_type", TCH_H_S1)
    SET_COMP ("tn", TN_4)
    SET_COMP ("tsc", TSC_2)
    SET_COMP ("hop", HOP_YES)
    SKIP_COMP ("arfcn")
    SET_COMP ("maio", MAIO_12)
    SET_COMP ("hsn", HSN_14)
ENDSTRUCT

BEGIN_MSTRUCT ("chan_desc", CHANNEL_DESC_FACCH4_HALF)
    SET_COMP ("chan_type", TCH_H_S1)
    SET_COMP ("tn", TN_4)
    SET_COMP ("tsc", TSC_2)
    SET_COMP ("hop", HOP_YES)
    SKIP_COMP ("arfcn")
    SET_COMP ("maio", MAIO_2)
    SET_COMP ("hsn", HSN_4)
ENDSTRUCT

BEGIN_MSTRUCT ("freq_list_after", FREQ_LIST_AFTER_13_1)
    SET_COMP ("flist", CHAN_LIST_13_1)
ENDSTRUCT

BEGIN_MSTRUCT ("multirate_conf", S_MULTIRATE_CONF_2)
    SET_COMP ("tlv_len", TLV_LEN_2)
    SET_COMP ("mr_vers", MR_VERS)

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    SET_COMP ("nscb",      NSCB)
    SET_COMP ("icmi",     ICM1)
    SET_COMP ("st_mode",  ST_MODE_1)
    SET_COMP ("set_amr",  SET_AMR_2)
    SET_COMP ("cod_prop", SA_COD_PROP_M2)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",  S_MULTIRATE_CONF_3)
    SET_COMP ("tlv_len",  TLV_LEN_3)
    SET_COMP ("mr_vers",  MR_VERS)
    SET_COMP ("nscb",     NSCB)
    SET_COMP ("icmi",     ICM1)
    SET_COMP ("st_mode",  ST_MODE_1)
    SET_COMP ("set_amr",  SET_AMR_3)
    SET_COMP ("cod_prop",  SA_COD_PROP_M3)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",  S_MULTIRATE_CONF_4)
    SET_COMP ("tlv_len",  TLV_LEN_4)
    SET_COMP ("mr_vers",  MR_VERS)
    SET_COMP ("nscb",     NSCB)
    SET_COMP ("icmi",     ICM1)
    SET_COMP ("st_mode",  ST_MODE_1)
    SET_COMP ("set_amr",  SET_AMR_4)
    SET_COMP ("cod_prop",  SA_COD_PROP_M4)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",  S_MULTIRATE_CONF_4_ICMI)
    SET_COMP ("tlv_len",  TLV_LEN_4)
    SET_COMP ("mr_vers",  MR_VERS)
    SET_COMP ("nscb",     NSCB)
    SET_COMP ("icmi",     ICM1_S)
    SET_COMP ("st_mode",  ST_MODE_1)
    SET_COMP ("set_amr",  SET_AMR_4)
    SET_COMP ("cod_prop",  SA_COD_PROP_M4)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",  S_MULTIRATE_CONF_4_702A)
    SET_COMP ("tlv_len",  TLV_LEN_4)
    SET_COMP ("mr_vers",  MR_VERS)
    SET_COMP ("nscb",     NSCB)
    SET_COMP ("icmi",     ICM1_S)
    SET_COMP ("st_mode",  ST_MODE_1)
    SET_COMP ("set_amr",  SET_AMR_5)
    SET_COMP ("cod_prop",  SA_COD_PROP_M4)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",  S_MULTIRATE_CONF_4_702B)
    SET_COMP ("tlv_len",  TLV_LEN_4)
    SET_COMP ("mr_vers",  MR_VERS)
    SET_COMP ("nscb",     NSCB)
    SET_COMP ("icmi",     ICM1_S)
    SET_COMP ("st_mode",  ST_MODE_1)
    SET_COMP ("set_amr",  SET_AMR_0)
    SET_COMP ("cod_prop",  SA_COD_PROP_M4)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf",  S_MULTIRATE_CONF_4_702C)
    SET_COMP ("tlv_len",  TLV_LEN_4)
    SET_COMP ("mr_vers",  MR_VERS)
    SET_COMP ("nscb",     NSCB)
    SET_COMP ("icmi",     ICM1_S)
    SET_COMP ("st_mode",  ST_MODE_4)
    SET_COMP ("set_amr",  SET_AMR_3)

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        SET_COMP ("cod_prop", SA_COD_PROP_M4)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf", S_MULTIRATE_CONF_4_702D)
    SET_COMP ("tlv_len", TLV_LEN_4)
    SET_COMP ("mr_vers", MR_VERS)
    SET_COMP ("nscb", NSCB)
    SET_COMP ("icmi", ICMI_S)
    SET_COMP ("st_mode", ST_MODE_1)
    SET_COMP ("set_amr", SET_AMR_4)
    SET_COMP ("cod_prop", SA_COD_PROP_702D)
ENDSTRUCT
BEGIN_MSTRUCT ("multirate_conf", S_MULTIRATE_CONF_4_702E)
    SET_COMP ("tlv_len", TLV_LEN_3)
    SET_COMP ("mr_vers", MR_VERS)
    SET_COMP ("nscb", NSCB)
    SET_COMP ("icmi", ICMI_S)
    SET_COMP ("st_mode", ST_MODE_1)
    SET_COMP ("set_amr", SET_AMR_4)
    SET_COMP ("cod_prop", SA_COD_PROP_702E)
ENDSTRUCT
BEGIN_MSTRUCT ("page_mode", PAGING_NORMAL)
    SET_COMP ("pm", PAGING_NORM)
ENDSTRUCT
BEGIN_MSTRUCT ("start_time", START_TIME_1)
    SET_COMP ("t1", T1)
    SET_COMP ("t3", T3)
    SET_COMP ("t2", T2)
ENDSTRUCT
BEGIN_MSTRUCT ("cell_desc", CELL_DESC_1)
    SET_COMP ("bcch_arfcn_hi", BCCH_ARFCN_CELL_DESC_HI)
    SET_COMP ("ncc", BSIC_CELL_DESC_NCC)
    SET_COMP ("bcc", BSIC_CELL_DESC_BCC)
    SET_COMP ("bcch_arfcn_lo", BCCH_ARFCN_CELL_DESC_LO)
ENDSTRUCT
BEGIN_MSTRUCT ("cell_desc", CELL_DESC_BAD_BCCH)
    SET_COMP ("bcch_arfcn_hi", BCCH_ARFCN_CELL_DESC_HI_BAD)
    SET_COMP ("ncc", BSIC_CELL_DESC_NCC)
    SET_COMP ("bcc", BSIC_CELL_DESC_BCC)
    SET_COMP ("bcch_arfcn_lo", BCCH_ARFCN_CELL_DESC_LO_BAD)
ENDSTRUCT
BEGIN_MSTRUCT ("cell_opt_bcch", CELL_OPT_BCCH_1)
    SET_COMP ("pow_ctrl", POW_CTRL_YES)
    SET_COMP ("dtx_b", B_DTX_SHALL_USE)
    SET_COMP ("rlt", RLT_64)
ENDSTRUCT
BEGIN_MSTRUCT ("cell_select", CELL_SELECT_1)
    SET_COMP ("cell_resel_hyst", CELL_HYST_4_DB)
    SET_COMP ("ms_txpwr_max_cch", MS_TXPWR_MAX_CCH_02)
    SET_COMP ("acs", ACS_USE_S14)
    SET_COMP ("neci", NECI_YES)
    SET_COMP ("rxlev_access_min", RX_LEV_ACCESS_MIN_16)
ENDSTRUCT
BEGIN_MSTRUCT ("cell_select", CELL_SELECT_2)
    SET_COMP ("cell_resel_hyst", CELL_HYST_4_DB)
    SET_COMP ("ms_txpwr_max_cch", MS_TXPWR_MAX_CCH_02)
    SET_COMP ("acs", ACS_USE_S14)
    SET_COMP ("neci", NECI_YES)

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      SET_COMP ("rxlev_access_min",    RX_LEV_ACCESS_MIN_22)
ENDSTRUCT
BEGIN_MSTRUCT ("cell_select",        CELL_SELECT_3)
      SET_COMP ("cell_resel_hyst",     CELL_HYST_4_DB)
      SET_COMP ("ms_txpwr_max_cch",    MS_TXPWR_MAX_CCH_02)
      SET_COMP ("acs",                 ACS_USE_S14)
      SET_COMP ("neci",                NECI_YES)
      SET_COMP ("rxlev_access_min",    RX_LEV_ACCESS_MIN_24)
ENDSTRUCT
BEGIN_MSTRUCT ("chan_desc",          CHANNEL_DESC_SDCCH)
      SET_COMP ("chan_type",           SDCCH_4_S1)
      SET_COMP ("tn",                  TN_3)
      SET_COMP ("tsc",                 TSC_2)
      SET_COMP ("hop",                 HOP_YES)
      SKIP_COMP ("arfcn")
      SET_COMP ("maio",                MAIO_12)
      SET_COMP ("hsn",                 HSN_14)
ENDSTRUCT
BEGIN_MSTRUCT ("chan_desc",          CHANNEL_DESC_SDCCH2)
      SET_COMP ("chan_type",           SDCCH_4_S1)
      SET_COMP ("tn",                  TN_4)
      SET_COMP ("tsc",                 TSC_2)
      SET_COMP ("hop",                 HOP_NO)
      SET_COMP ("arfcn",               ARFCN_115)
      SKIP_COMP ("maio")
      SKIP_COMP ("hsn")
ENDSTRUCT
BEGIN_MSTRUCT ("chan_desc",          CHANNEL_DESC_SDCCH2_1800)
      SET_COMP ("chan_type",           SDCCH_4_S1)
      SET_COMP ("tn",                  TN_4)
      SET_COMP ("tsc",                 TSC_2)
      SET_COMP ("hop",                 HOP_NO)
      SET_COMP ("arfcn",               ARFCN_811)
      SKIP_COMP ("maio")
      SKIP_COMP ("hsn")
ENDSTRUCT
BEGIN_MSTRUCT ("chan_desc",          CHANNEL_DESC_SDCCH2_1800_1)
      SET_COMP ("chan_type",           SDCCH_4_S1)
      SET_COMP ("tn",                  TN_4)
      SET_COMP ("tsc",                 TSC_2)
      SET_COMP ("hop",                 HOP_NO)
      SET_COMP ("arfcn",               ARFCN_812)
      SKIP_COMP ("maio")
      SKIP_COMP ("hsn")
ENDSTRUCT
BEGIN_MSTRUCT ("chan_desc",          CHANNEL_DESC_SDCCH2_1900_1)
      SET_COMP ("chan_type",           SDCCH_4_S1)
      SET_COMP ("tn",                  TN_4)
      SET_COMP ("tsc",                 TSC_2)
      SET_COMP ("hop",                 HOP_NO)
      SET_COMP ("arfcn",               ARFCN_612)
      SKIP_COMP ("maio")
      SKIP_COMP ("hsn")
ENDSTRUCT
BEGIN_MSTRUCT ("chan_desc",          CHANNEL_DESC_BAD)
      SET_COMP ("chan_type",           SDCCH_4_S1)
      SET_COMP ("tn",                  TN_4)
      SET_COMP ("tsc",                 TSC_2)

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        SET_COMP ("hop",          HOP_NO)
        SET_COMP ("arfcn",       ARFCN_800)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
    ENDSTRUCT
    BEGIN_MSTRUCT ("chan_desc",   CHANNEL_DESC_FACCH2)
        SET_COMP ("chan_type",   TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("hop",        HOP_NO)
        SET_COMP ("arfcn",     ARFCN_115)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
    ENDSTRUCT
    BEGIN_MSTRUCT ("chan_desc",   CHANNEL_DESC_HALFRATE)
        SET_COMP ("chan_type",   TCH_H_S1)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("hop",        HOP_NO)
        SET_COMP ("arfcn",     ARFCN_115)
        SKIP_COMP ("maio")
        SKIP_COMP ("hsn")
    ENDSTRUCT
    BEGIN_MSTRUCT ("chan_desc",   CHANNEL_DESC_FACCH3)
        SET_COMP ("chan_type",   TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("hop",        HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",       MAIO_12)
        SET_COMP ("hsn",       HSN_14)
    ENDSTRUCT
    BEGIN_MSTRUCT ("chan_desc",   CHANNEL_DESC_FACCH4)
        SET_COMP ("chan_type",   TCH_F)
        SET_COMP ("tn",         TN_4)
        SET_COMP ("tsc",        TSC_2)
        SET_COMP ("hop",        HOP_YES)
        SKIP_COMP ("arfcn")
        SET_COMP ("maio",       MAIO_2)
        SET_COMP ("hsn",       HSN_4)
    ENDSTRUCT
    BEGIN_MSTRUCT ("chan_needed", CHANNEL_NEEDED_1)
        SET_COMP ("cn2",       CN_ANY_CHAN)
        SET_COMP ("cn1",       CN_ANY_CHAN)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ciph_key_num", CKSN_RESERVED)
        SET_COMP ("key_seq",   CKSN_7)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ciph_mode_set", CIPH_MODE_OFF)
        SET_COMP ("algo_ident", ALGO_0)
        SET_COMP ("sc",        CIPH_OFF)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ciph_mode_set", CIPH_MODE_ON)
        SET_COMP ("algo_ident", ALGO_0)
        SET_COMP ("sc",        CIPH_ON)
    ENDSTRUCT

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BEGIN_MSTRUCT ("ciph_res",          CIPH_RESP_NO_IMEI)
    SET_COMP ("cr",                 INC_IMEISV_NO)
ENDSTRUCT
BEGIN_MSTRUCT ("ciph_res",          CIPH_RESP_WITH_IMEI)
    SET_COMP ("cr",                 INC_IMEISV_YES)
ENDSTRUCT
BEGIN_MSTRUCT ("ctrl_chan_desc",    CTRL_CHAN_DESC_1)
    SET_COMP ("att",                CCD_ATT_YES)
    SET_COMP ("bs_ag_blks_res",     BS_AG_BLK_RES_5)
    SET_COMP ("ccch_conf",         CCD_CCCH_1_NOT_COMB)
    SET_COMP ("bs_pa_mfrms",       BS_PA_MFRMS_2)
    SET_COMP ("t3212",             T3212_36_MIN)
ENDSTRUCT
BEGIN_MSTRUCT ("freq_chan_seq",    FREQ_CHAN_SEQ_1)
    SET_COMP ("low_arfcn",         FREQ_CHAN_SEQ_1_LOW_ARFCN)
    SET_COMP ("inc_skip",          FREQ_CHAN_SEQ_1_INC_SKIP)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_122_2147)
    SET_COMP ("mcc",                MCC_122)
    SET_COMP ("mnc",                MSG_MNC_33)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_122_36_2147)
    SET_COMP ("mcc",                MCC_122)
    SET_COMP ("mnc",                MSG_MNC_36)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_122_35_2147)
    SET_COMP ("mcc",                MCC_122)
    SET_COMP ("mnc",                MSG_MNC_35)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_122_34_2147)
    SET_COMP ("mcc",                MCC_122)
    SET_COMP ("mnc",                MSG_MNC_34)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_122_2147_V)
    SET_COMP ("mcc",                MCC_122)
    SET_COMP ("mnc",                MSG_MNC_32)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_123_2147)
    SET_COMP ("mcc",                MCC_123)
    SET_COMP ("mnc",                MSG_MNC_32)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_123_2147_V)
    SET_COMP ("mcc",                MCC_123)
    SET_COMP ("mnc",                MSG_MNC_33)
    SET_COMP ("lac",                LAC_2147)
ENDSTRUCT
BEGIN_MSTRUCT ("loc_area_ident",    LOC_AREA_IDENT_123_2148)
    SET_COMP ("mcc",                MCC_123)
    SET_COMP ("mnc",                MSG_MNC_32)
    SET_COMP ("lac",                LAC_2148)
ENDSTRUCT

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BEGIN_MSTRUCT ("meas_result",      MEAS_RESULT_NCELL_3)
  SET_COMP ("ba_used",             BA_0)
  SET_COMP ("dtx_used",            DTX_NOT_USED)
  SET_COMP ("rxlev_full",          RX_LEV_20)
  SET_COMP ("meas_valid",          MEAS_VALID_YES)
  SET_COMP ("rxlev_sub",           RX_LEV_20)
  SET_COMP ("rxqual_full",         RX_QUAL_1)
  SET_COMP ("rxqual_sub",          RX_QUAL_1)
  SET_COMP ("num_ncell",           TWO_NCELLS)
  SET_COMP ("ncell",               AS_NCELLS_3_SACCH)
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result",      MEAS_RESULT_NCELL_1900)
  SET_COMP ("ba_used",             BA_1)
  SET_COMP ("dtx_used",            DTX_NOT_USED)
  SET_COMP ("rxlev_full",          RX_LEV_20)
  SET_COMP ("meas_valid",          MEAS_VALID_YES)
  SET_COMP ("rxlev_sub",           RX_LEV_20)
  SET_COMP ("rxqual_full",         RX_QUAL_1)
  SET_COMP ("rxqual_sub",          RX_QUAL_1)
  SET_COMP ("num_ncell",           SIX_NCELLS)
  SET_COMP ("ncell",               AS_NCELLS_3_SACCH_1900)
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result",      MEAS_RESULT_NCELL_3_DG_186)
  SET_COMP ("ba_used",             BA_0)
  SET_COMP ("dtx_used",            DTX_NOT_USED)
  SET_COMP ("rxlev_full",          RX_LEV_20)
  SET_COMP ("meas_valid",          MEAS_VALID_YES)
  SET_COMP ("rxlev_sub",           RX_LEV_20)
  SET_COMP ("rxqual_full",         RX_QUAL_1)
  SET_COMP ("rxqual_sub",          RX_QUAL_1)
  SET_COMP ("num_ncell",           TWO_NCELLS_7)
  SKIP_COMP ("ncell")
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result",      MEAS_RESULT_NCELL_0)
  SET_COMP ("ba_used",             BA_0)
  SET_COMP ("dtx_used",            DTX_NOT_USED)
  SET_COMP ("rxlev_full",          RX_LEV_20)
  SET_COMP ("meas_valid",          MEAS_VALID_YES)
  SET_COMP ("rxlev_sub",           RX_LEV_20)
  SET_COMP ("rxqual_full",         RX_QUAL_1)
  SET_COMP ("rxqual_sub",          RX_QUAL_1)
  SET_COMP ("num_ncell",           NO_NCELLS_7)
  SKIP_COMP ("ncell")
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result",      MEAS_RESULT_NCELL_6_FTA)
  SET_COMP ("ba_used",             BA_1)
  SET_COMP ("dtx_used",            DTX_NOT_USED)
  SET_COMP ("rxlev_full",          RX_LEV_20)
  SET_COMP ("meas_valid",          MEAS_VALID_YES)
  SET_COMP ("rxlev_sub",           RX_LEV_20)
  SET_COMP ("rxqual_full",         RX_QUAL_1)
  SET_COMP ("rxqual_sub",          RX_QUAL_1)
  SET_COMP ("num_ncell",           SIX_NCELLS)
  SET_COMP ("ncell",               AS_NCELLS_6_SACCH)
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result",      MEAS_RESULT_NCELL_FTA_B)
  SET_COMP ("ba_used",             BA_1)

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    SET_COMP ("dtx_used",    DTX_NOT_USED)
    SET_COMP ("rxlev_full",  RX_LEV_20)
    SET_COMP ("meas_valid",  MEAS_VALID_YES)
    SET_COMP ("rxlev_sub",   RX_LEV_20)
    SET_COMP ("rxqual_full", RX_QUAL_1)
    SET_COMP ("rxqual_sub",  RX_QUAL_1)
    SET_COMP ("num_ncell",   SIX_NCELLS)
    SET_COMP ("ncell",       AS_NCELLS_FTA_B)
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result", MEAS_RESULT_NCELL_FTA_C)
    SET_COMP ("ba_used",    BA_1)
    SET_COMP ("dtx_used",    DTX_NOT_USED)
    SET_COMP ("rxlev_full",  RX_LEV_20)
    SET_COMP ("meas_valid",  MEAS_VALID_YES)
    SET_COMP ("rxlev_sub",   RX_LEV_20)
    SET_COMP ("rxqual_full", RX_QUAL_1)
    SET_COMP ("rxqual_sub",  RX_QUAL_1)
    SET_COMP ("num_ncell",   SIX_NCELLS)
    SET_COMP ("ncell",       AS_NCELLS_FTA_C)
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result", MEAS_RESULT_NCELL_FTA_D)
    SET_COMP ("ba_used",    BA_1)
    SET_COMP ("dtx_used",    DTX_NOT_USED)
    SET_COMP ("rxlev_full",  RX_LEV_20)
    SET_COMP ("meas_valid",  MEAS_VALID_YES)
    SET_COMP ("rxlev_sub",   RX_LEV_20)
    SET_COMP ("rxqual_full", RX_QUAL_1)
    SET_COMP ("rxqual_sub",  RX_QUAL_1)
    SET_COMP ("num_ncell",   SIX_NCELLS)
    SET_COMP ("ncell",       AS_NCELLS_FTA_D)
ENDSTRUCT
BEGIN_MSTRUCT ("meas_result", MEAS_RESULT_NCELL_FTA_E)
    SET_COMP ("ba_used",    BA_1)
    SET_COMP ("dtx_used",    DTX_NOT_USED)
    SET_COMP ("rxlev_full",  RX_LEV_20)
    SET_COMP ("meas_valid",  MEAS_VALID_YES)
    SET_COMP ("rxlev_sub",   RX_LEV_20)
    SET_COMP ("rxqual_full", RX_QUAL_1)
    SET_COMP ("rxqual_sub",  RX_QUAL_1)
    SET_COMP ("num_ncell",   FOUR_NCELLS)
    SET_COMP ("ncell",       AS_NCELLS_FTA_E)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",    MOBILE_ALLOCATION_1)
    SET_COMP ("mac",           MOB_ALLOC_1)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",    MOBILE_ALLOCATION_ONE_CHAN)
    SET_COMP ("mac",           MOB_ALLOC_ONE_CHAN)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",    MOBILE_ALLOCATION_2)
    SET_COMP ("mac",           MOB_ALLOC_2)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",    MOBILE_ALLOCATION_3)
    SET_COMP ("mac",           MOB_ALLOC_3)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",    MOBILE_ALLOCATION_4)
    SET_COMP ("mac",           MOB_ALLOC_4)
ENDSTRUCT

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BEGIN_MSTRUCT ("mob_alloc",      MOBILE_ALLOCATION_EGSM)
    SET_COMP ("mac",              MOB_ALLOC_EGSM)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",      MOBILE_ALLOCATION_1800)
    SET_COMP ("mac",              MOB_ALLOC_1800)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_alloc",      MOBILE_ALLOCATION_1800_FAIL)
    SET_COMP ("mac",              MOB_ALLOC_1800_FAIL)
ENDSTRUCT

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note that a5\_1 has inverse logic

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BEGIN_MSTRUCT ("mob_class_2",    MOB_CLASS2_NORMAL)
    SET_COMP ("rev_lev",          PHASE_2)
    SET_COMP ("es_ind",          SUPPORTED)
    SET_COMP ("a5_1",            NOT_SUPPORTED)
    SET_COMP ("rf_pow_cap",      RF_CLASS_4)
    SET_COMP ("ps",              NOT_SUPPORTED)
    SET_COMP ("ss_screen",      SS_SCREEN_1)
    SET_COMP ("mt_pp_sms",      SUPPORTED)
    SET_COMP ("vbs",            NOT_SUPPORTED)
    SET_COMP ("vgcs",           NOT_SUPPORTED)
    SET_COMP ("egsm",           NOT_SUPPORTED)
    SET_COMP ("class3",         SUPPORTED)
    SET_COMP ("lcsva",          NOT_SUPPORTED)
    SET_COMP ("ucs2_treat",     SUPPORTED)
    SET_COMP ("solsa",          NOT_SUPPORTED)
    SET_COMP ("cmsp",           SUPPORTED)
    SET_COMP ("a5_3",           NOT_SUPPORTED)
    SET_COMP ("a5_2",           SUPPORTED)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_class_2",    MOB_CLASS2_900)
    SET_COMP ("rev_lev",          PHASE_2)
    SET_COMP ("es_ind",          SUPPORTED)
    SET_COMP ("a5_1",            NOT_SUPPORTED)
    SET_COMP ("rf_pow_cap",      RF_CLASS_4)
    SET_COMP ("ps",              NOT_SUPPORTED)
    SET_COMP ("ss_screen",      SS_SCREEN_1)
    SET_COMP ("mt_pp_sms",      SUPPORTED)
    SET_COMP ("vbs",            NOT_SUPPORTED)
    SET_COMP ("vgcs",           NOT_SUPPORTED)
    SET_COMP ("egsm",           NOT_SUPPORTED)
    SET_COMP ("class3",         SUPPORTED)
    SET_COMP ("lcsva",          NOT_SUPPORTED)
    SET_COMP ("ucs2_treat",     SUPPORTED)
    SET_COMP ("solsa",          NOT_SUPPORTED)
    SET_COMP ("cmsp",           SUPPORTED)
    SET_COMP ("a5_3",           NOT_SUPPORTED)
    SET_COMP ("a5_2",           SUPPORTED)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_class_2",    MOB_CLASS2_EGSM)
    SET_COMP ("rev_lev",          PHASE_2)
    SET_COMP ("es_ind",          SUPPORTED)
    SET_COMP ("a5_1",            NOT_SUPPORTED)
    SET_COMP ("rf_pow_cap",      RF_CLASS_4)
    SET_COMP ("ps",              NOT_SUPPORTED)
    SET_COMP ("ss_screen",      SS_SCREEN_1)

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    SET_COMP ("mt_pp_sms", SUPPORTED)
    SET_COMP ("vbs", NOT_SUPPORTED)
    SET_COMP ("vgcs", NOT_SUPPORTED)
    SET_COMP ("egsm", SUPPORTED)
    SET_COMP ("class3", SUPPORTED)
    SET_COMP ("lcsva", NOT_SUPPORTED)
    SET_COMP ("ucs2_treat", SUPPORTED)
    SET_COMP ("solsa", NOT_SUPPORTED)
    SET_COMP ("cmsp", SUPPORTED)
    SET_COMP ("a5_3", NOT_SUPPORTED)
    SET_COMP ("a5_2", NOT_SUPPORTED)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_class_2", MOB_CLASS_1800)
    SET_COMP ("rev_lev", PHASE_2)
    SET_COMP ("es_ind", SUPPORTED)
    SET_COMP ("a5_1", NOT_SUPPORTED)
    SET_COMP ("rf_pow_cap", RF_CLASS_0)
    SET_COMP ("ps", NOT_SUPPORTED)
    SET_COMP ("ss_screen", SS_SCREEN_1)
    SET_COMP ("mt_pp_sms", SUPPORTED)
    SET_COMP ("vbs", NOT_SUPPORTED)
    SET_COMP ("vgcs", NOT_SUPPORTED)
    SET_COMP ("egsm", NOT_SUPPORTED)
    SET_COMP ("class3", SUPPORTED)
    SET_COMP ("lcsva", NOT_SUPPORTED)
    SET_COMP ("ucs2_treat", SUPPORTED)
    SET_COMP ("solsa", NOT_SUPPORTED)
    SET_COMP ("cmsp", SUPPORTED)
    SET_COMP ("a5_3", NOT_SUPPORTED)
    SET_COMP ("a5_2", SUPPORTED)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_class_2", MOB_CLASS_1900)
    SET_COMP ("rev_lev", PHASE_2)
    SET_COMP ("es_ind", SUPPORTED)
    SET_COMP ("a5_1", NOT_SUPPORTED)
    SET_COMP ("rf_pow_cap", RF_CLASS_0)
    SET_COMP ("ps", NOT_SUPPORTED)
    SET_COMP ("ss_screen", SS_SCREEN_1)
    SET_COMP ("mt_pp_sms", SUPPORTED)
    SET_COMP ("vbs", NOT_SUPPORTED)
    SET_COMP ("vgcs", NOT_SUPPORTED)
    SET_COMP ("egsm", NOT_SUPPORTED)
    SET_COMP ("class3", SUPPORTED)
    SET_COMP ("lcsva", NOT_SUPPORTED)
    SET_COMP ("ucs2_treat", SUPPORTED)
    SET_COMP ("solsa", NOT_SUPPORTED)
    SET_COMP ("cmsp", SUPPORTED)
    SET_COMP ("a5_3", NOT_SUPPORTED)
    SET_COMP ("a5_2", SUPPORTED)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_class_2", MOB_CLASS2_212)
    SET_COMP ("rev_lev", PHASE_2)
    SET_COMP ("es_ind", SUPPORTED)
    SET_COMP ("a5_1", NOT_SUPPORTED)
    SET_COMP ("rf_pow_cap", RF_CLASS_4)
    SET_COMP ("ps", NOT_SUPPORTED)
    SET_COMP ("ss_screen", SS_SCREEN_1)
    SET_COMP ("mt_pp_sms", SUPPORTED)

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    SET_COMP ("vbs", NOT_SUPPORTED)
    SET_COMP ("vgcs", NOT_SUPPORTED)
    SET_COMP ("egsm", SUPPORTED)
    SET_COMP ("class3", SUPPORTED)
    SET_COMP ("lcsva", NOT_SUPPORTED)
    SET_COMP ("ucs2_treat", SUPPORTED)
    SET_COMP ("solsa", NOT_SUPPORTED)
    SET_COMP ("cmsp", SUPPORTED)
    SET_COMP ("a5_3", NOT_SUPPORTED)
    SET_COMP ("a5_2", SUPPORTED)
ENDSTRUCT
BEGIN_MSTRUCT ("mob_ident", MOBILE_IDENTITY_IMSI2)
    SET_COMP ("ident_type", TYPE_IMSI)
    SET_COMP ("odd_even", EVEN)
    SET_COMP ("ident_dig", M_IMSI_08158912)
    SKIP_COMP ("tmsi_1")
ENDSTRUCT
BEGIN_MSTRUCT ("mob_ident", MOBILE_IDENTITY_IMSI_HPLMN)
    SET_COMP ("ident_type", TYPE_IMSI)
    SET_COMP ("odd_even", ODD)
    SET_COMP ("ident_dig", M_IMSI_1233247114912)
    SKIP_COMP ("tmsi_1")
ENDSTRUCT
BEGIN_MSTRUCT ("mob_ident", MOBILE_IDENTITY_IMSI_TEST)
    SET_COMP ("ident_type", TYPE_IMSI)
    SET_COMP ("odd_even", ODD)
    SET_COMP ("ident_dig", M_IMSI_0010147114912)
    SKIP_COMP ("tmsi_1")
ENDSTRUCT
BEGIN_MSTRUCT ("mob_ident", MOBILE_IDENTITY_IMEISV)
    SET_COMP ("ident_type", ID_TYPE_IMEISV)
    SET_COMP ("odd_even", EVEN)
    SET_COMP ("ident_dig", M_IMEI)
    SKIP_COMP ("tmsi_1")
ENDSTRUCT
BEGIN_MSTRUCT ("mob_ident", MOBILE_IDENTITY_TMSI)
    SET_COMP ("ident_type", TYPE_TMSI)
    SET_COMP ("odd_even", EVEN)
    SKIP_COMP ("ident_dig")
    SET_COMP ("tmsi_1", TMSI_1)
ENDSTRUCT
BEGIN_MSTRUCT ("pow_cmd", POWER_COMMAND_05)
    SET_COMP ("pow", POW_05)
ENDSTRUCT
BEGIN_MSTRUCT ("pow_cmd_access", POW_05_HO)
    SET_COMP ("atc", POW_05_HO_ATC)
    SET_COMP ("pow", POW_05_HO_POW)
ENDSTRUCT
BEGIN_MSTRUCT ("rach_ctrl", RACH_CTRL_1)
    SET_COMP ("max_retrans", MAX_RETRANS_1)
    SET_COMP ("tx_integer", SPREAD_TRANS_3)
    SET_COMP ("cell_bar_access", BARRED_NO)
    SET_COMP ("re", REESTAB_YES)
    SET_COMP ("ac", ACC_0005)
ENDSTRUCT
BEGIN_MSTRUCT ("rach_ctrl", RACH_CTRL_2)
    SET_COMP ("max_retrans", MAX_RETRANS_1)
    SET_COMP ("tx_integer", SPREAD_TRANS_3)

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        SET_COMP ("cell_bar_access",    BARRED_YES)
        SET_COMP ("re",                REESTAB_YES)
        SET_COMP ("ac",                ACC_0005)
    ENDSTRUCT
    BEGIN_MSTRUCT ("req_ref",          REQUEST_REFERENCE_1)
        SET_COMP ("ra",                RA_1)
        SET_COMP ("t1",                T1)
        SET_COMP ("t3",                T3)
        SET_COMP ("t2",                T2)
    ENDSTRUCT
    BEGIN_MSTRUCT ("req_ref",          REQUEST_REFERENCE_2)
        SET_COMP ("ra",                RA_2)
        SET_COMP ("t1",                T1)
        SET_COMP ("t3",                T3)
        SET_COMP ("t2",                T2)
    ENDSTRUCT
    BEGIN_MSTRUCT ("req_ref",          REQUEST_REFERENCE_3)
        SET_COMP ("ra",                RA_3)
        SET_COMP ("t1",                T1)
        SET_COMP ("t3",                T3)
        SET_COMP ("t2",                T2)
    ENDSTRUCT
    BEGIN_MSTRUCT ("synch_ind",        SYNCH_IND_0)
        SET_COMP ("nci",                NCI_0)
        SET_COMP ("rot",                ROT_0)
        SET_COMP ("si",                SYI_NON_SYNCH)
    ENDSTRUCT
    BEGIN_MSTRUCT ("synch_ind",        SYNCH_IND_1)
        SET_COMP ("nci",                NCI_1)
        SET_COMP ("rot",                ROT_1)
        SET_COMP ("si",                SYI_NORM_SYNCH)
    ENDSTRUCT
    BEGIN_MSTRUCT ("synch_ind",        SYNCH_IND_2)
        SET_COMP ("nci",                NCI_1)
        SET_COMP ("rot",                ROT_1)
        SET_COMP ("si",                SYI_PRE_SYNCH)
    ENDSTRUCT
    BEGIN_MSTRUCT ("time_advance",     TIMING_ADVANCE_27)
        SET_COMP ("ta",                TIME_ADV_27)
    ENDSTRUCT
    BEGIN_MSTRUCT ("time_advance",     TIMING_ADVANCE_10)
        SET_COMP ("ta",                TIME_ADV_10)
    ENDSTRUCT
    BEGIN_MSTRUCT ("si3_rest_oct",     S_SI3_REST_EMPTY)
        SKIP_COMP ("opt_sel_par" )
        SKIP_COMP ("pow_offs" )
        SKIP_COMP ("si2ter_ind" )
        SKIP_COMP ("es_ind_tag" )
        SKIP_COMP ("if_and_where" )
        SKIP_COMP ("gprs_indic" )
    ENDSTRUCT
    BEGIN_MSTRUCT ("si4_rest_oct",     S_SI4_REST_EMPTY)
        SKIP_COMP ("opt_sel_par" )
        SKIP_COMP ("pow_offs" )
        SKIP_COMP ("gprs_indic" )
        SKIP_COMP ("lsa_param" )
        SKIP_COMP ("cell_ident" )

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        SKIP_COMP ("Isa_id_info" )
    ENDSTRUCT
    BEGIN_MSTRUCT ("si3_rest_oct",      S_SI3_REST_LOW)
        SET_COMP ("opt_sel_par", S_SI34_OPT_SEL_PAR)
        SKIP_COMP ("pow_offs" )
        SKIP_COMP ("si2ter_ind" )
        SKIP_COMP ("es_ind_tag" )
        SKIP_COMP ("if_and_where" )
        SKIP_COMP ("gprs_indic" )
    ENDSTRUCT
    BEGIN_MSTRUCT ("si4_rest_oct",      S_SI4_REST_LOW)
        SET_COMP ("opt_sel_par", S_SI34_OPT_SEL_PAR)
        SKIP_COMP ("pow_offs" )
        SKIP_COMP ("gprs_indic" )
        SKIP_COMP ("Isa_param" )
        SKIP_COMP ("cell_ident" )
        SKIP_COMP ("Isa_id_info" )
    ENDSTRUCT
    BEGIN_MSTRUCT ("opt_sel_par",      S_SI34_OPT_SEL_PAR)
        SET_COMP ("cell_bar_qual",  CBQ_YES)
        SKIP_COMP ("cell_resele_offs" )
        SKIP_COMP ("temp_offs" )
        SKIP_COMP ("penalty_time" )
    ENDSTRUCT
    BEGIN_MSTRUCT ("ia_rest_oct",      S_IA_REST_1)
        SET_COMP ("ia_rest_oct_par", S_IA_REST_OCT_PAR)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ia_rest_oct_par",  S_IA_REST_OCT_PAR)
        SET_COMP ("flag", 0x00)
        SET_COMP ("ia_freq_par", S_IA_FREQ_PAR)
        SKIP_COMP ("ia_assign_par")
    ENDSTRUCT
    BEGIN_MSTRUCT ("ia_freq_par",      S_IA_FREQ_PAR)
        SET_COMP ("fp_len", 0x02)
        SET_COMP ("maio", 0x10)
        SET_COMP ("mac", A_MAC_IA)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ncell",           S_NCELL_32_0_6)
        SET_COMP ("rx_lev_ncell", 0x20)
        SET_COMP ("bcch_ncell", 0x00)
        SET_COMP ("bsic", 0x06)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ncell",           S_NCELL_63_8_1)
        SET_COMP ("rx_lev_ncell", 63)
        SET_COMP ("bcch_ncell", 8)
        SET_COMP ("bsic", 1)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ncell",           S_NCELL_63_3_7)
        SET_COMP ("rx_lev_ncell", 63)
        SET_COMP ("bcch_ncell", 3)
        SET_COMP ("bsic", 7)
    ENDSTRUCT
    BEGIN_MSTRUCT ("ncell",           S_NCELL_61_6_5)
        SET_COMP ("rx_lev_ncell", 61)
        SET_COMP ("bcch_ncell", 6)
        SET_COMP ("bsic", 5)
    ENDSTRUCT

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BEGIN_MSTRUCT ("ncell",          S_NCELL_56_7_3)
    SET_COMP ("rx_lev_ncell", 56)
    SET_COMP ("bcch_ncell",  7)
    SET_COMP ("bsic",        3)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_36_5_1)
    SET_COMP ("rx_lev_ncell", 36)
    SET_COMP ("bcch_ncell",  5)
    SET_COMP ("bsic",        1)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_32_1_3)
    SET_COMP ("rx_lev_ncell", 32)
    SET_COMP ("bcch_ncell",  1)
    SET_COMP ("bsic",        3)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_42_1_5)
    SET_COMP ("rx_lev_ncell", 0x2A)
    SET_COMP ("bcch_ncell",  0x01)
    SET_COMP ("bsic",        0x05)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_42_0_5)
    SET_COMP ("rx_lev_ncell", 0x2A)
    SET_COMP ("bcch_ncell",  0x00)
    SET_COMP ("bsic",        0x05)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_63_3_9)
    SET_COMP ("rx_lev_ncell", 63)
    SET_COMP ("bcch_ncell",  3)
    SET_COMP ("bsic",        9)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_63_6_15)
    SET_COMP ("rx_lev_ncell", 63)
    SET_COMP ("bcch_ncell",  6)
    SET_COMP ("bsic",       15)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_61_5_11)
    SET_COMP ("rx_lev_ncell", 61)
    SET_COMP ("bcch_ncell",  5)
    SET_COMP ("bsic",       11)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_45_1_9)
    SET_COMP ("rx_lev_ncell", 45)
    SET_COMP ("bcch_ncell",  1)
    SET_COMP ("bsic",        9)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_35_4_13)
    SET_COMP ("rx_lev_ncell", 35)
    SET_COMP ("bcch_ncell",  4)
    SET_COMP ("bsic",       13)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_0_0_0)
    SKIP_COMP ("rx_lev_ncell")
    SKIP_COMP ("bcch_ncell")
    SKIP_COMP ("bsic")
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_63_4_9)
    SET_COMP ("rx_lev_ncell", 0x3F)
    SET_COMP ("bcch_ncell",  0x04)
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        SET_COMP ("bsic",      0x09)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_63_1_15)
        SET_COMP ("rx_lev_ncell", 0x3F)
        SET_COMP ("bcch_ncell", 0x01)
        SET_COMP ("bsic",      0x0F)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_63_2_13)
        SET_COMP ("rx_lev_ncell", 63)
        SET_COMP ("bcch_ncell", 2)
        SET_COMP ("bsic",      13)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_57_0_11)
        SET_COMP ("rx_lev_ncell", 0x39)
        SET_COMP ("bcch_ncell", 0x00)
        SET_COMP ("bsic",      0x0B)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_57_3_11)
        SET_COMP ("rx_lev_ncell", 0x39)
        SET_COMP ("bcch_ncell", 0x03)
        SET_COMP ("bsic",      0x0B)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_38_6_9)
        SET_COMP ("rx_lev_ncell", 0x26)
        SET_COMP ("bcch_ncell", 0x06)
        SET_COMP ("bsic",      0x09)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_32_5_15)
        SET_COMP ("rx_lev_ncell", 0x20)
        SET_COMP ("bcch_ncell", 0x05)
        SET_COMP ("bsic",      0x0F)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_28_1_13)
        SET_COMP ("rx_lev_ncell", 0x1C)
        SET_COMP ("bcch_ncell", 0x01)
        SET_COMP ("bsic",      0x0D)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_28_3_13)
        SET_COMP ("rx_lev_ncell", 0x1C)
        SET_COMP ("bcch_ncell", 0x03)
        SET_COMP ("bsic",      0x0D)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_63_7_9)
        SET_COMP ("rx_lev_ncell", 0x3F)
        SET_COMP ("bcch_ncell", 0x07)
        SET_COMP ("bsic",      0x09)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_60_1_15)
        SET_COMP ("rx_lev_ncell", 0x3C)
        SET_COMP ("bcch_ncell", 0x01)
        SET_COMP ("bsic",      0x0F)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",      S_NCELL_59_4_13)
        SET_COMP ("rx_lev_ncell", 0x3B)
        SET_COMP ("bcch_ncell", 0x04)
        SET_COMP ("bsic",      0x0D)
ENDSTRUCT
```

```
BEGIN_MSTRUCT ("ncell",          S_NCELL_51_0_11)
    SET_COMP ("rx_lev_ncell", 0x33)
    SET_COMP ("bcch_ncell",  0x00)
    SET_COMP ("bsic",        0x0B)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell", S_NCELL_34_5_9)
    SET_COMP ("rx_lev_ncell", 0x22)
    SET_COMP ("bcch_ncell",  0x05)
    SET_COMP ("bsic",        0x09)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_63_2_9)
    SET_COMP ("rx_lev_ncell", 0x3F)
    SET_COMP ("bcch_ncell",  0x02)
    SET_COMP ("bsic",        0x09)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_63_0_15)
    SET_COMP ("rx_lev_ncell", 0x3F)
    SET_COMP ("bcch_ncell",  0x00)
    SET_COMP ("bsic",        0x0F)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_63_3_13)
    SET_COMP ("rx_lev_ncell", 0x3F)
    SET_COMP ("bcch_ncell",  0x03)
    SET_COMP ("bsic",        0x0D)
ENDSTRUCT
BEGIN_MSTRUCT ("ncell",          S_NCELL_57_1_11)
    SET_COMP ("rx_lev_ncell", 0x39)
    SET_COMP ("bcch_ncell",  0x01)
    SET_COMP ("bsic",        0x0B)
ENDSTRUCT
BEGIN_MSTRUCT ("freq_list_after", S_FREQ_LIST_AFTER_2)
    SET_COMP ("flist",        A_FREQ_LIST_AFTER_2)
ENDSTRUCT
BEGIN_MSTRUCT ("freq_list_before", S_FREQ_LIST_BEFORE_1)
    SET_COMP ("flist",        A_FREQ_LIST_BEFORE_1)
ENDSTRUCT
BEGIN_MSTRUCT ("ext_meas_res",    S_EXT_MEAS_RES_000)
    SET_COMP ("sc_used",        CONST_1)
    SET_COMP ("dtx_used",      CONST_1)
    SET_COMP ("rx_lev_ncell",  A_EXT_MEAS_RES_000_LEV)
ENDSTRUCT
BEGIN_MSTRUCT ("ext_meas_res",    S_EXT_MEAS_RES_001)
    SET_COMP ("sc_used",        CONST_0)
    SET_COMP ("dtx_used",      CONST_1)
    SET_COMP ("rx_lev_ncell",  A_EXT_MEAS_RES_001_LEV)
ENDSTRUCT
BEGIN_MSTRUCT ("ext_meas_res",    S_EXT_MEAS_RES_002)
    SET_COMP ("sc_used",        CONST_0)
    SET_COMP ("dtx_used",      CONST_1)
    SET_COMP ("rx_lev_ncell",  A_EXT_MEAS_RES_002_LEV)
ENDSTRUCT
BEGIN_MSTRUCT ("ext_meas_res",    S_EXT_MEAS_RES_003)
    SET_COMP ("sc_used",        CONST_1)
    SET_COMP ("dtx_used",      CONST_1)
    SET_COMP ("rx_lev_ncell",  A_EXT_MEAS_RES_003_LEV)
ENDSTRUCT
```

## 3 TEST CASES

### 3.1 Routing (internal)

#### 3.1.1 RR000: Setup the routing and PCO view for the RR test

**Description:** Routings for the RR tests are set. All stored BCCH info are cleared.

**Preamble:** none

	MM	RR	PL/DL
COMMAND (TAP RESET)			
COMMAND (MMI RESET)			
COMMAND (CC RESET)			
COMMAND (SS RESET)			
COMMAND (SMS RESET)			
COMMAND (MM RESET)			
COMMAND (RR RESET)			
COMMAND (DL RESET)			
COMMAND (SIM RESET)			
COMMAND (RRLP RESET)			
COMMAND (PL RESET)			
COMMAND (TAP REDIRECT CLEAR)			
COMMAND (MMI REDIRECT CLEAR)			
COMMAND (CC REDIRECT CLEAR)			
COMMAND (SS REDIRECT CLEAR)			
COMMAND (SMS REDIRECT CLEAR)			
COMMAND (MM REDIRECT CLEAR)			
COMMAND (RR REDIRECT CLEAR)			
COMMAND (DL REDIRECT CLEAR)			
COMMAND (SIM REDIRECT CLEAR)			
COMMAND (RRLP REDIRECT CLEAR)			
COMMAND (PL REDIRECT CLEAR)			
COMMAND (MMI REDIRECT CC NULL)			
COMMAND (MMI REDIRECT SS NULL)			
COMMAND (MMI REDIRECT SMS NULL)			
COMMAND (MMI REDIRECT PL NULL)			
COMMAND (MMI REDIRECT RR NULL)			
COMMAND (MM REDIRECT MMI NULL)			
COMMAND (MM REDIRECT RR NULL)			
COMMAND (MM REDIRECT DL NULL)			
COMMAND (RR REDIRECT PL TAP)			
COMMAND (RR REDIRECT DL TAP)			
COMMAND (RR REDIRECT MM TAP)			
COMMAND (RR REDIRECT LC TAP)			
COMMAND (RR REDIRECT RRLP TAP)			
COMMAND (RR REDIRECT MMI TAP)			
COMMAND (RR CONFIG NO_SYS_TIME)			
COMMAND (DL REDIRECT RR NULL)			
COMMAND (DL REDIRECT PL NULL)			
COMMAND (PL REDIRECT RR NULL)			

```

COMMAND (PL REDIRECT DL NULL)
COMMAND (PL REDIRECT MMI NULL)
|
COMMAND (TAP REDIRECT TAP RR)
COMMAND (RR CONFIG CLEAR_BCCH_INFO)
(1) | RR_SYNC_IND |
| (clear BCCH info) |
| *<===== |
| |

```

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) RR_SYNC_IND	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	S_BCCH_INFO_CLEAR
	syncchs	NOT_PRESENT_16BIT
	chm	NOT_USED

History: 04.07.97 PZ Initial  
 24-Mar-03 MSB clear all stored BCCH infos.

## 3.2 Cell Selection

### 3.2.1 RR001: Start cell selection (std = 1)

**Description:** A cell selection without BCCH information is started.

Variant A: no SIM is inserted.

Variant B: SIM is inserted, test SIM card, IMSI in the HPLMN, TMSI

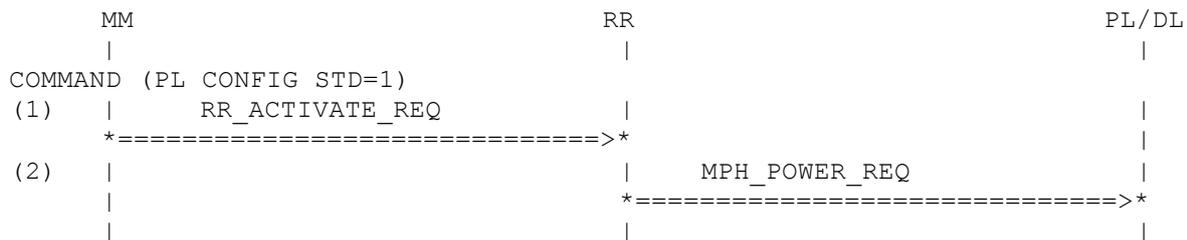
Variant C: SIM is inserted, normal SIM card, IMSI in the HPLMN, no TMSI

Variant D: SIM is inserted, test SIM card, IMSI in the HPLMN, no TMSI

Variant E: SIM is inserted, normal SIM card, IMSI in the HPLMN, TMSI

**Preamble:** RR000

**Variants:** <A>....<E>



#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ		
<A>	plmn	PLMN_ID_EMPTY
<B>	plmn	PLMN_ID_123
<C>	plmn	PLMN_ID_123
<D>	plmn	PLMN_ID_123
<E>	plmn	PLMN_ID_123
<A>	op	OP_MODE_EMPTY
<B>	op	OP_MODE_TEST_SIM
<C>	op	OP_MODE_NORMAL
<D>	op	OP_MODE_TEST_SIM
<E>	op	OP_MODE_NORMAL
<A>	cksn	CKSN_NOT_PRES
<B>	cksn	CKSN_NOT_PRES
<C>	cksn	CKSN_NOT_PRES
<D>	cksn	CKSN_NOT_PRES
<E>	cksn	CKSN_6
<A>	kcv	KCV_EMPTY
<B>	kcv	KCV_12345678
<C>	kcv	KCV_12345678
<D>	kcv	KCV_12345678
<E>	kcv	KCV_12345678
<A>	acc	ACC_CTRL_CLASS_0000
<B>	acc	ACC_CTRL_CLASS_0008
<C>	acc	ACC_CTRL_CLASS_0008
<D>	acc	ACC_CTRL_CLASS_4000
<E>	acc	ACC_CTRL_CLASS_0000
<A>	imsi_struct	MOBILE_ID_NOT_SET
<B>	imsi_struct	MOBILE_ID_IMSI_HPLMN
<C>	imsi_struct	MOBILE_ID_IMSI_HPLMN
<D>	imsi_struct	MOBILE_ID_IMSI_HPLMN
<E>	imsi_struct	MOBILE_ID_IMSI_HPLMN
<A>	tmsi_struct	MOBILE_ID_NOT_SET

<B>	tmsi_struct	MOBILE_ID_TMSI
<C>	tmsi_struct	MOBILE_ID_NOT_SET
<D>	tmsi_struct	MOBILE_ID_NOT_SET
<E>	tmsi_struct	MOBILE_ID_TMSI
<A>	thplmn	TIME_HPLMN_EMPTY
<B>	thplmn	TIME_HPLMN_VALID
<C>	thplmn	TIME_HPLMN_VALID
<D>	thplmn	TIME_HPLMN_VALID
<E>	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED

## (2) MPH\_POWER\_REQ

pch_interrupt	PCH_INTERRUPT
freq_bands	NOT_USED

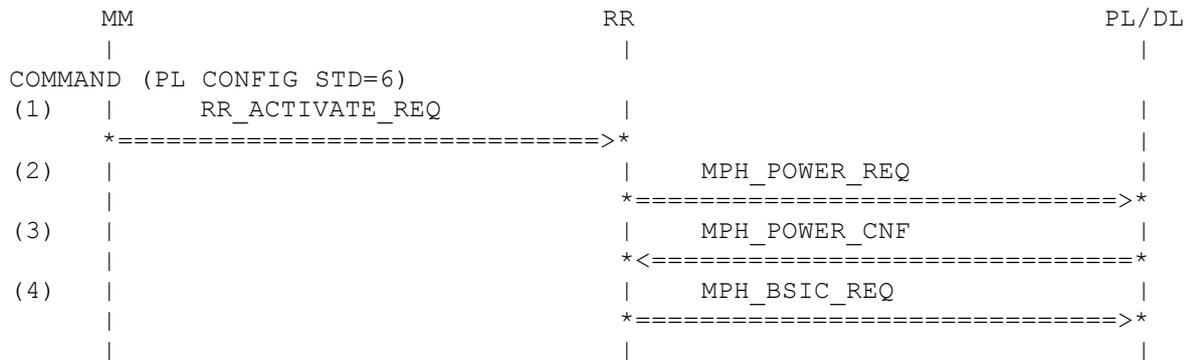
History:	04-Jul-97	DL	Initial
	31-Aug-98	LE	rr_activate_req adapted
	06-Jan-99	LE	optimised cell selection
	12-May-00	DG	RR_ACTIVATE_REQ: cell_test added
	19-Jan-01	DG	RR_ACTIVATE_REQ: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

**3.2.2 RR002: Start cell selection with or without BCCH information (std 6)**

**Description:** A cell selection without BCCH information is started.  
 Variant A: no BCCH information on SIM, , PCM sets channel.  
 Variant B: BCCH information on SIM GSM 900 channel not set, PCM sets channel  
 Variant C: BCCH information on SIM GSM 900 channel set, PCM sets channel

**Preamble:** RR000

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



**Parametrization**

Primitive	Parameter	Value	
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123	
	op	OP_MODE_NORMAL	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_12345678	
	acc	ACC_CTRL_CLASS_0008	
	imsi_struct	MOBILE_ID_IMSI_HPLMN	
	tmsi_struct	MOBILE_ID_TMSI	
	thplmn	TIME_HPLMN_VALID	
	<A>	bcch_info	S_BCCH_INFO_EMPTY
	<B>	bcch_info	S_BCCH_INFO_NO_24
	<C>	bcch_info	S_BCCH_INFO_24
		cell_test	CELL_TEST_DISABLE
		gprs_indication	NOT_USED
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT	
	freq_bands	NOT_USED	
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_2	
	arfcn	ARFCN_24_527	
	rx_lev	RXLEV_22_21	
(4) MPH_BSIC_REQ	<A>	arfcn	ARFCN_527
	<B>	arfcn	ARFCN_527
	<C>	arfcn	ARFCN_24
History:	15-Feb-00	LE	Initialselection
	12-May-00	DG	RR_ACTIVATE_REQ: cell_test added
	19-Jan-01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info

05-Jun-01

MSE

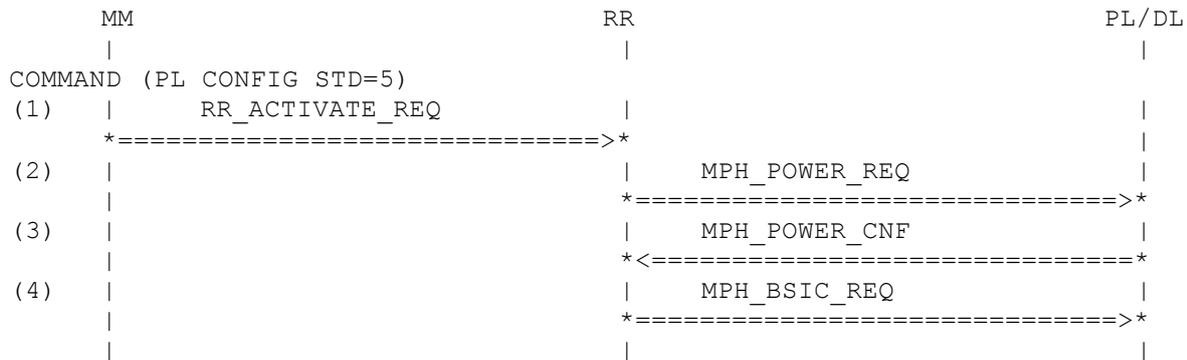
added  
adapted to TAP2

**3.2.3 RR003: Start cell selection with or without BCCH information (std 5)**

**Description:** A cell selection without BCCH information is started.  
 Variant A: no BCCH information on SIM, ignore PCM.  
 Variant B: BCCH information on SIM GSM 900 channel not set, PCM sets no channel  
 Variant C: BCCH information on SIM GSM 900 channel set, PCM sets channel

**Preamble:** RR000

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



**Parametrization**

Primitive	Parameter	Value	
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123	
	op	OP_MODE_NORMAL	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_12345678	
	acc	ACC_CTRL_CLASS_0008	
	imsi_struct	MOBILE_ID_IMSI_HPLMN	
	tmsi_struct	MOBILE_ID_TMSI	
	thplmn	TIME_HPLMN_VALID	
	<A>	bcch_info	S_BCCH_INFO_EMPTY
	<B>	bcch_info	S_BCCH_INFO_NO_24
	<C>	bcch_info	S_BCCH_INFO_24
		cell_test	CELL_TEST_DISABLE
		gprs_indication	NOT_USED
	(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
freq_bands		NOT_USED	
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_2	
	arfcn	ARFCN_24_527	
	rx_lev	RXLEV_22_21	
(4) MPH_BSIC_REQ	arfcn	ARFCN_24	
History:	15-Feb-00	LE	Initial
	12-May-00	DG	RR_ACTIVATE_REQ: cell_test added
	19-Jan-01	DG	RR_ACTIVATE_REQ: gprs_indication added
			MPH_BSIC_REQ: cell_type, timing_info added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.4 RR004: Start cell selection without BCCH information (std 4)

**Description:** A cell selection without BCCH information is started.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=4)		
(1) RR_ACTIVATE_REQ		
	*=====>*	
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND (SI 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND (SI 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND (SI 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND (SI 4)	
	*<=====*	
(10)	MPH_CLASSMARK_REQ	
	*=====>*	
(11)	MPH_IDLE_REQ	
	*=====>*	
(12)	MPH_CBCH_REQ	
	*=====>*	
(13)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(14) RR_ACTIVATE_CNF		
	*<=====*	
(15)	MPH_IDENTITY_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_2 A_ARFCN_527_601 RXLEV_22_21
(4) MPH_BSIC_REQ	arfcn	ARFCN_527
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_527 BSIC_6 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl si1_rest_oct }	ARFCN_527 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_ALLOC_1024 RACH_CTRL_1 NOT_USED
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_527 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch	ARFCN_527 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1

	cell_select rach_ctrl si3_rest_oct }	CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc CHANNEL_DESC_SDCCH2_1800 mob_alloc si4_rest_oct }	ARFCN_527 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_1  NOT_USED S_SI4_REST_EMPTY
(10) MPH_CLASSMARK_REQ	classmark	CLASS_MS_1800
(11) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_527 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_23 PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_2 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_1 NOT_USED CONST_0 NOT_USED
(12) MPH_CBCH_REQ	cbch PRR_CHANNEL_TYPE_3_CB_1800	
(13) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_EMPTY NOT_USED
(14) RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_NORMAL MM_INFO_1 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO

(15) MPH\_IDENTITY\_REQ

mid

S\_MS\_ID\_IMSI\_HPLMN\_TMSI

History:

27-Jun-02

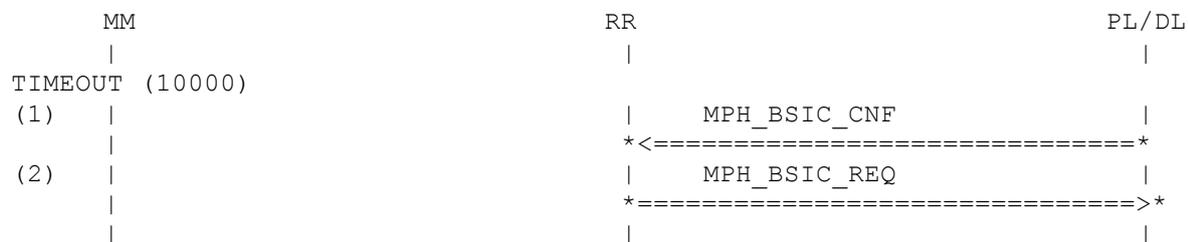
MPA

initial

### 3.2.5 RR010 : Network Sync Timeout

**Description:** PL cannot synchronise to the specified ARFCN and so returns a MPH\_BSIC\_CNF with the cause BCCH\_NO\_AVAIL. RR then proceeds to send the next BSIC id to be read.

**Preamble:** RR002C



**Parametrization**

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	MPH_BSIC_CNF	arfcn	NOT_USED
		bsic	NOT_USED
		cs	CS_NO_BCCH_AVAIL
(2)	MPH_BSIC_REQ	arfcn	ARFCN_527

History:            19-Mar-03            ZMM            initial

### 3.2.6 RR011: Listen to SYS INFO (without SIM)

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages.

Variant A: cell is barred.

Variant B: C1 < 0

Variant C: BCCH ok

Variant D: BCCH ok, low priority cell

**Preamble:** RR001A

**Variants:** <A>....<D>

	MM	RR	PL/DL
(1)		MPH_POWER_CNF	
		*<=====*	
(2)		MPH_BSIC_REQ	
		*=====*>	
(3)		MPH_BSIC_CNF	
		*<=====*	
(4)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(5)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(6)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	

#### Parametrization

Primitive	Parameter	Value
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	<A> rx_lev	RXLEV_22_21_20
	<B> rx_lev	RXLEV_10_8_4
	<C> rx_lev	RXLEV_22_21_20
<D> rx_lev	RXLEV_22_21_20	
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
ti	TI_0	

	cell_chan_desc	CELL_CHAN_DESC_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
	}	
(7) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
<A>	neigh_cell_desc	NCELL_DESC_1
<B>	neigh_cell_desc	NCELL_DESC_1
<C>	neigh_cell_desc	NCELL_DESC_1
<D>	neigh_cell_desc	NCELL_DESC_8
	ncc_permit	NCC_PERMITTED_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
	}	
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<A>	si3_rest_oct	S_SI3_REST_EMPTY
<B>	si3_rest_oct	S_SI3_REST_EMPTY
<C>	si3_rest_oct	S_SI3_REST_EMPTY
<D>	si3_rest_oct	S_SI3_REST_LOW
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4

		ti	TI_0
		loc_area_ident	LOC_AREA_IDENT_123_2147
		cell_select	CELL_SELECT_1
<A>		rach_ctrl	RACH_CTRL_2
<B>		rach_ctrl	RACH_CTRL_1
<C>		rach_ctrl	RACH_CTRL_1
<D>		rach_ctrl	RACH_CTRL_1
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
<A>		si4_rest_oct	S_SI4_REST_EMPTY
<B>		si4_rest_oct	S_SI4_REST_EMPTY
<C>		si4_rest_oct	S_SI4_REST_EMPTY
<D>		si4_rest_oct	S_SI4_REST_LOW
		}	
History:	04.07.97	DL	Initial
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info
			added
	08.02.01	DG	si3/4_rest_oct:
			SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

### 3.2.7 RR012: Listen to SYS INFOs (with SIM)

**Description:** Listening to a BCCH carrier.  
 Variant A: cell is barred  
 Variant B: C1 < 0  
 Variant C: wrong PLMN  
 Variant D: BCCH ok  
 Variant E: BCCH ok, but low priority cell  
 Variant F: BCCH ok with CBCH

**Preamble:** RR001B

**Variants:** <A>....<F>

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(5)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(6)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(7)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
<A>	rx_lev	RXLEV_22_21_20
<B>	rx_lev	RXLEV_10_8_4
<C>	rx_lev	RXLEV_22_21_20
<D>	rx_lev	RXLEV_22_21_20
<E>	rx_lev	RXLEV_22_21_20
<F>	rx_lev	RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_ERROR
(4) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR

	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
	}	
(5) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
<A>	neigh_cell_desc	NCELL_DESC_2
<B>	neigh_cell_desc	NCELL_DESC_2
<C>	neigh_cell_desc	NCELL_DESC_2
<D>	neigh_cell_desc	NCELL_DESC_2
<E>	neigh_cell_desc	NCELL_DESC_1
<F>	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
	}	
(6) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
<A>	loc_area_ident	LOC_AREA_IDENT_123_2147
<B>	loc_area_ident	LOC_AREA_IDENT_123_2147
<C>	loc_area_ident	LOC_AREA_IDENT_122_2147
<D>	loc_area_ident	LOC_AREA_IDENT_123_2147
<E>	loc_area_ident	LOC_AREA_IDENT_123_2147
<F>	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1

<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
<A>	si3_rest_oct	S_SI3_REST_EMPTY
<B>	si3_rest_oct	S_SI3_REST_EMPTY
<C>	si3_rest_oct	S_SI3_REST_EMPTY
<D>	si3_rest_oct	S_SI3_REST_EMPTY
<E>	si3_rest_oct	S_SI3_REST_LOW
<F>	si3_rest_oct	S_SI3_REST_EMPTY

## (7) MPH\_UNITDATA\_IND

	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
<A>	loc_area_ident	LOC_AREA_IDENT_123_2147
<B>	loc_area_ident	LOC_AREA_IDENT_123_2147
<C>	loc_area_ident	LOC_AREA_IDENT_122_2147
<D>	loc_area_ident	LOC_AREA_IDENT_123_2147
<E>	loc_area_ident	LOC_AREA_IDENT_123_2147
<F>	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
<A>	chan_desc	NOT_USED
<B>	chan_desc	NOT_USED
<C>	chan_desc	NOT_USED
<D>	chan_desc	NOT_USED
<E>	chan_desc	NOT_USED
<F>	chan_desc	CHANNEL_DESC_SDCCH2
	mob_alloc	NOT_USED
<A>	si4_rest_oct	S_SI4_REST_EMPTY
<B>	si4_rest_oct	S_SI4_REST_EMPTY
<C>	si4_rest_oct	S_SI4_REST_EMPTY
<D>	si4_rest_oct	S_SI4_REST_EMPTY
<E>	si4_rest_oct	S_SI4_REST_LOW
<F>	si4_rest_oct	S_SI4_REST_EMPTY

History:	04.07.97	DL	Initial
	10.04.00	LE (DG)	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

### 3.2.8 RR013: Listen to SYS INFOs (with SIM)

**Description:** Listen to a second BCCH carrier.

Variant A: Cell barred

Variant B: C1 < 0

Variant C: Wrong PLMN

Variant D: BCCH ok

Variant E: BCCH ok, Neighbourcell Description Range 128 Format

Variant F: BCCH ok, Neighbourcell Description Range 256 Format

Variant G: BCCH ok, Neighbourcell Description Range 512 Format

Variant H: BCCH ok, Neighbourcell Description Range 1024 Format

Variant I: BCCH ok, Neighbourcell Description Variable Format.

**Preamble:** RR027

**Variants:** <A>....<I>

	MM	RR	PL/DL
(1)		MPH_BSIC_CNF	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(3)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(4)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(5)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	

#### Parametrization

Primitive	Parameter	Value	
(1) MPH_BSIC_CNF	arfcn	ARFCN_32	
	bsic	BSIC_5	
	cs	CS_NO_ERROR	
(2) MPH_UNITDATA_IND	arfcn	ARFCN_32	
	fn	NOT_USED	
	sdu		
	{		
	component	RR	
	direction	DOWNLINK	
	pd	D_SYS_INFO_1	
	ti	TI_0	
	cell_chan_desc	CELL_CHAN_DESC_1	
	<A>	rach_ctrl	RACH_CTRL_2
	<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1	
<D>	rach_ctrl	RACH_CTRL_1	
<E>	rach_ctrl	RACH_CTRL_1	
<F>	rach_ctrl	RACH_CTRL_1	
<G>	rach_ctrl	RACH_CTRL_1	
<H>	rach_ctrl	RACH_CTRL_1	

<I>	rach_ctrl }	RACH_CTRL_1
(3) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
<A>	neigh_cell_desc	NCELL_DESC_1
<B>	neigh_cell_desc	NCELL_DESC_1
<C>	neigh_cell_desc	NCELL_DESC_1
<D>	neigh_cell_desc	NCELL_DESC_1
<E>	neigh_cell_desc	NCELL_DESC_128
<F>	neigh_cell_desc	NCELL_DESC_256
<G>	neigh_cell_desc	NCELL_DESC_512
<H>	neigh_cell_desc	NCELL_DESC_1024
<I>	neigh_cell_desc	NCELL_DESC_VAR
	ncc_permit	NCC_PERMITTED_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
<G>	rach_ctrl	RACH_CTRL_1
<H>	rach_ctrl	RACH_CTRL_1
<I>	rach_ctrl	RACH_CTRL_1
	}	
(4) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
<A>	loc_area_ident	LOC_AREA_IDENT_123_2147
<B>	loc_area_ident	LOC_AREA_IDENT_123_2147
<C>	loc_area_ident	LOC_AREA_IDENT_122_2147
<D>	loc_area_ident	LOC_AREA_IDENT_123_2147
<E>	loc_area_ident	LOC_AREA_IDENT_123_2147
<F>	loc_area_ident	LOC_AREA_IDENT_123_2147
<G>	loc_area_ident	LOC_AREA_IDENT_123_2147
<H>	loc_area_ident	LOC_AREA_IDENT_123_2147
<I>	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
<A>	cell_select	CELL_SELECT_1
<B>	cell_select	CELL_SELECT_2
<C>	cell_select	CELL_SELECT_1
<D>	cell_select	CELL_SELECT_1
<E>	cell_select	CELL_SELECT_1

<F>	cell_select	CELL_SELECT_1
<G>	cell_select	CELL_SELECT_1
<H>	cell_select	CELL_SELECT_1
<I>	cell_select	CELL_SELECT_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
<G>	rach_ctrl	RACH_CTRL_1
<H>	rach_ctrl	RACH_CTRL_1
<I>	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	

## (5) MPH\_UNITDATA\_IND

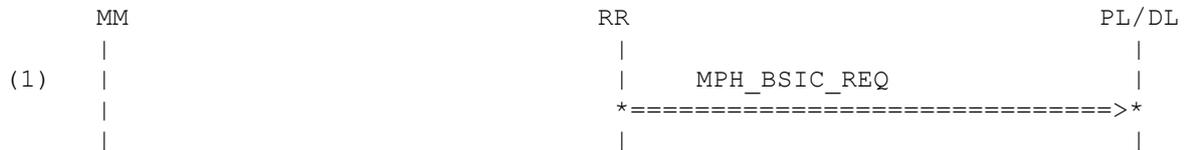
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
<A>	loc_area_ident	LOC_AREA_IDENT_123_2147
<B>	loc_area_ident	LOC_AREA_IDENT_123_2147
<C>	loc_area_ident	LOC_AREA_IDENT_122_2147
<D>	loc_area_ident	LOC_AREA_IDENT_123_2147
<E>	loc_area_ident	LOC_AREA_IDENT_123_2147
<F>	loc_area_ident	LOC_AREA_IDENT_123_2147
<G>	loc_area_ident	LOC_AREA_IDENT_123_2147
<H>	loc_area_ident	LOC_AREA_IDENT_123_2147
<I>	loc_area_ident	LOC_AREA_IDENT_123_2147
<A>	cell_select	CELL_SELECT_1
<B>	cell_select	CELL_SELECT_2
<C>	cell_select	CELL_SELECT_1
<D>	cell_select	CELL_SELECT_1
<E>	cell_select	CELL_SELECT_1
<F>	cell_select	CELL_SELECT_1
<G>	cell_select	CELL_SELECT_1
<H>	cell_select	CELL_SELECT_1
<I>	cell_select	CELL_SELECT_1
<A>	rach_ctrl	RACH_CTRL_2
<B>	rach_ctrl	RACH_CTRL_1
<C>	rach_ctrl	RACH_CTRL_1
<D>	rach_ctrl	RACH_CTRL_1
<E>	rach_ctrl	RACH_CTRL_1
<F>	rach_ctrl	RACH_CTRL_1
<G>	rach_ctrl	RACH_CTRL_1
<H>	rach_ctrl	RACH_CTRL_1
<I>	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	

History:	04.07.97	DL	Initial
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

**3.2.9 RR021: BCCH carrier not suitable (cell barred, without SIM)**

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable due to the cell being barred. RR resumes the search for a BCCH carrier by issuing a MPH-NEXT request primitive.

**Preamble:** RR011A



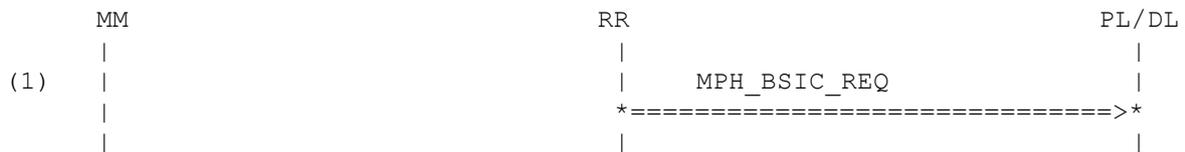
**Parametrization**

	Primitive	Parameter	Value
(1)	MPH_BSIC_REQ arfcn	ARFCN_32	
History:	04.07.97 19.01.01	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

### 3.2.10 RR022: BCCH carrier not suitable (C1 <= 0, without SIM)

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the path loss criterion is not greater than 0. RR resumes the search for a BCCH carrier by issuing a MPH-NEXT request primitive.

**Preamble:** RR011B



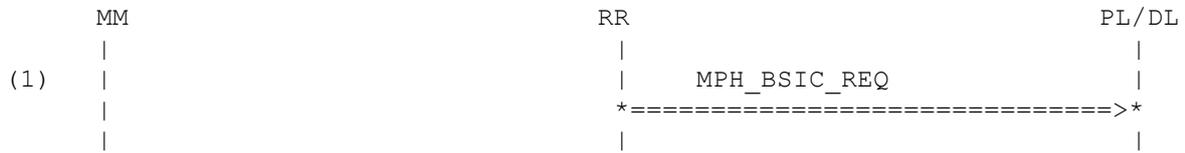
#### Parametrization

	Primitive	Parameter	Value
(1)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97 19.01.01	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

**3.2.11 RR023: BCCH carrier not suitable (cell barred, with SIM, second cell)**

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the cell is barred. RR resumes the search for a BCCH carrier by issuing a MPH-NEXT request primitive. (Ref.)

**Preamble:** RR013A



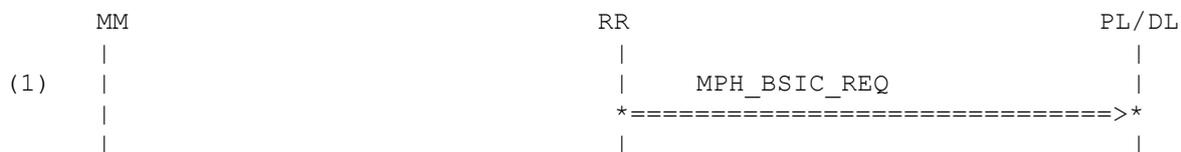
**Parametrization**

	Primitive	Parameter	Value
(1)	MPH_BSIC_REQ	arfcn	ARFCN_124
History:	04.07.97 19.01.01	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

**3.2.12 RR024: BCCH carrier not suitable (C1 <= 0, with cell, second cell)**

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the path loss criterion is not greater than 0. RR resumes the search for a BCCH carrier by issuing a MPH-NEXT request primitive. (Ref.)

**Preamble:** RR013B



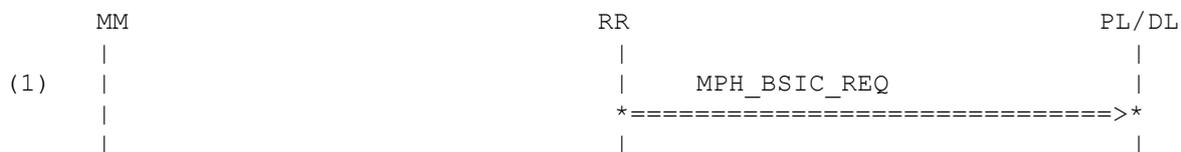
**Parametrization**

	Primitive	Parameter	Value
(1)	MPH_BSIC_REQ	arfcn	ARFCN_124
History:	04.07.97 19.01.01	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

**3.2.13 RR025: BCCH carrier not suitable (incorrect network, with SIM, second cell)**

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the network is incorrect. RR resumes the search for a BCCH carrier by issuing a MPH-NEXT request primitive. (Ref.)

**Preamble:** RR013C



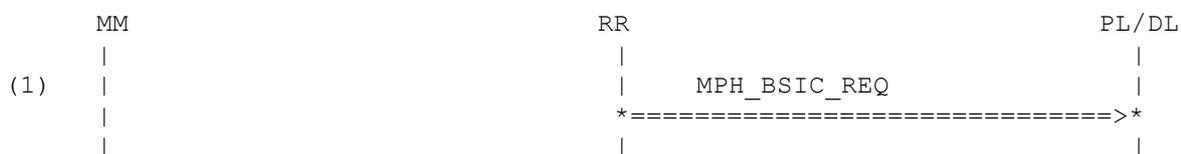
**Parametrization**

	Primitive	Parameter	Value
(1)	MPH_BSIC_REQ	arfcn	ARFCN_124
History:	04. 07.97 19.01.01	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

### 3.2.14 RR027: BCCH carrier not suitable (cell barred, with SIM)

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the cell is barred. RR resumes the search with a MPH-BSIC-REQ request using the neighbourcell description of the previous attempt.

**Preamble:** RR012A



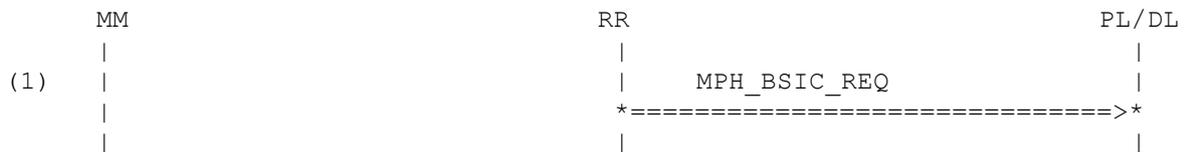
#### Parametrization

Primitive	Parameter	Value
(1) MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04. 07.97 19.01.01	DL DG Initial MPH_BSIC_REQ: cell_type, timing_info added

### 3.2.15 RR028: BCCH carrier not suitable (C1 <= 0, with SIM)

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the path loss criterion is too low. RR resumes the search with a MPH-BSIC-REQ request using the neighbourcell description of the previous attempt.

**Preamble:** RR012B



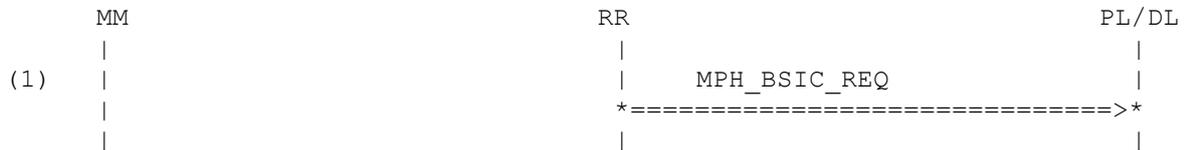
#### Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04. 07.97 19.01.01	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

### 3.2.16 RR029: BCCH carrier not suitable (incorrect network, with SIM)

**Description:** The SYS INFO messages have reported that the BCCH carrier is not suitable as the network is incorrect. RR resumes the search for a BCCH carrier by issuing a MPH-BSIC\_REQ request primitive.

**Preamble:** RR012C



#### Parametrization

Primitive	Parameter	Value
(1) MPH_BSIC_REQ	arfcn	ARFCN_32
History:	DL DG	Initial MPH_BSIC_REQ: cell_type, timing_info added

### 3.2.17 RR030: Suitable BCCH carrier found (with SIM)

**Description:** The SYS INFO messages have reported a suitable BCCH carrier. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR012D

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_2
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	15.05.98	VK	MPH_CBCH_REQ
	02.03.00	DG	RR_SYNC_IND
	10.04.00	LE (DG)	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	29.05.00	DG	value changed: RR_ACTIVATE_CNF: MM_INFO_1 > MM_INFO_2
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.18 RR033: Suitable BCCH carrier found (without SIM)

**Description:** The SYS INFO messages have reported a suitable BCCH carrier. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR011C

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_LIMITED
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_7
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_FF
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_EMPTY
	mm_info	MM_INFO_1
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	03.03.00	DG	RR_SYNC_IND
	11.04.00	LE (DG)	values changed: RR_SYNC_IND/bcch_info: NOT_USED > BCCH_INFO_1_PLUS_43 RR_ACTIVATE_CNF/op: OP_MODE_NO_SIM_LIM_SERV > OP_MODE_EMPTY RR_ACTIVATE_CNF/mm_info: MM_INFO_3 > MM_INFO_1
	12.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	08.06.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.19 RR034: Suitable BCCH carrier found (low priority cell, without SIM)

**Description:** The SYS INFO messages have reported a suitable BCCH carrier, also it is a low priority cell. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR011D

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

	Primitive	Parameter	Value
(1)	MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2)	MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_LIMITED
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLKES_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_7
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_FF
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(3)	MPH_CBCH_REQ	cbch	NOT_USED
(4)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_8
		sync_only	NOT_USED
(5)	RR_ACTIVATE_CNF	op	OP_MODE_EMPTY
		mm_info	MM_INFO_1
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	03.03.00	DG	RR_SYNC_IND
	13.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	08.06.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_8
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.20 RR035: Suitable BCCH carrier found (with SIM, second cell)

**Description:** The SYS INFO messages have reported a suitable BCCH carrier. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR013D

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_SYNC_IND		
	*<=====*		
(6)	RR_ACTIVATE_CNF		
	*<=====*		
(7)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1
	sync_only	NOT_USED
(5) RR_SYNC_IND	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	NOT_USED

		synccs	NOT_PRESENT_16BIT
		chm	NOT_USED
(6)	RR_ACTIVATE_CNF		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(7)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	03.03.00	DG	RR_SYNC_IND
	13.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.21 RR036: Suitable BCCH carrier found - NCell description in 128-range format

**Description:** The SYS INFO messages have reported a suitable BCCH carrier with the NCell description in the 128-range format. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR013E

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKES_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1B
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	03.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.22 RR037: Suitable BCCH carrier found - NCell description in 256-range format

**Description:** The SYS INFO messages have reported a suitable BCCH carrier with the NCell description in the 256-range format. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR013F

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1B
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.23 RR038: Suitable BCCH carrier found - NCell description in 512-range format

**Description:** The SYS INFO messages have reported a suitable BCCH carrier with the NCell description in the 512-range format. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR013G

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1B
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.24 RR039: Suitable BCCH carrier found - NCell description in 1024-range format

**Description:** The SYS INFO messages have reported a suitable BCCH carrier with the NCell description in the 1024-range format. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR013H

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1B
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.25 RR040: Suitable BCCH carrier found - NCell description in variable-bit format

**Description:** The SYS INFO messages have reported a suitable BCCH carrier with the NCell description in variable-bit format. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive.

**Preamble:** RR013I

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(5)	RR_ACTIVATE_CNF		
	*<=====*		
(6)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	NOT_USED
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1B
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.26 RR041: Listen to SYS INFOs, SYS INFO 1 not required

**Description:** Listening to a BCCH carrier. System Information 1 is not necessary to select the BCCH. Then in idle mode the system information type 1 message receives. There is no reaction expected by RR.

**Preamble:** RR001B

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(5)	MPH_SYNC_IND	
(6)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(7)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(8)	MPH_CLASSMARK_REQ	
(9)	MPH_IDLE_REQ	
(10)	MPH_CBCH_REQ	
(11)	MPH_NEIGHBOURCELL_REQ	
(12)	RR_ACTIVATE_CNF	
(13)	MPH_IDENTITY_REQ	
(14)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
TIMEOUT (3)		
(15)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(4) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(5) MPH_SYNC_IND	cs arfcn	CS_SYS_INFO_1_NOT_NEEDED ARFCN_67
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4

	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(8) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(9) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(10) MPH_CBCH_REQ	cbch	NOT_USED
(11) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(12) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147
	power	NOT_USED
	gprs_indication	GPRS_NO
(13) MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
(14) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	

## (15) MPH\_UNITDATA\_IND

```

arfcn          ARFCN_67
fn             NOT_USED
sdu            {
component      RR
direction      DOWNLINK
pd             D_SYS_INFO_1
ti            TI_0
cell_chan_desc CELL_CHAN_DESC_1
rach_ctrl      RACH_CTRL_1
}

```

History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	19.02.01	DG	MPH_ERROR_IND > MPH_SYNC_IND
	05-Jun-01	MSE	adapted to TAP2

**3.2.27 RR070: No BCCH carrier available**

**Description:** PL signals that no BCCH carrier is available. MM is informed by a RR-ABORT indication.

**Preamble:** RR001B

	MM	RR	PL/DL
(1)		MPH_POWER_CNF	
		*<=====*	
(2)		MPH_BSIC_REQ	
		*=====>*	
(3)		MPH_BSIC_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_SYNC_REQ	
		*=====>*	
(9)	RR_ABORT_IND		
	*<=====*		

**Parametrization**

	Primitive	Parameter	Value
(1)	MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(2)	MPH_BSIC_REQ	arfcn	ARFCN_67
(3)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(4)	MPH_BSIC_REQ	arfcn	ARFCN_32
(5)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(6)	MPH_BSIC_REQ	arfcn	ARFCN_124
(7)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL
		(8) MPH_SYNC_REQ	CS
			CS_STOP_PLMN_SEARCH_AND_DEACTIVATE

## (9) RR\_ABORT\_IND

op	OP_MODE_TEST_SIM_NO_SERV
cause	RRCS_ABORT_CEL_SEL_FAIL
plmn_avail	NO_PLMN_AVAILABLE
plmn	NOT_USED
lac_list	NOT_USED
rxlevel	NOT_USED
power	NOT_USED

History:	04.07.97	DL	Initial
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	25.01.01	DG	final MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1)added
	12.02.01	DG	final MPH_BSIC_REQ replaced by MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.2.28 RR071: No BCCH carrier available (limited service possible)

**Description:** PL signals that no BCCH carrier is available. MM is informed by a RR-ABORT indication. One network was detected in the preamble.

**Preamble:** RR029

	MM	RR	PL/DL
(1)		MPH_BSIC_CNF	
		*<=====*	
(2)		MPH_BSIC_REQ	
		*=====>*	
(3)		MPH_BSIC_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(10)		MPH_CLASSMARK_REQ	
		*=====>*	
(11)		MPH_IDLE_REQ	
		*=====>*	
(12)		MPH_CBCH_REQ	
		*=====>*	
(13)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(14)	RR_ABORT_IND		
	*<=====*		
(15)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

	Primitive	Parameter	Value
(1)	MPH_BSIC_CNF	arfcn	ARFCN_32
		bsic	BSIC_6
		cs	CS_NO_BCCH_AVAIL
(2)	MPH_BSIC_REQ	arfcn	ARFCN_124
(3)	MPH_BSIC_CNF	arfcn	ARFCN_124
		bsic	BSIC_6
		cs	CS_NO_BCCH_AVAIL

(4)	MPH_BSIC_REQ	arfcn	ARFCN_67
(5)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(9)	MPH_UNITDATA_IND	arfcn fn sdu { component direction	ARFCN_67 NOT_USED  RR DOWNLINK

		pd	D_SYS_INFO_4
		ti	TI_0
		loc_area_ident	LOC_AREA_IDENT_122_2147
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
		si4_rest_oct	S_SI4_REST_EMPTY
		}	
(10)	MPH_CLASSMARK_REQ	classmark	CLASS_MS
(11)	MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_10
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLK_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_7
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_FF
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(12)	MPH_CBCH_REQ	cbch	NOT_USED
(13)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(14)	RR_ABORT_IND	op	OP_MODE_TEST_SIM_LIM_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_AVAILABLE
		plmn	AS_PLMN
		lac_list	A_LAC_LIST1
		rxlevel	A_RXLEVEL_22
		power	NOT_USED
(15)	MPH_IDENTITY_REQ	mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	11.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1

	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	30.01.01	DG	MPH_BSIC_REQ/CNF(43)removed, ARFCN_124 now succesful values changed: MPH_IDLE_REQ: DLT_LIMITED -> DLT_23 BS_PA_MFRMS_7 -> BS_PA_MFRMS_2 NCC_PERMITTED_FF ->
NCC_PERMITTED_1			
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.2.29 RR072: Message Cell Broadcast

**Description:** The SYS INFO messages have reported a suitable BCCH carrier. RR places PL in IDLE mode by issuing a MPH-IDLE request primitive and informs MM in the form of a RR-ACTIVATE confirmation primitive. The cell contains Message Cell Broadcast.

**Preamble:** RR012F

	MM	RR	PL/DL
(1)		MPH_CLASSMARK_REQ	
		*=====>*	
(2)		MPH_IDLE_REQ	
		*=====>*	
(3)		MPH_CBCH_REQ	
		*=====>*	
(4)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(6)	RR_ACTIVATE_CNF		
	*<=====*		
(7)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(2) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(3) MPH_CBCH_REQ	cbch	PRR_CHANNEL_TYPE_3_CB
(4) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(5) RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(6)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04. 07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	05-Jun-01	MSE	adapted to TAP2

### 3.2.30 RR080: Cell Selection for Dualband

**Description:** A cell selection for dualband is started.

**Preamble:** RR000

	MM	RR	PL/DL
	COMMAND (PL CONFIG STD=5)		
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_UNITDATA_IND (SYS INFO TYPE 1)	
		*<=====*	
(7)		MPH_UNITDATA_IND (SYS INFO TYPE 2)	
		*<=====*	
(8)		MPH_UNITDATA_IND (SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_UNITDATA_IND (SYS INFO TYPE 4)	
		*<=====*	
(10)		MPH_CLASSMARK_REQ	
		*=====>*	
(11)		MPH_IDLE_REQ	
		*=====>*	
(12)		MPH_CBCH_REQ	
		*=====>*	
(13)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(14)	RR_ACTIVATE_CNF		
	*<=====*		
(15)		MPH_IDENTITY_REQ	
		*=====>*	

**Parametrization**

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn op cksn kcv acc imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	PLMN_ID_123 OP_MODE_TEST_SIM CKSN_NOT_PRES KCV_12345678 ACC_CTRL_CLASS_0008 MOBILE_ID_IMSI_HPLMN MOBILE_ID_TMSI TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(2)	MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3)	MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4)	MPH_BSIC_REQ	arfcn	ARFCN_67
(5)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1

(8)	MPH_UNITDATA_IND	<pre> arfcn          ARFCN_67 fn             NOT_USED sdu { component      RR direction      DOWNLINK pd             D_SYS_INFO_3 ti             TI_0 cell_ident     CELL_IDENT_3748 loc_area_ident LOC_AREA_IDENT_123_2147 ctrl_chan_desc CTRL_CHAN_DESC_1 cell_opt_bcch  CELL_OPT_BCCH_1 cell_select    CELL_SELECT_1 rach_ctrl      RACH_CTRL_1 si3_rest_oct   S_SI3_REST_EMPTY } </pre>
(9)	MPH_UNITDATA_IND	<pre> arfcn          ARFCN_67 fn             NOT_USED sdu { component      RR direction      DOWNLINK pd             D_SYS_INFO_4 ti             TI_0 loc_area_ident LOC_AREA_IDENT_123_2147 cell_select    CELL_SELECT_1 rach_ctrl      RACH_CTRL_1 chan_desc      NOT_USED mob_alloc      NOT_USED si4_rest_oct   S_SI4_REST_EMPTY } </pre>
(10)	MPH_CLASSMARK_REQ	<pre> classmark      CLASS_MS_DUALBAND </pre>
(11)	MPH_IDLE_REQ	<pre> mod            MODE_CELL_SELECTION arfcn          ARFCN_67 ext_bcch       NOT_USED comb_ccch      CCD_CCCH_1_NOT_COMB tn             TN_0 dlt            DLT_23 pg             PG_0 bs_ag_blocks_res BS_AG_BLK_RES_5 bs_pa_mfrms    BS_PA_MFRMS_2 power          MS_TXPWR_MAX_CCH_02 ncc_permitted  NCC_PERMITTED_1 reorg_only     NOT_USED eotd_avail     CONST_0 gprs_support   NOT_USED </pre>
(12)	MPH_CBCH_REQ	<pre> cbch           NOT_USED </pre>
(13)	MPH_NEIGHBOURCELL_REQ	<pre> multi_band     NOT_USED </pre>

		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(14)		RR_ACTIVATE_CNF	
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(15)		MPH_IDENTITY_REQ	
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	11.09.98	LE	Initial
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5 new: RR_SYNC_IND
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

### 3.2.31 RR045: No SIM card, suitable if using C1 Offset

**Description:** It is no SIM card inserted. The first channel is selected, because RR adds an offset of 4 (C1 offset) to the calculated C1 value.

**Preamble:** RR001A

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(5)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(6)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(7)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(8)	MPH_CLASSMARK_REQ	
(9)	MPH_IDLE_REQ	
(10)	MPH_CBCH_REQ	
(11)	MPH_NEIGHBOURCELL_REQ	
(12)	RR_ACTIVATE_CNF	
(13)	MPH_IDENTITY_REQ	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(4) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	

	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(5) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_2
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(6) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(7) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	

(8)	MPH_CLASSMARK_REQ	classmark	CLASS_MS
(9)	MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_LIMITED PG_0 BS_AG_BLKES_RES_5 BS_PA_MFRMS_7 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_FF NOT_USED CONST_0 NOT_USED
(10)	MPH_CBCH_REQ	cbch	NOT_USED
(11)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_2 NOT_USED
(12)	RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_EMPTY MM_INFO_1 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(13)	MPH_IDENTITY_REQ	mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch:
	23.05.00	DG	values changed: MPH_UNITDATA/sysinfo 2: NCELL_DESC_1 > NCELL_DESC_2 MPH_UNITDATA/sysinfo 3, 4: CELL_SELECT_3 > CELL_SELECT_1
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_2
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BASIC_REQ: cell_type, timing_info added

08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2

**3.2.32 RR046: With normal SIM Card, suitable if using C1 Offset**

**Description:** It is a normal SIM card inserted. The first channel is selected, because RR adds an offset of 4 (C1 offset) to the calculated C1 value.

**Preamble:** RR001C

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(5)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(6)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(7)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(8)	MPH_CLASSMARK_REQ	
(9)	MPH_IDLE_REQ	
(10)	MPH_CBCH_REQ	
(11)	MPH_NEIGHBOURCELL_REQ	
(12)	RR_ACTIVATE_CNF	
(13)	MPH_IDENTITY_REQ	

**Parametrization**

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_ERROR
(4) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	

	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(5)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_2
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(6)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(7)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	

(8)	MPH_CLASSMARK_REQ	classmark	CLASS_MS
(9)	MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLKS_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(10)	MPH_CBCH_REQ	cbch	NOT_USED
(11)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_2
		sync_only	NOT_USED
(12)	RR_ACTIVATE_CNF	op	OP_MODE_NORMAL
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(13)	MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_NO_TMSI
History:	04. 07.97	DL	Initial
	15.05.98	VK	MPH_CBCH_REQ
	06.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5:
	23.05.00	DG	values changed: MPH_UNITDATA/sysinfo 2: NCELL_DESC_1 > NCELL_DESC_2 MPH_UNITDATA/sysinfo 3, 4: CELL_SELECT_3 > CELL_SELECT_1
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

### 3.2.33 RR047: With Test SIM Card, unsuitable although using C1 Offset

**Description:** It is a test SIM card inserted. The first channel is not selected, because RR adds no offset of 4 (C1 offset) to the calculated C1 value.

**Preamble:** RR001D

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(5)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(6)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(7)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(8)	MPH_BSIC_REQ	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(4) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1

(5)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(6)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_3 RACH_CTRL_1 S_SI3_REST_EMPTY
(7)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_3 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(8)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04. 07.97 15.05.98 26.05.00  19.01.01	DL VK DG  DG	Initial MPH_CBCH_REQ values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF MPH_BSIC_REQ: cell_type, timing_info

08.02.01	DG	added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2

### 3.2.34 RR048: Cell Selection E-GSM

#### Description:

Preamble: RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(10)	MPH_CLASSMARK_REQ	
	*=====>*	
(11)	MPH_IDLE_REQ	
	*=====>*	
(12)	MPH_CBCH_REQ	
	*=====>*	
(13)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(14)   RR_ACTIVATE_CNF		
*<=====*		
(15)	MPH_IDENTITY_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI

	thplmn bcch_info cell_test gprs_indication	TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_2 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu	ARFCN_67 NOT_USED SYS_INFO_3_A
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4

	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(10) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(11) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(12) MPH_CBCH_REQ		
	cbch	NOT_USED
(13) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_2
		sync_only NOT_USED
(14) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147
	power	NOT_USED
	gprs_indication	GPRS_NO
(15) MPH_IDENTITY_REQ		
	mid	S_MS_ID_IMSI_HPLMN_TMSI

History: 27-Jun-02 MPA Initial

### 3.2.35 RR049: Cell Selection for Testcase 13.1

**Description:**
**Preamble:** RR000

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

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(10)	MPH_CLASSMARK_REQ	
	*=====>*	
(11)	MPH_IDLE_REQ	
	*=====>*	
(12)	MPH_CBCH_REQ	
	*=====>*	
(13)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(14)   RR_ACTIVATE_CNF		
*<=====*		
(15)	MPH_IDENTITY_REQ	
	*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_TEST
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_TEST
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED

(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu	ARFCN_67 NOT_USED SYS_INFO_1_15
(7) MPH_UNITDATA_IND	arfcn fn sdu	ARFCN_67 NOT_USED SYS_INFO_2_15
(8) MPH_UNITDATA_IND	arfcn fn sdu <A> <B>	ARFCN_67 NOT_USED SYS_INFO_3_15 SYS_INFO_4_15
(9) MPH_UNITDATA_IND	arfcn fn sdu <A> <B>	ARFCN_67 NOT_USED SYS_INFO_4_15 SYS_INFO_3_15
(10) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(11) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_COMB TN_0 DLT_18 PG_12 BS_AG_BLK_RES_0 BS_PA_MFRMS_3 MS_TXPWR_MAX_CCH_0D NCC_PERMITTED_2 NOT_USED CONST_0 NOT_USED
(12) MPH_CBCH_REQ	cbch	NOT_USED

(13)	MPH_NEIGHBOURCELL_REQ		multi_band	NOT_USED
			arfcn	A_MPH_NCELL_EMPTY
			sync_only	NOT_USED
(14)	RR_ACTIVATE_CNF		op	OP_MODE_TEST_SIM
			mm_info	MM_INFO_15
			cid	CELL_IDENT_0001
			plmn	PLMN_ID_TEST
			lac	LAC_0001
			power	NOT_USED
			gprs_indication	GPRS_NO
(15)	MPH_IDENTITY_REQ		mid	S_MS_ID_IMSI_TEST_TMSI
History:	15-Feb-00	LE	Initial	
	14-Apr-00	DG	value changed:	
			MPH_IDLE_REQ/ext_bcch:	
			EXT_BCCH_NOT_LIST > BSIC_5	
	15-May-00	DG	RR_ACTIVATE_REQ: cell_test added	
	17-May-00	DG	new. RR_SYNC_IND	
	12-Jul-00	DG	MPH_CLASSMARK_REQ:	
			class changed into classmark	
			(Forum G23M / No 0057)	
	19-Jan-01	DG	RR_ACTIVATE_REQ: gprs_indication added	
			MPH_BSIC_REQ: cell_type, timing_info	
			added	
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added	
	05-Jun-01	MSE	adapted to TAP2	

### 3.3 Idle Mode Neighbour Cell Procedures

#### 3.3.1 RR132: Listening to Neighbour Cell

**Description:** Layer 1 sends a measurement report with a neighbour cell. RR starts listening to the neighbour cell. First the channel 3 is read. After reading of system information type 3 message on report is waited and then channel 18 is requested.

**Preamble:** RR030

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_MEASUREMENT_IND	
		*<=====*	
(3)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(4)		MPH_MEASUREMENT_IND	
		*<=====*	
(5)		MPH_MEASUREMENT_IND	
		*<=====*	
(6)		MPH_MEASUREMENT_IND	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(8)		MPH_MEASUREMENT_IND	
		*<=====*	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) MPH_MEASUREMENT_IND		
arfcn	ARFCN_67	
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(2) MPH_MEASUREMENT_IND		
	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(3) MPH_UNITDATA_IND		
	arfcn	ARFCN_3
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(4) MPH_MEASUREMENT_IND		
	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC

	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(5) MPH_MEASUREMENT_IND		
	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(6) MPH_MEASUREMENT_IND		
	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(7) MPH_UNITDATA_IND		
	arfcn	ARFCN_24
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(8) MPH_MEASUREMENT_IND		
	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED

History:	04.07.97	DL	Initial
	26.05.00	DG	values changed:
			si3/4_rest_oct:
	08.02.01	DG	NOT_USED > SI3_REST_DEF
			si3_rest_oct: SI3_REST_DEF >
			SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

### 3.3.2 RR133: Listening to Neighbour Cell and Network is lost, Limited service only possible

**Description:** Layer 1 sends a measurement report with a neighbour cell. RR starts listening to measurement reports. There is a downlink signalling error. RR has not read SI 3 from the neighbour cell. RR starts a cell selection for a suitable cell to camp ON. Just when the cell selection is started an emergency call is started. RR should store this primitive. At the end of Power search, RR does not find a suitable cell to camp on with full service. Only limited service is possible. RR should then try an emergency call with limited service.

**Preamble:** RR030

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_MEASUREMENT_IND	
		*<=====*	
(3)		MPH_ERROR_IND	
		*<=====*	
(4)		MPH_POWER_REQ	
		*=====>*	
(5)	RR_ESTABLISH_REQ		
	*=====>*		
(6)		MPH_POWER_CNF	
		*<=====*	
(7)		MPH_BSIC_REQ	
		*=====>*	
(8)		MPH_BSIC_CNF	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(11)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(12)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(13)		MPH_BSIC_REQ	
		*=====>*	
(14)		MPH_BSIC_CNF	
		*<=====*	
(15)		MPH_BSIC_REQ	
		*=====>*	
(16)		MPH_BSIC_CNF	
		*<=====*	
(17)		MPH_BSIC_REQ	
		*=====>*	
(18)		MPH_BSIC_CNF	

```

(19) | | *<=====
      | | | MPH_BSIC_REQ |
      | | *=====>*
(20) | | | MPH_BSIC_CNF |
      | | *=====>*
(21) | | | MPH_UNITDATA_IND |
      | | | (SYS INFO TYPE 1) |
      | | *=====>*
(22) | | | MPH_UNITDATA_IND |
      | | | (SYS INFO TYPE 2) |
      | | *=====>*
(23) | | | MPH_UNITDATA_IND |
      | | | (SYS INFO TYPE 3) |
      | | *=====>*
(24) | | | MPH_UNITDATA_IND |
      | | | (SYS INFO TYPE 4) |
      | | *=====>*
(25) | | | MPH_CLASSMARK_REQ |
      | | *=====>*
(26) | | | MPH_IDLE_REQ |
      | | *=====>*
(27) | | | MPH_CBCH_REQ |
      | | *=====>*
(28) | | | MPH_NEIGHBOURCELL_REQ |
      | | *=====>*
(29) | | RR_ABORT_IND |
      | *=====>*
(30) | | | MPH_IDENTITY_REQ |
      | | *=====>*
(31) | | | MPH_RANDOM_ACCESS_REQ |
      | | *=====>*

```

**Parametrization**

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(2) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27

	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(3) MPH_ERROR_IND		
	cs	CS_DOWN_LINK_FAIL
	arfcn	ARFCN_67
(4) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(5) RR_ESTABLISH_REQ		
	estcs	ESTCS_EMRG_CAL
	sdu	MM_MESSAGE
(6) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(7) MPH_BSIC_REQ		
	arfcn	ARFCN_32
(8) MPH_BSIC_CNF		
	arfcn	ARFCN_32
	bsic	BSIC_5
	cs	CS_NO_ERROR
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(10) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_2
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(11) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	

	component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(12) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_32 NOT_USED RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(13) MPH_BSIC_REQ	arfcn	ARFCN_67
(14) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_BCCH_AVAIL
(15) MPH_BSIC_REQ	arfcn	ARFCN_124
(16) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_6 CS_NO_BCCH_AVAIL
(17) MPH_BSIC_REQ	arfcn	ARFCN_32
(18) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_BCCH_AVAIL
(19) MPH_BSIC_REQ	arfcn	ARFCN_67
(20) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR

## (21) MPH\_UNITDATA\_IND

```

arfcn      ARFCN_67
fn         NOT_USED
sdu
{
  component      RR
  direction      DOWNLINK
  pd             D_SYS_INFO_1
  ti            TI_0
  cell_chan_desc CELL_CHAN_DESC_1
  rach_ctrl     RACH_CTRL_1
}

```

## (22) MPH\_UNITDATA\_IND

```

arfcn      ARFCN_67
fn         NOT_USED
sdu
{
  component      RR
  direction      DOWNLINK
  pd             D_SYS_INFO_2
  ti            TI_0
  neigh_cell_desc NCELL_DESC_1
  ncc_permit     NCC_PERMITTED_1
  rach_ctrl     RACH_CTRL_1
}

```

## (23) MPH\_UNITDATA\_IND

```

arfcn      ARFCN_67
fn         NOT_USED
sdu
{
  component      RR
  direction      DOWNLINK
  pd             D_SYS_INFO_3
  ti            TI_0
  cell_ident     CELL_IDENT_3748
  loc_area_ident LOC_AREA_IDENT_122_2147
  ctrl_chan_desc CTRL_CHAN_DESC_1
  cell_opt_bcch  CELL_OPT_BCCH_1
  cell_select    CELL_SELECT_1
  rach_ctrl     RACH_CTRL_1
  si3_rest_oct   S_SI3_REST_EMPTY
}

```

## (24) MPH\_UNITDATA\_IND

```

arfcn      ARFCN_67
fn         NOT_USED
sdu
{
  component      RR
  direction      DOWNLINK
  pd             D_SYS_INFO_4
  ti            TI_0
  loc_area_ident LOC_AREA_IDENT_122_2147
  cell_select    CELL_SELECT_1
  rach_ctrl     RACH_CTRL_1
  chan_desc     NOT_USED
  mob_alloc     NOT_USED
}

```

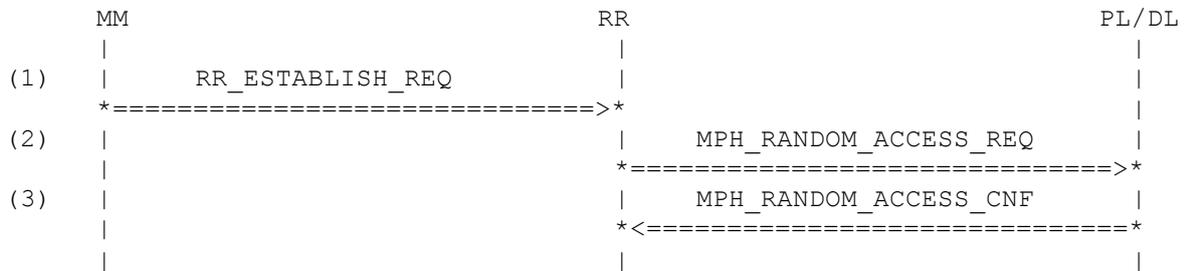
	si4_rest_oct }	S_SI4_REST_EMPTY
(25) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(26) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_10 PG_0 BS_AG_BLKS_RES_5 BS_PA_MFRMS_7 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_FF NOT_USED NOT_USED NOT_USED
(27) MPH_CBCH_REQ	cbch	NOT_USED
(28) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1C NOT_USED
(29) RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_TEST_SIM_LIM_SERV RRCS_ABORT_CEL_SEL_FAIL ONE_PLMN_AVAILABLE AS_PLMN A_LAC_LIST1 A_RXLEVEL_21 NOT_USED
(30) MPH_IDENTITY_REQ		
(31) MPH_RANDOM_ACCESS_REQ	mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	21.06-2003	
	send_mode RB	NOT_USED Initial

### 3.4 Immediate Assignment

#### 3.4.1 RR136: RR-Connection Establishment by the MS

**Description:** MM starts a connection establishment and RR sends two random bursts.

**Preamble:** RR030



**Parametrization**

Primitive	Parameter	Value
(1) RR_ESTABLISH_REQ	estcs	ESTCS_SERV_REQ_BY_MM
	sdu	MM_MESSAGE
(2) MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_2_BURSTS
(3) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
	DL	Initial
History:	04.07.97	

### 3.4.2 RR153: Paging for MS (IMSI)

**Description:** The base station sends a Paging Request Type 1 message with the IMSI of the mobile station. RR sends two random bursts.

**Preamble:** RR030

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_PAGING_IND	
		*<=====*	
(3)		MPH_RANDOM_ACCESS_REQ	
		*=====*>	
(4)		MPH_RANDOM_ACCESS_CNF	
		*<=====*	

#### Parametrization

	Primitive	Parameter	Value
(1)	MPH_MEASUREMENT_IND	arfcn	ARFCN_67
		rx_lev_full	RX_LEV_35
		rx_lev_sub	RX_LEV_35
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	NOT_USED
		gprs_sync	NOT_USED
(2)	MPH_PAGING_IND	identity_type	ID_IMSI
		channel_needed	CN_ANY
(3)	MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_2_BURSTS2
(4)	MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
History:	04.07.97	DL	Initial
	05.05.98	VK	Revised (one prim removed)
	24.01.01	DG	new: MPH_MEASUREMENT_IND

### 3.4.3 RR154: Imm Ass for the MS, T3122 is not running

**Description:** The base station sends an Immediate Assignment message for the MS. RR informs the PL and tries to establish the layer 2 connection.

<A>: no starting time, no rest octets, no hopping, SDCCH  
 <B>: no starting time, no rest octets, with hopping, SDCCH  
 <C>: no starting time, no rest octets, no hopping, TCH  
 <D>: with starting time, no rest octets, no hopping, SDCCH  
 <E>: with starting time, with rest octets, no hopping, SDCCH  
 <F>: with starting time, with rest octets, with hopping, SDCCH  
 <G>: no starting time, no rest octets, no hopping, SDCCH, 1800 / part of a suite  
 <H>: no starting time, no rest octets, no hopping, SDCCH, 1900 / part of a suite

Variants:

<A>..<H>

**Preamble:**

<A>RR153  
 <B>RR153  
 <C>RR153  
 <D>RR153  
 <E>RR153  
 <F>RR153  
 <G>none  
 <H>none

MM	RR	PL/DL
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(6)	DL_ESTABLISH_CNF	
(7)	MPH_SYNC_REQ	
(8)	RR_ESTABLISH_IND	

**Parametrization**

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN
	ti	TI_0
	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
<A>	chan_desc	CHANNEL_DESC_SDCCH2
<B>	chan_desc	CHANNEL_DESC_SDCCH
<C>	chan_desc	CHANNEL_DESC_FACCH2
<D>	chan_desc	CHANNEL_DESC_SDCCH2
<E>	chan_desc	CHANNEL_DESC_SDCCH2
<F>	chan_desc	CHANNEL_DESC_SDCCH
<G>	chan_desc	CHANNEL_DESC_SDCCH2_1800_1
<H>	chan_desc	CHANNEL_DESC_SDCCH2_1900_1
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
<A>	start_time	NOT_USED
<B>	start_time	NOT_USED
<C>	start_time	NOT_USED
<D>	start_time	START_TIME_1
<E>	start_time	START_TIME_1
<F>	start_time	START_TIME_1
<G>	start_time	NOT_USED
<H>	start_time	NOT_USED
<A>	ia_rest_oct	NOT_USED
<B>	ia_rest_oct	NOT_USED
<C>	ia_rest_oct	NOT_USED
<D>	ia_rest_oct	NOT_USED
<E>	ia_rest_oct	S_IA_REST_1
<F>	ia_rest_oct	S_IA_REST_1
<G>	ia_rest_oct	NOT_USED
<H>	ia_rest_oct	NOT_USED
	}	
(3) MPH_DEDICATED_REQ	mod	MODE_IMM_ASSIGN
<A>	start	NO_STARTING_TIME
<B>	start	NO_STARTING_TIME
<C>	start	NO_STARTING_TIME
<D>	start	STARTING_TIME_1
<E>	start	STARTING_TIME_1
<F>	start	STARTING_TIME_1
<G>	start	NO_STARTING_TIME

<H>	start	NO_STARTING_TIME
<A>	ch_type	PRR_CHANNEL_TYPE_3
<B>	ch_type	PRR_CHANNEL_TYPE_2
<C>	ch_type	PRR_CHANNEL_TYPE_4
<D>	ch_type	PRR_CHANNEL_TYPE_3
<E>	ch_type	PRR_CHANNEL_TYPE_3
<F>	ch_type	PRR_CHANNEL_TYPE_2
<G>	ch_type	PRR_CHANNEL_TYPE_3_1800
<H>	ch_type	PRR_CHANNEL_TYPE_3_1900
<A>	ch_type2	NOT_USED
<B>	ch_type2	NOT_USED
<C>	ch_type2	NOT_USED
<D>	ch_type2	NOT_USED
<E>	ch_type2	NOT_USED
<F>	ch_type2	NOT_USED
<G>	ch_type2	NOT_USED
<H>	ch_type2	NOT_USED
<A>	arfcn	ARFCN_67
<B>	arfcn	ARFCN_67
<C>	arfcn	ARFCN_67
<D>	arfcn	ARFCN_67
<E>	arfcn	ARFCN_67
<F>	arfcn	ARFCN_67
<G>	arfcn	ARFCN_527
<H>	arfcn	ARFCN_527
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
 (4) MPH_DEDICATED_CNF		
	dedi_res	NOT_USED
 (5) DL_ESTABLISH_REQ		
<A>	ch_type	CH_TYPE_SDCCH
<B>	ch_type	CH_TYPE_SDCCH
<C>	ch_type	CH_TYPE_FACCH
<D>	ch_type	CH_TYPE_SDCCH
<E>	ch_type	CH_TYPE_SDCCH
<F>	ch_type	CH_TYPE_SDCCH
<G>	ch_type	CH_TYPE_SDCCH
<H>	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
<A>	mob_class_2	MOB_CLASS2_900
<B>	mob_class_2	MOB_CLASS2_900
<C>	mob_class_2	MOB_CLASS2_900
<D>	mob_class_2	MOB_CLASS2_900
<E>	mob_class_2	MOB_CLASS2_900
<F>	mob_class_2	MOB_CLASS2_900
<G>	mob_class_2	MOB_CLASS_1800
<H>	mob_class_2	MOB_CLASS_1900

		mob_ident }	MOBILE_IDENTITY_IMSI_HPLMN
(6)	DL_ESTABLISH_CNF	ch_type sapi	CH_TYPE_SDCCH SAPI_0
(7)	MPH_SYNC_REQ	cs	CS_CLEAN_SYS_INFO
(8)	RR_ESTABLISH_IND	param	NOT_USED
History:	04.07.97 13.04.00	DL LE (DG)	Initial Value changed: DL_ESTABLISH_REQ/mob_class_2: MOB_CLASS2_NORMAL > MOB_CLASS2_900
	25.01.01	DG	IMMEDIATE ASSIGNMENT: tma, dl, d_t, pck_chan_desc added
	12.02.01	DG	new: MPH_SYNC_REQ
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation
	28-Feb02	LG	added preambles by variants

### 3.4.4 RR152: Imm Ass for the MS, spare bits unequal 0

**Description:** According FTA 26.5.7.1.3

**Preamble:** RR153

	MM	RR	PL/DL
(1)		MPH_RANDOM_ACCESS_CNF	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(IMMEDIATE ASSIGNMENT)	
		*<=====*	
(3)		MPH_DEDICATED_REQ	
		*=====*	
(4)		MPH_DEDICATED_CNF	
		*<=====*	
(5)		DL_ESTABLISH_REQ	
		(PAGING RESPONSE)	
		*=====*	
(6)		DL_ESTABLISH_CNF	
		*<=====*	
(7)		MPH_SYNC_REQ	
		*=====*	
(8)	RR_ESTABLISH_IND		
	*<=====*		

**Parametrization**

Primitive	Parameter	Value
(9) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(10) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	IMM_ASS_152_SPARE_900
(11) MPH_DEDICATED_REQ	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_3
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(12) MPH_DEDICATED_CNF	dedi_res	NOT_USED
(13) DL_ESTABLISH_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	MOB_CLASS2_900
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(14) DL_ESTABLISH_CNF	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(15) MPH_SYNC_REQ	cs	CS_CLEAN_SYS_INFO
(16) RR_ESTABLISH_IND	param	NOT_USED

History:           20.01.2003           VK           Derived from RR154A

**3.4.5 RR155: Imm Ass Extended for the MS, T3122 is not running**

**Description:** The base station sends an Immediate Assignment message for the MS. RR informs the PL and tries to establish the layer 2 connection.  
The MS is addressed in the 2<sup>nd</sup> part of the message, the first part contains an invalid channel description (channel 1)

**Preamble:** RR153

	MM	RR	PL/DL
(1)		MPH_RANDOM_ACCESS_CNF	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(IMMEDIATE ASSIGNMENT EXT)	
		*<=====*	
(3)		MPH_DEDICATED_REQ	
		*=====>*	
(4)		MPH_DEDICATED_CNF	
		*<=====*	
(5)		DL_ESTABLISH_REQ	
		(PAGING RESPONSE)	
		*=====>*	
(6)		DL_ESTABLISH_CNF	
		*<=====*	
(7)		MPH_SYNC_REQ	
		*=====>*	
(8)	RR_ESTABLISH_IND		
	*<=====*		

**Parametrization**

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN_EXT
	ti	TI_0
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH2_1800
	req_ref	REQUEST_REFERENCE_2
	time_advance	TIMING_ADVANCE_27
	chan_desc_2	CHANNEL_DESC_SDCCH2
	req_ref_2	REQUEST_REFERENCE_1
	time_advance_2	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	}	
(3) MPH_DEDICATED_REQ	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_3
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4) MPH_DEDICATED_CNF	dedi_res	NOT_USED
(5) DL_ESTABLISH_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	MOB_CLASS2_900
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(6) DL_ESTABLISH_CNF	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0

(7) MPH_SYNC_REQ	cs	CS_CLEAN_SYS_INFO
(8) RR_ESTABLISH_IND	param	NOT_USED
History:	14.01.03	MPA Initial

### 3.4.6 RR156: Imm Ass Reject for the MS, T3122 is not running

**Description:** The base station rejects the call establishment. RR stops sending of random bursts for the requested time. After waiting for an immediate assignment message longer than T3122 the immediate assignment procedure is stopped. When the waiting time of the immediate assignment reject message is over this is indicated to MM.

**Preamble:** RR136

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND	
	(IMMEDIATE ASSIGN REJ)	
	*<=====*	
(2)	MPH_RANDOM_ACCESS_REQ	
	*=====>*	
MUTE (2000)		
TIMEOUT (500)		
(3)   RR_RELEASE_IND		
	*<=====*	
(4)	MPH_IDLE_REQ	
	*=====>*	
MUTE (7000)		
TIMEOUT (500)		
(5)   RR_SYNC_IND		
	*<=====*	

#### Parametrization

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN_REJ
	ti	TI_0
	page_mode	PAGING_NORMAL
	req_ref	REQUEST_REFERENCE_2
	t3122	WAIT_INDICATION_0A
	req_ref_2	REQUEST_REFERENCE_2
	t3122_2	WAIT_INDICATION_0A
	req_ref_3	REQUEST_REFERENCE_3
	t3122_3	WAIT_INDICATION_0A
	req_ref_4	REQUEST_REFERENCE_1
	t3122_4	WAIT_INDICATION_0A
	}	
(2) MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_NO_BURSTS
(3) RR_RELEASE_IND	cause	RRCS_RND_ACC_DELAY
	sapi	SAPI_0
	gprs_resumption	NOT_USED
(4) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION

		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLKS_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(5)	RR_SYNC_IND		
		ciph	NOT_PRESENT_8BIT
		mm_info	NOT_USED
		bcch_info	NOT_USED
		syncs	SYNCCS_T3122_TIM_OUT
		chm	NOT_USED
History:	04.07.97	DL	Initial
	14.04.00	DG	value changed:
			MPH_IDLE_REQ/ext_bcch:
			EXT_BCCH_NOT_LIST > BSIC_5
	25.01.01	DG	RR_RELEASE_IND: gprs_resumption added
	06.03.03	LG	MUTE/TIMEOUT inserted,

### 3.4.7 RR157: Immediate Assignment E-GSM

#### Description:

Preamble: RR048

MM	RR	PL/DL
(1)	MPH_MEASUREMENT_IND	
(2)	MPH_PAGING_IND	
(3)	MPH_RANDOM_ACCESS_REQ	
(4)	MPH_RANDOM_ACCESS_CNF	
(5)	MPH_RANDOM_ACCESS_CNF	
(6)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(7)	MPH_DEDICATED_REQ	
(8)	MPH_DEDICATED_CNF	
(9)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(10)	DL_ESTABLISH_CNF	
(11)	MPH_SYNC_REQ	
(12)	RR_ESTABLISH_IND	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_35
	rx_lev_sub	RX_LEV_35
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	NOT_USED
	gprs_sync	NOT_USED
	(2) MPH_PAGING_IND	identity_type
channel_needed		CN_ANY

(3) MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_2_BURSTS2
(4) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(5) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti tma dl d_t page_mode chan_desc pck_chan_desc req_ref time_advance mob_alloc start_time ia_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_IMM_ASSIGN TI_0 NOT_USED NOT_USED NOT_USED PAGING_NORMAL CHANNEL_DESC_SDCCH NOT_USED REQUEST_REFERENCE_1 TIMING_ADVANCE_27 MOBILE_ALLOCATION_1 NOT_USED NOT_USED
(7) MPH_DEDICATED_REQ	mod start ch_type ch_type2 arfcn bsic ho_param tr_para ciph amr_conf	MODE_IMM_ASSIGN NO_STARTING_TIME PRR_CHANNEL_TYPE_2 NOT_USED ARFCN_67 NOT_USED NOT_USED PRR_TR_PARA_2 NO_CIPHERING NOT_USED
(8) MPH_DEDICATED_CNF	dedi_res	NOT_USED
(9) DL_ESTABLISH_REQ	ch_type sapi sdu { component direction pd ti ciph_key_num mob_class_2 mob_ident MOBILE_IDENTITY_IMSI_HPLMN }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_PAG_RES TI_0 CKSN_RESERVED MOB_CLASS2_212

(10) DL\_ESTABLISH\_CNF

ch\_type  
sapiCH\_TYPE\_SDCCH  
SAPI\_0

(11) MPH\_SYNC\_REQ

cs

CS\_CLEAN\_SYS\_INFO

(12) RR\_ESTABLISH\_IND

param

NOT\_USED

History: 27-Jun-02

MPA

Initial

### 3.4.8 RR158: Immediate Assignment TC 13.1

#### Description:

Preamble: RR049A

MM	RR	PL/DL
(1)	MPH_MEASUREMENT_IND	
(2)	MPH_PAGING_IND	
(3)	MPH_RANDOM_ACCESS_REQ	
(4)	MPH_RANDOM_ACCESS_CNF	
(5)	MPH_RANDOM_ACCESS_CNF	
(6)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(7)	MPH_DEDICATED_REQ	
(8)	MPH_DEDICATED_CNF	
(9)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(10)	DL_ESTABLISH_CNF	
(11)	MPH_SYNC_REQ	
(12)	RR_ESTABLISH_IND	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_35
	rx_lev_sub	RX_LEV_35
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	NOT_USED
	gprs_sync	NOT_USED
(2) MPH_PAGING_IND	identity_type	ID_IMSI
	channel_needed	CN_ANY
(3) MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_8_BURSTS

(4) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(5) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(6) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN
	ti	TI_0
	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_ONE_CHAN
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	
(7) MPH_DEDICATED_REQ	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	NOT_USED
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	NOT_USED
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(8) MPH_DEDICATED_CNF	dedi_res	NOT_USED
(9) DL_ESTABLISH_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	MOB_CLASS2_212
	mob_ident	MOBILE_IDENTITY_IMSI_TEST
	}	
(10) DL_ESTABLISH_CNF	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0

(11)	MPH_SYNC_REQ	cs	CS_CLEAN_SYS_INFO
(12)	RR_ESTABLISH_IND	param	NOT_USED
History:	27-Jun-02	MPA	Initial

### 3.4.9 RR159: Immediate Assignment (Multiband)

#### Description:

Preamble: RR153

MM	RR	PL/DL
COMMAND (PL CONFIG STD=5)		
(1)	MPH_RANDOM_ACCESS_CNF	
	*<=====	
(2)	MPH_UNITDATA_IND	
	(IMMEDIATE ASSIGNMENT)	
	*<=====	
(3)	MPH_DEDICATED_REQ	
	*=====>	
(4)	MPH_DEDICATED_CNF	
	*<=====	
(5)	DL_ESTABLISH_REQ	
	(PAGING RESPONSE)	
	*=====>	
(6)	DL_ESTABLISH_CNF	
	*<=====	
(7)	MPH_SYNC_REQ	
	*=====>	
(8)	RR_ESTABLISH_IND	
	*<=====	

#### Parametrization

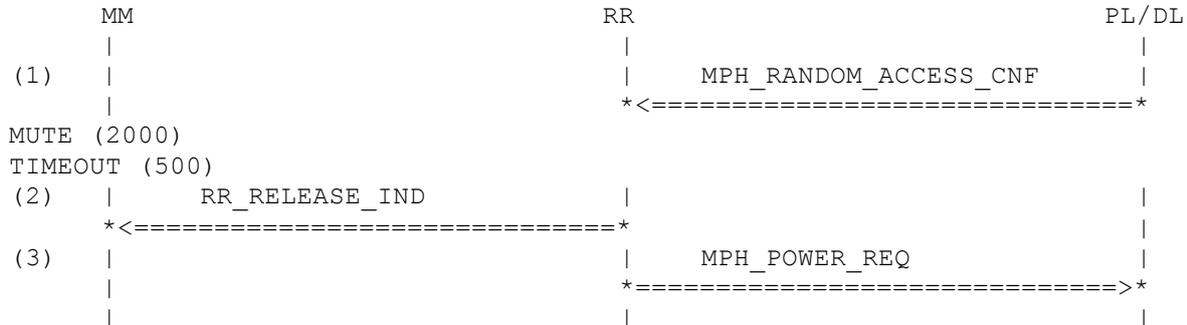
Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN
	ti	TI_0
	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	

(3)	MPH_DEDICATED_REQ	mod start ch_type ch_type2 arfcn bsic ho_param tr_para ciph amr_conf	MODE_IMM_ASSIGN NO_STARTING_TIME PRR_CHANNEL_TYPE_2 NOT_USED ARFCN_67 NOT_USED NOT_USED PRR_TR_PARA_2 NO_CIPHERING NOT_USED
(4)	MPH_DEDICATED_CNF	dedi_res	NOT_USED
(5)	DL_ESTABLISH_REQ	ch_type sapi sdu { component direction pd ti ciph_key_num mob_class_2 mob_ident }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_PAG_RES TI_0 CKSN_RESERVED NOT_USED MOBILE_IDENTITY_IMSI_HPLMN
(6)	DL_ESTABLISH_CNF	ch_type sapi	CH_TYPE_SDCCH SAPI_0
(7)	MPH_SYNC_REQ	cs	CS_CLEAN_SYS_INFO
(8)	RR_ESTABLISH_IND	param	NOT_USED
History:	t-Jun-jj	NN	Initial

### 3.4.10 RR160: T3126 Timeout, T3122 is not running, Mobile Originated Call

**Description:** The base station sends no immediate assignment. RR informs MM.

**Preamble:** RR136



#### Parametrization

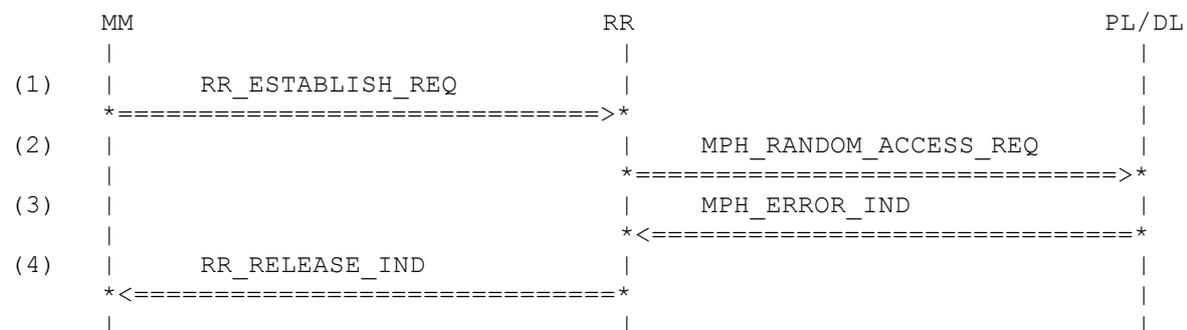
	Primitive	Parameter	Value
(1)	MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2)	RR_RELEASE_IND	cause	RRCS_RND_ACC_FAIL
		sapi	SAPI_0
		gprs_resumption	NOT_USED
(3)	MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED

History:	04.07.97	DL	Initial
	14.04.00	DG	value changed:
			MPH_IDLE_REQ/ext_bcch:
			EXT_BCCH_NOT_LIST > BSIC_5
	25.01.01	DG	RR_RELEASE_IND: gprs_resumption added
	06.03.03	LG	MUTE/TIMEOUT inserted

### 3.4.11 RR161: DLF indication crosses connection establishment

**Description:** MM starts a connection establishment. At the same time a downlink failure occurs.

**Preamble:** RR030



#### Parametrization

	Primitive	Parameter	Value
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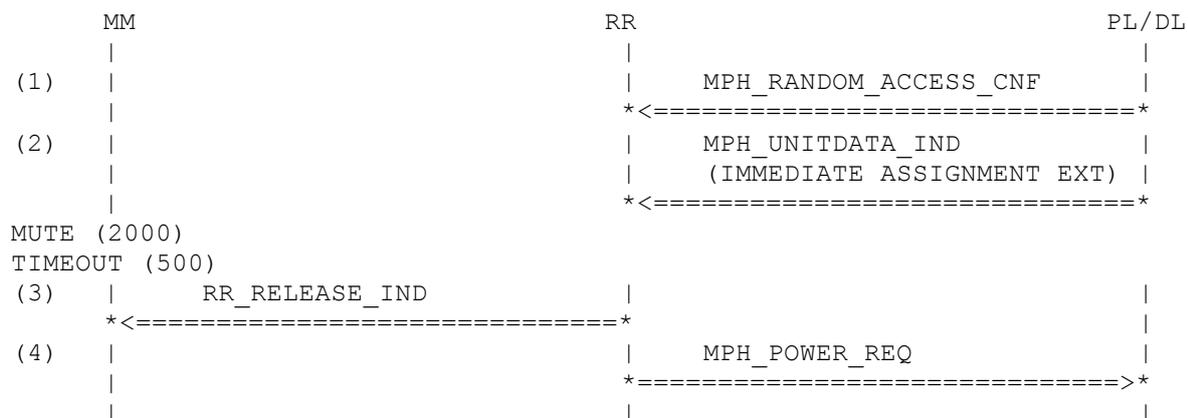
(1) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(2) MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_2_BURSTS
(3) MPH_ERROR_IND	cs arfcn	CS_DOWN_LINK_FAIL ARFCN_67
(4) RR_RELEASE_IND	cause sapi gprs_resumption	RRCS_ABNORM_UNSPEC SAPI_0 NOT_USED

History:            04.10.02            MPA            Initial

### 3.4.12 RR162: Imm Ass Extended for the MS fails

**Description:** The base station sends an Immediate Assignment message for the MS. RR informs the PL and tries to establish the layer 2 connection. The MS is addressed in the 2<sup>nd</sup> part of the message, but the message is discarded, because there is found an conditional IE error

**Preamble:** RR153



**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>	
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1	
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67	
	fn	NOT_USED	
	sdu		
	{		
	component	RR	
	direction	DOWNLINK	
	pd	D_IMM_ASSIGN_EXT	
	ti	TI_0	
	page_mode	PAGING_NORMAL	
	chan_desc	CHANNEL_DESC_SDCCH2_1800	
	req_ref	REQUEST_REFERENCE_2	
	time_advance	TIMING_ADVANCE_27	
	chan_desc_2	CHANNEL_DESC_SDCCH2_1800	
	req_ref_2	REQUEST_REFERENCE_1	
	time_advance_2	TIMING_ADVANCE_27	
	mob_alloc	MOBILE_ALLOCATION_1	
	start_time	NOT_USED	
	}		
(3) RR_RELEASE_IND	cause	RRCS_INT_NOT_PRESENT	
	sapi	SAPI_0	
	gprs_resumption	NOT_USED	
(4) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT	
	freq_bands	NOT_USED	
History:	14.01.03	MPA	Initial
	06.03.03	LG	MUTE/TIMEOUT inserted

**3.4.13 RR400: Paging for MS, TMSI**

**Description:** The base station sends a Paging Request Type 1 message with the TMSI of the mobile station. RR sends two random bursts.

**Preamble:** RR030

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====	
(2)		MPH_PAGING_IND	
		*<=====	
(3)		MPH_RANDOM_ACCESS_REQ	
		*===== >	
(4)		MPH_RANDOM_ACCESS_CNF	
		*<=====	

**Parametrization**

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_35
	rx_lev_sub	RX_LEV_35
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	NOT_USED
	gprs_sync	NOT_USED
(2) MPH_PAGING_IND	identity_type	ID_TMSI
	channel_needed	CN_ANY
(3) MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_2_BURSTS2
(4) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
History:	04.07.97	DL Initial
	24.01.01	DG new: MPH_MEASUREMENT_IND



### 3.4.14 RR403: Imm Ass Extended for the MS

**Description:** The base station sends an Immediate Assignment Extended message for the MS. RR informs the PL and tries to establish the layer 2 connection.

<A>: no starting time, channel description 1 (SDCCH)

<B>: no starting time, channel description 2 (SDCCH)

<C>: with starting time, channel description 1 (FACCH)

<D>: with starting time, channel description 2 (FACCH)

**Preamble:** RR153

**Variants:** <A>..<D>

MM	RR	PL/DL
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT EXT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	

#### Parametrization

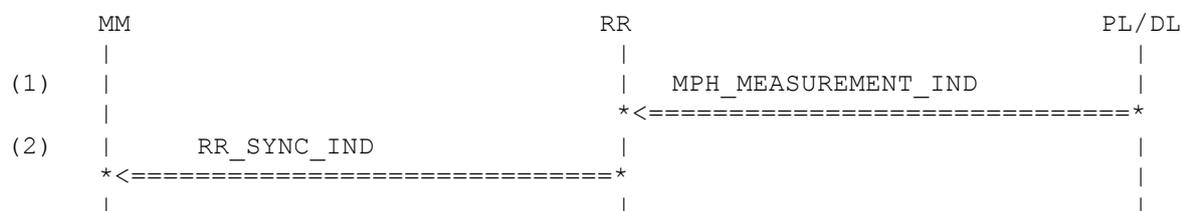
Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN_EXT
	ti	TI_0
	page_mode	PAGING_NORMAL
<A>	chan_desc	CHANNEL_DESC_SDCCH
<B>	chan_desc	CHANNEL_DESC_FACCH2
<C>	chan_desc	CHANNEL_DESC_FACCH2
<D>	chan_desc	CHANNEL_DESC_SDCCH
<A>	req_ref	REQUEST_REFERENCE_1
<B>	req_ref	REQUEST_REFERENCE_2
<C>	req_ref	REQUEST_REFERENCE_1
<D>	req_ref	REQUEST_REFERENCE_2
	time_advance	TIMING_ADVANCE_27
<A>	chan_desc_2	CHANNEL_DESC_FACCH2
<B>	chan_desc_2	CHANNEL_DESC_SDCCH
<C>	chan_desc_2	CHANNEL_DESC_SDCCH
<D>	chan_desc_2	CHANNEL_DESC_FACCH2
<A>	req_ref_2	REQUEST_REFERENCE_2
<B>	req_ref_2	REQUEST_REFERENCE_1
<C>	req_ref_2	REQUEST_REFERENCE_2

<D>	req_ref_2	REQUEST_REFERENCE_1	
	time_advance_2	TIMING_ADVANCE_10	
	mob_alloc	MOBILE_ALLOCATION_1	
<A>	start_time	NOT_USED	
<B>	start_time	NOT_USED	
<C>	start_time	START_TIME_1	
<D>	start_time	START_TIME_1	
	}		
(3) MPH_DEDICATED_REQ			
	mod	MODE_IMM_ASSIGN	
<A>	start	NO_STARTING_TIME	
<B>	start	NO_STARTING_TIME	
<C>	start	STARTING_TIME_1	
<D>	start	STARTING_TIME_1	
<A>	ch_type	PRR_CHANNEL_TYPE_2	
<B>	ch_type	PRR_CHANNEL_TYPE_2	
<C>	ch_type	PRR_CHANNEL_TYPE_4	
<D>	ch_type	PRR_CHANNEL_TYPE_4	
	ch_type2	NOT_USED	
	arfcn	ARFCN_67	
	bsic	NOT_USED	
	ho_param	NOT_USED	
<A>	tr_para	PRR_TR_PARA_2	
<B>	tr_para	PRR_TR_PARA_2B	
<C>	tr_para	PRR_TR_PARA_2	
<D>	tr_para	PRR_TR_PARA_2B	
	ciph	NO_CIPHERING	
	amr_conf	NOT_USED	
(4) MPH_DEDICATED_CNF			
	dedi_res	NOT_USED	
(5) DL_ESTABLISH_REQ			
<A>	ch_type	CH_TYPE_SDCCH	
<B>	ch_type	CH_TYPE_SDCCH	
<C>	ch_type	CH_TYPE_FACCH	
<D>	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu		
	{		
	component	RR	
	direction	UPLINK	
	pd	U_PAG_RES	
	ti	TI_0	
	ciph_key_num	CKSN_RESERVED	
	mob_class_2	MOB_CLASS2_900	
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN	
	}		
History:	30.10.97	LE	Initial
	29.01.01	DG	DL_ESTABLISH_REQ: MOB_CLASS2_NORMAL changed to MOB_CLASS2_900
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.4.15 RR404: Indicate Fieldstrength Jump

**Description:** If the fieldstrength of the serving cell is more or equal 10 dBm than during the last location updating request, an indication is forwarded to MM.

**Preamble:** RR156



#### Parametrization

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_35
	rx_lev_sub	RX_LEV_35
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	NOT_USED
gprs_sync	NOT_USED	
(2) RR_SYNC_IND	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	NOT_USED
	synccs	SYNCCS_LUP_RETRY
	chm	NOT_USED

History:            20.01.99            LE            Initial

### 3.4.16 RR405: Paging for MS (IMSI) after connection

**Description:** The base station sends a Paging Request Type 1 message with the IMSI of the mobile station. RR sends two random bursts. The previous connection has a layer 2 release without acknowledgement.

**Preamble:** RR227

	MM	RR	PL/DL
(1)		MPH_PAGING_IND	
		*<=====*	
(2)		MPH_RANDOM_ACCESS_REQ	
		*=====*>	
(3)		MPH_RANDOM_ACCESS_CNF	
		*<=====*	

#### Parametrization

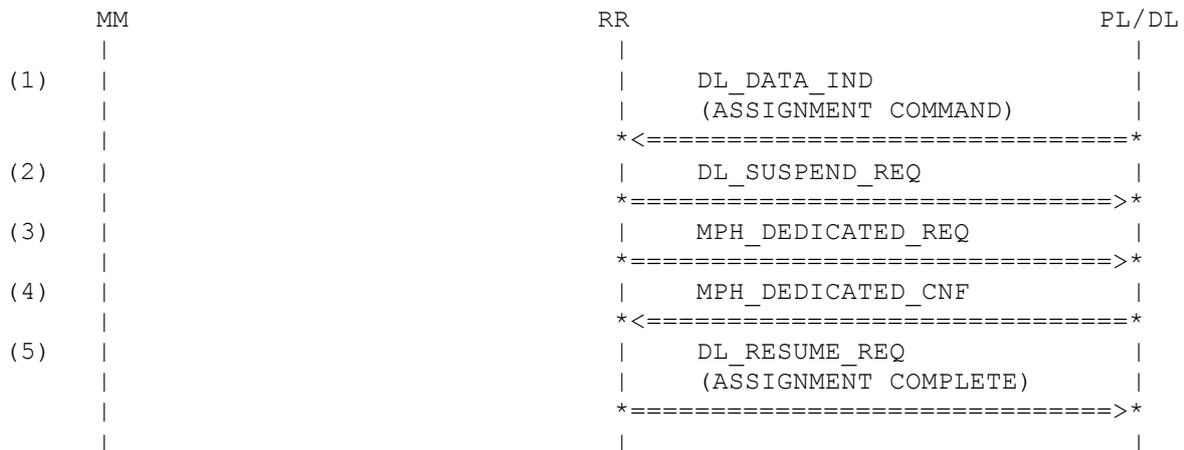
	Primitive	Parameter	Value
(1)	MPH_PAGING_IND	identity_type channel_needed	ID_IMSI CN_ANY
(2)	MPH_RANDOM_ACCESS_REQ	send_mode	SEND_MODE_2_BURSTS2
(3)	MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
History:	19.04.99 06.03.00 18.04.00	LE DG DG	Initial RR_SYNC_IND values changed: RR_SYNC_IND: NOT_USED > MM_INFO_2 NOT_PRESENT_16BIT > SYNCCS_BACK_FROM_DEDICATED NOT_USED > CHM_DG_629
	05-Jun-01	MSE	adapted to TAP2

## 3.5 Channel Assignment

### 3.5.1 RR204: start of intracell handover without change in channel mode

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. There is no change of channel mode.

**Preamble:** RR154B



#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_SDCCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED

		ciph_mode_set	NOT_USED
		vgcs_tmi	NOT_USED
		multirate_conf	S_MULTIRATE_CONF_1
		}	
(2)	DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(3)	MPH_DEDICATED_REQ	mod	MODE_CHAN_ASSIGN
		start	NO_STARTING_TIME
		ch_type	PRR_CHANNEL_TYPE_3
		ch_type2	NOT_USED
		arfcn	ARFCN_67
		bsic	NOT_USED
		ho_param	NOT_USED
		tr_para	PRR_TR_PARA_3
		ciph	NO_CIPHERING
		amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF		
(5)	DL_RESUME_REQ	dedi_res	DEDI_RES_OK
		ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_ASSIGN_COMP
		ti	TI_0
		rr_cause	RR_CAUSE_0
		}	
History:	04.07.97	DL	Initial
	18.11.97	LE	adapted to layer 1
	06.05.98	VK	DL_RELEASE_CNF removed
	25.01.01	DG	DL_DATA_REQ added, DL_DATA_IND: multislots_alloc, chan_mode2...8 added
	12.02.01	DG	DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation





### 3.5.2 RR209: start of intracell handover with change of channel mode

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. There is a change of channel mode.

**Preamble:** RR154B

MM	RR	PL/DL
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_RESUME_REQ (ASSIGNMENT COMPLETE)	

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_FACCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	CHANNEL_MODE_SPEECH
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	}	

(2) DL_SUSPEND_REQ		ch_type sapi	CH_TYPE_SDCCH SAPI_0
(3) MPH_DEDICATED_REQ		mod start ch_type ch_type2 arfcn bsic ho_param tr_para ciph amr_conf	MODE_CHAN_ASSIGN NO_STARTING_TIME PRR_CHANNEL_TYPE_4 NOT_USED ARFCN_67 NOT_USED NOT_USED PRR_TR_PARA_13 NO_CIPHERING NOT_USED
(4) MPH_DEDICATED_CNF		dedi_res	DEDI_RES_OK
(5) DL_RESUME_REQ		ch_type sapi sdu { component direction pd ti rr_cause }	CH_TYPE_FACCH SAPI_0 _ RR UPLINK U_ASSIGN_COMP TI_0 RR_CAUSE_0
History:	04.07.97 06.05.98 25.01.01 26-Feb-02	DL VK DG OT	Initial DL_RELEASE_CNF removed D_ASSIGN_CMD: multislot_allc, chan_mode2...8 added Adaptations for AMR implementation

**3.5.3 RR700: start of intracell handover with change of channel mode-AMR**

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. There is a change of channel mode. Requires a channel mode pcm entry with speech version 3.

- <A>: one codec mode, w/o initial codec mode, full rate
- <B>: two codec modes, w/o initial codec mode
- <C>: three codec modes, w/o initial codec mode
- <D>: four codec modes, w/o initial codec mode
- <E>: four codec modes, with initial codec mode
- <F>: one codec mode, w/o initial codec mode, half rate
- <G>: full rate ericsson IOT
- <H>: full rate alcatel IOT
- <I>: half rate ericsson IOT
- <J>: half rate alcatel IOT

**Variants:**

<A>....<J>

**Preamble:** RR154B

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
COMMAND (RR CONFIG PCM=<MSCAP,0x33,0,0,0,0,0>)		
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_RESUME_REQ (ASSIGNMENT COMPLETE)	
(6)	DL_ESTABLISH_CNF	

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
<A>	chan_desc	CHANNEL_DESC_FACCH2
<B>	chan_desc	CHANNEL_DESC_FACCH2
<C>	chan_desc	CHANNEL_DESC_FACCH2
<D>	chan_desc	CHANNEL_DESC_FACCH2
<E>	chan_desc	CHANNEL_DESC_FACCH2
<F>	chan_desc	CHANNEL_DESC_HALFRATE
<G>	chan_desc	CHANNEL_DESC_FACCH2
<H>	chan_desc	CHANNEL_DESC_FACCH2

<I>		chan_desc
	CHANNEL_DESC_HALFRATE	
<J>		chan_desc
	CHANNEL_DESC_HALFRATE	
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	CHANNEL_MODE_AMR
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
<A>	multirate_conf	S_MULTIRATE_CONF_1
<B>	multirate_conf	S_MULTIRATE_CONF_2
<C>	multirate_conf	S_MULTIRATE_CONF_3
<D>	multirate_conf	S_MULTIRATE_CONF_4
<E>	multirate_conf	S_MULTIRATE_CONF_4_ICMI
<F>	multirate_conf	S_MULTIRATE_CONF_1
<G>	multirate_conf	S_MULTIRATE_CONF_ER_AFS
<H>	multirate_conf	S_MULTIRATE_CONF_ALC_AFS
<I>		multirate_conf
	S_MULTIRATE_CONF_ER_AHS	
<J>		multirate_conf
	S_MULTIRATE_CONF_ALC_AHS	
	}	
(2)	DL_SUSPEND_REQ	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(3)	MPH_DEDICATED_REQ	
	mod	MODE_CHAN_ASSIGN
	start	NO_STARTING_TIME
<A>	ch_type	PRR_CHANNEL_TYPE_4
<B>	ch_type	PRR_CHANNEL_TYPE_4
<C>	ch_type	PRR_CHANNEL_TYPE_4
<D>	ch_type	PRR_CHANNEL_TYPE_4
<E>	ch_type	PRR_CHANNEL_TYPE_4
<F>	ch_type	PRR_CHANNEL_TYPE_HALF
<G>	ch_type	PRR_CHANNEL_TYPE_4
<H>	ch_type	PRR_CHANNEL_TYPE_4
<I>		ch_type
	PRR_CHANNEL_TYPE_HALF	
<J>	ch_type	PRR_CHANNEL_TYPE_HALF

	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_AMR
	ciph	NO_CIPHERING
<A>	amr_conf	S_AMR_CONF_1
<B>	amr_conf	S_AMR_CONF_2
<C>	amr_conf	S_AMR_CONF_3
<D>	amr_conf	S_AMR_CONF_4
<E>	amr_conf	S_AMR_CONF_4_ICMI
<F>	amr_conf	S_AMR_CONF_1
<G>	amr_conf	S_AMR_CONF_5_ER_AFS
<H>	amr_conf	S_AMR_CONF_6_ALC_AFS
<I>	amr_conf	S_AMR_CONF_7_ER_AHS
<J>	amr_conf	amr_conf
	S_AMR_CONF_8_ALC_AHS	
(4) MPH_DEDICATED_CNF		
	dedi_res	DEDI_RES_OK
(5) DL_RESUME_REQ		
<A>	ch_type	CH_TYPE_FACCH
<B>	ch_type	CH_TYPE_FACCH
<C>	ch_type	CH_TYPE_FACCH
<D>	ch_type	CH_TYPE_FACCH
<E>	ch_type	CH_TYPE_FACCH
<F>	ch_type	CH_TYPE_FACCH_HR
<G>	ch_type	CH_TYPE_FACCH
<H>	ch_type	CH_TYPE_FACCH
<I>	ch_type	CH_TYPE_FACCH_HR
<J>	ch_type	CH_TYPE_FACCH_HR
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_ASSIGN_COMP
	ti	TI_0
	rr_cause	RR_CAUSE_0
	}	
(6) DL_ESTABLISH_CNF		
<A>	ch_type	CH_TYPE_FACCH
<B>	ch_type	CH_TYPE_FACCH
<C>	ch_type	CH_TYPE_FACCH
<D>	ch_type	CH_TYPE_FACCH
<E>	ch_type	CH_TYPE_FACCH
<F>	ch_type	CH_TYPE_FACCH_HR
<G>	ch_type	CH_TYPE_FACCH
<H>	ch_type	CH_TYPE_FACCH
<I>	ch_type	CH_TYPE_FACCH_HR
<J>	ch_type	CH_TYPE_FACCH_HR
	sapi	SAPI_0
History:	18. Jan 02	OT Initial, for AMR

### 3.5.4 RR211: start of intracell handover using starting time

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. The Starting Time feature is used.

A : after time : Mobile Allocation            before : Mobile Allocation  
 B : after time : Mobile Allocation (new CA)    before : Mobile Allocation (new CA)  
 C : after time : Frequency List                before : Mobile Allocation  
 D : after time : Frequency List                before : Frequency List  
 E : after time : Frequency List                before : Frequency Channel Sequence  
 F : after time : Mobile Allocation            before: as after (used as part of a suite only)

**Variants:** <A>....<F>

**Preamble:** <A>RR154B  
 <B>RR154B  
 <C>RR154B  
 <D>RR154B  
 <E>RR154B  
 <F>none

MM	RR	PL/DL
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_RESUME_REQ (ASSIGNMENT COMPLETE)	

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_FACCH3
	pow_cmd	POWER_COMMAND_05
<A>	freq_list_after	NOT_USED
<B>	freq_list_after	NOT_USED
<C>	freq_list_after	S_FREQ_LIST_AFTER_2
<D>	freq_list_after	S_FREQ_LIST_AFTER_2
<E>	freq_list_after	S_FREQ_LIST_AFTER_2
<F>	freq_list_after	NOT_USED
<A>	cell_chan_desc	NOT_USED
<B>	cell_chan_desc	CELL_CHAN_DESC_2
<C>	cell_chan_desc	NOT_USED

<D>	cell_chan_desc	NOT_USED
<E>	cell_chan_desc	NOT_USED
<F>	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
<A>	mob_alloc_after	MOBILE_ALLOCATION_2
<B>	mob_alloc_after	MOBILE_ALLOCATION_4
<C>	mob_alloc_after	NOT_USED
<D>	mob_alloc_after	NOT_USED
<E>	mob_alloc_after	NOT_USED
<F>	mob_alloc_after	MOBILE_ALLOCATION_1800
	start_time	START_TIME_1
<A>	freq_list_before	NOT_USED
<B>	freq_list_before	NOT_USED
<C>	freq_list_before	NOT_USED
<D>	freq_list_before	S_FREQ_LIST_BEFORE_1
<E>	freq_list_before	NOT_USED
<F>	freq_list_before	NOT_USED
	chan_desc_before	CHANNEL_DESC_FACCH4
	chan_desc_before_2	NOT_USED
<A>	freq_chan_seq	NOT_USED
<B>	freq_chan_seq	NOT_USED
<C>	freq_chan_seq	NOT_USED
<D>	freq_chan_seq	NOT_USED
<E>	freq_chan_seq	FREQ_CHAN_SEQ_1
<F>	freq_chan_seq	NOT_USED
<A>	mob_alloc_before	MOBILE_ALLOCATION_3
<B>	mob_alloc_before	MOBILE_ALLOCATION_3
<C>	mob_alloc_before	MOBILE_ALLOCATION_3
<D>	mob_alloc_before	NOT_USED
<E>	mob_alloc_before	NOT_USED
<F>	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	}	
(2) DL_SUSPEND_REQ		
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(3) MPH_DEDICATED_REQ		
	mod	MODE_CHAN_ASSIGN
	start	STARTING_TIME_1
<A>	ch_type	PRR_CHANNEL_TYPE_6
<B>	ch_type	PRR_CHANNEL_TYPE_8
<C>	ch_type	PRR_CHANNEL_TYPE_6
<D>	ch_type	PRR_CHANNEL_TYPE_6
<E>	ch_type	PRR_CHANNEL_TYPE_6
<F>	ch_type	PRR_CHANNEL_TYPE_6
	PRR_CHANNEL_TYPE_6_1800	
<A>	ch_type2	PRR_CHANNEL_TYPE_7

<B>	ch_type2	PRR_CHANNEL_TYPE_9	
<C>	ch_type2	PRR_CHANNEL_TYPE_7	
<D>	ch_type2	PRR_CHANNEL_TYPE_10	
<E>	ch_type2	PRR_CHANNEL_TYPE_11	
<F>	ch_type2		
	PRR_CHANNEL_TYPE_7_1800		
<A>	arfcn	ARFCN_67	
<B>	arfcn	ARFCN_67	
<C>	arfcn	ARFCN_67	
<D>	arfcn	ARFCN_67	
<E>	arfcn	ARFCN_67	
<F>	arfcn	ARFCN_527	
	bsic	NOT_USED	
	ho_param	NOT_USED	
	tr_para	PRR_TR_PARA_3	
	ciph	NO_CIPHERING	
	amr_conf	NOT_USED	
(4) MPH_DEDICATED_CNF			
	dedi_res	DEDI_RES_OK	
(5) DL_RESUME_REQ			
	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu		
	{		
	component	RR	
	direction	UPLINK	
	pd	U_ASSIGN_COMP	
	ti	TI_0	
	rr_cause	RR_CAUSE_0	
	}		
History:	04.05.98	VK	Initial
	25.01.01	DG	D_ASSIGN_CMD: multislot_all oc, chan_mode2...8 added
	26.01.01	DG	DL_DATA_REQ added
	30.01.01	DG	value changed: MPH_DEDICATED_REQ: PRR_TR_PARA_13 -> PRR_TR_PARA_3
	12.02.01	DG	DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation

**3.5.5 RR212: start of intracell handover with E-GSM channel 0**

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. There is no change of channel mode. It is started in E-GSM band with channel number 0.

**Preamble:** RR157

MM	RR	PL/DL
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_RESUME_REQ (ASSIGNMENT COMPLETE)	

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_FACCH3
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_EGSM
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	MOBILE_ALLOCATION_EGSM
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED

		ciph_mode_set }	NOT_USED
(2) DL_SUSPEND_REQ		ch_type sapi	CH_TYPE_SDCCH SAPI_0
(3) MPH_DEDICATED_REQ		mod start ch_type ch_type2 arfcn bsic ho_param tr_para ciph amr_conf	MODE_CHAN_ASSIGN NO_STARTING_TIME PRR_CHANNEL_TYPE_EGSM NOT_USED ARFCN_67 NOT_USED NOT_USED PRR_TR_PARA_3 NO_CIPHERING NOT_USED
(4) MPH_DEDICATED_CNF		dedi_res	DEDI_RES_OK
(5) DL_RESUME_REQ		ch_type sapi sdu { component direction pd ti rr_cause }	CH_TYPE_FACCH SAPI_0  RR UPLINK U_ASSIGN_COMP TI_0 RR_CAUSE_0
History:	15-Feb-00 14.04.00	LE DG	Initial value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	17.05.00 26.05.00	DG DG	new: RR_SYNC_IND values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	25.01.01	DG	IMMEDIATE ASSIGNMENT: tma, dl, d_t, pck_chan_desc added; MPH_MEASUREMENT_IND added, D_ASSIGN_CMD: multislot_alloc, chan_mode2...8 added, DL_ESTABLISH_REQ:
MOB_CLASS2_EGSM			-> MOB_CLASS2_212
	08.02.01 26.02.01	DG DG	RR_ACTIVATE_CNF: gprs_indication added Preamble 001B replaced by local RR_ACTIVATE_REQ/MPH_POWER_REQ
	27.02.01	DG	new: MPH_SYNC_REQ

05-Jun-01  
26-Feb-02

MSE  
OT

adapted to TAP2  
Adaptations for AMR implementation

### 3.5.6 RR214: start of intracell handover for test case 13.1

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. The parameters are from FTA test case 13.1

**Preamble:** RR158

MM	RR	PL/DL
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	DL_RECONNECT_REQ (ASSIGNMENT FAILURE)	

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHAN_DESC_13_1
	pow_cmd	POW_CMD_7
	freq_list_after	FREQ_LIST_AFTER_13_1
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	CM_SPEECH
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
	multirate_conf	NOT_USED
	}	

(2) DL\_SUSPEND\_REQ

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0

(3) DL\_RECONNECT\_REQ

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0
sdu	
{	
component	RR
direction	UPLINK
pd	U_ASSIGN_FAIL
ti	TI_0
rr_cause	RRC_CHANNEL_MODE
}	

History:

15-Feb-00  
17-May-00

LE	Initial
DG	new: DL_RECONNECT_REQ
	deleted:
	(15) MPH_DEDICATED_REQ,
	(16) MPH_DEDICATED_CNF
	(17) DL_RESUME_REQ
	IMMEDIATE ASSIGNMENT:
	tma, dl, d_t, pck_chan_desc added;
	MPH_MEASUREMENT_IND added,
	DL_ESTABLISH_REQ:

25.01.01

DG

MOB\_CLASS2\_EGSM

19.02.01  
05-Jun-01  
26-Feb-02

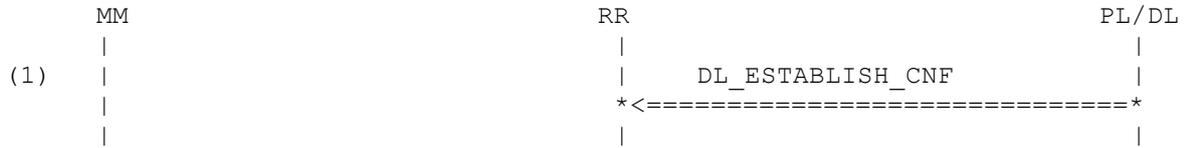
DG  
MSE  
OT

-> MOB\_CLASS2\_212  
new: MPH\_SYNC\_REQ  
adapted to TAP2  
Adaptations for AMR implementation

**3.5.7 RR205: successful end of intracell handover, no change in channel mode**

**Description:** The new connection is established. There was no change in channel mode.

**Preamble:** RR204



**Parametrization**

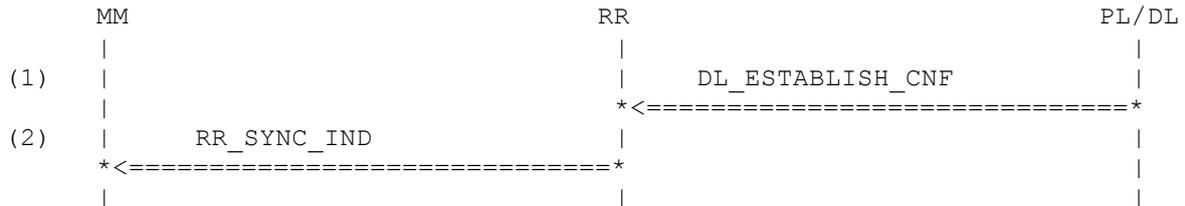
	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	DL_ESTABLISH_CNF	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
History:	04.07.97	DL	Initial

**3.5.8 RR210: successful end of intracell handover with change in channel mode**

**Description:** The new connection is established. There was a change in channel mode.

**Variants:** <A>...<E>

**Preamble:**  
 <A>RR209  
 <B>RR700A  
 <C>RR700B  
 <D>RR700C  
 <E>RR700D



**Parametrization**

Primitive	Parameter	Value	
(1) DL_ESTABLISH_CNF	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
(2) RR_SYNC_IND	ciph	NOT_USED	
	mm_info	NOT_USED	
	bcch_info	NOT_USED	
	synccs	NOT_PRESENT_16BIT	
	<A>	chm	S_CHM_SPEECH_FULL
	<B>	chm	S_CHM_SPEECH_AMR_FULL
	<C>	chm	S_CHM_SPEECH_AMR_FULL
<D>	chm	S_CHM_SPEECH_AMR_FULL	
<E>	chm	S_CHM_SPEECH_AMR_FULL	
History:	04.07.97	DL	Initial
	12.02.01	DG	new: MPH_SYNC_REQ
	05-Jun-01	MSE	adapted to TAP2
	18. Jan.02	OT	Variants <A>..<B> introduced, <B>..<E> for
AMR.	05.03.03	LG	MPH_SYNC_REQ removed

**3.5.9 RR213: unsuccessful intracell handover due to "frequency not implemented" (1800)**

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration(initial assignment). This test case is used only as part of a suite.

**Preamble:** none

MM	RR	PL/DL
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	DL_RECONNECT_REQ (ASSIGNMENT FAILURE)	

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_FACCH3
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	
	MOBILE_ALLOCATION_1800_FAIL	
	start_time	START_TIME_1
	freq_list_before	NOT_USED
	chan_desc_before	CHANNEL_DESC_FACCH4
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED

	ciph_mode_set }	NOT_USED
(2) DL_SUSPEND_REQ	ch_type sapi	CH_TYPE_SDCCH SAPI_0
(3) DL_RECONNECT_REQ	ch_type sapi sdu { component direction pd ti rr_cause }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_ASSIGN_FAIL TI_0 RRC_FREQ_NOT_IMPL
History:	1. Jul 02	MPA Initial

### 3.5.10 RR701: unsuccessful intracell handover without multirate conf IE-AMR

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration(initial assignment).

**Preamble:** RR154B

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	DL_RECONNECT_REQ (ASSIGNMENT FAILURE)	

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_FACCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	CHANNEL_MODE_AMR
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED

		multirate_conf	NOT_USED
		}	
(2)	DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(3)	DL_RECONNECT_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_ASSIGN_FAIL
		ti	TI_0
		rr_cause	RR_CAUSE_09
		}	
History:	18. Jan 02	OT	Initial, for AMR

### 3.5.11 RR702: unsuccessful intracell handover with inconsistent multirate conf IE-AMR

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration(initial assignment).

<A>: acs does not include any codec mode

<B>: acs does include more than four codec modes

<C>: one codec mode is not supported by the assigned channel

<D>: thres & hyst values are not set according 05.09 – wrong order

<E>: thres & hyst values are not set according 05.09 – less values than (acs-1)

**Variants:** <A>....<E>

**Preamble:** RR154B

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	DL_RECONNECT_REQ (ASSIGNMENT FAILURE)	

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_FACCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	CHANNEL_MODE_AMR
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED

	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
<A>	multirate_conf	S_MULTIRATE_CONF_4_702A
<B>	multirate_conf	S_MULTIRATE_CONF_4_702B
<C>	multirate_conf	S_MULTIRATE_CONF_4_702C
<D>	multirate_conf	S_MULTIRATE_CONF_4_702D
<E>	multirate_conf	S_MULTIRATE_CONF_4_702E
	}	
(2) DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(3) DL_RECONNECT_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_ASSIGN_FAIL
	ti	TI_0
	rr_cause	RRC_CHANNEL_MODE
	}	
History:	18. Jan 02	OT Initial, for AMR

### 3.5.12 RR206: new configuration failed, back to old configuration

**Description:** Establishment of new configuration failed. RR retries to reconnect the old configuration.

**Preamble:** RR204

	MM	RR	PL/DL
(1)		DL_RELEASE_IND	
		*<=====*	
(2)		MPH_DEDICATED_FAIL_REQ	
		*=====>*	
(3)		MPH_DEDICATED_FAIL_CNF	
		*<=====*	
(4)		DL_RECONNECT_REQ	
		(ASSIGNMENT FAILURE)	
		*=====>*	

#### Parametrization

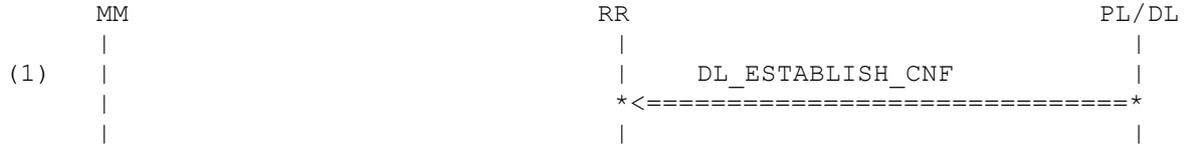
	Primitive	Parameter	Value
(1)	DL_RELEASE_IND	ch_type sapi cs	CH_TYPE_SDCCH SAPI_0 NOT_USED
(2)	MPH_DEDICATED_FAIL_REQ	param	NOT_USED
(3)	MPH_DEDICATED_FAIL_CNF	param	NOT_USED
(4)	DL_RECONNECT_REQ	ch_type sapi sdu { component direction pd ti rr_cause }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_ASSIGN_FAIL TI_0 RR_CAUSE_6F

History: 04.07.97 DL Initial

**3.5.13 RR207: reconnection of old configuration successful**

**Description:** Establishment of old configuration is successful.

**Preamble:** RR206



**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) DL_ESTABLISH_CNF	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0

History:            04.07.97            DL            Initial

### 3.5.14 RR208: reconnection of old configuration failed

**Description:** Establishment of old configuration has failed. RR releases the connection and enters the idle mode.

**Preamble:** RR206

MM	RR	PL/DL
(1)	DL_RELEASE_IND	
	*<=====*	
(2)   RR_ABORT_IND		
	*<=====*	
(3)	MPH_IDLE_REQ	
	*=====>*	
(4)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(5)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(9)	MPH_CLASSMARK_REQ	
	*=====>*	
(10)	MPH_IDLE_REQ	
	*=====>*	
(11)	MPH_CBCH_REQ	
	*=====>*	
(12)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) DL_RELEASE_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	cs	NOT_USED
(2) RR_ABORT_IND	op	OP_MODE_TEST_SIM
	cause	RRCS_DATA_LINK_FAIL
	plmn_avail	NO_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	NOT_USED
	rxlevel	NOT_USED
	power	NOT_USED
(3) MPH_IDLE_REQ	mod	MODE_CELL_RESELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED

		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLK_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_FF
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(4)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_1
		ti	TI_0
		cell_chan_desc	CELL_CHAN_DESC_1
		rach_ctrl	RACH_CTRL_1
		}	
(5)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_2
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_1
		ncc_permit	NCC_PERMITTED_1
		rach_ctrl	RACH_CTRL_1
		}	
(6)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_3
		ti	TI_0
		cell_ident	CELL_IDENT_3748
		loc_area_ident	LOC_AREA_IDENT_123_2147
		ctrl_chan_desc	CTRL_CHAN_DESC_1
		cell_opt_bcch	CELL_OPT_BCCH_1
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		si3_rest_oct	S_SI3_REST_EMPTY
		}	
(7)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67

		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_4
		ti	TI_0
		loc_area_ident	LOC_AREA_IDENT_123_2147
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
		si4_rest_oct	S_SI4_REST_EMPTY
		}	
(8)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_1
		ti	TI_0
		cell_chan_desc	CELL_CHAN_DESC_1
		rach_ctrl	RACH_CTRL_1
		}	
(9)	MPH_CLASSMARK_REQ		
		classmark	CLASS_MS
(10)	MPH_IDLE_REQ		
		mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLK_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(11)	MPH_CBCH_REQ		
		cbch	NOT_USED
(12)	MPH_NEIGHBOURCELL_REQ		
		multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED

## History:

04.07.97  
14.04.00

DL  
DG

Initial  
value changed:  
MPH\_IDLE\_REQ/ext\_bcch:

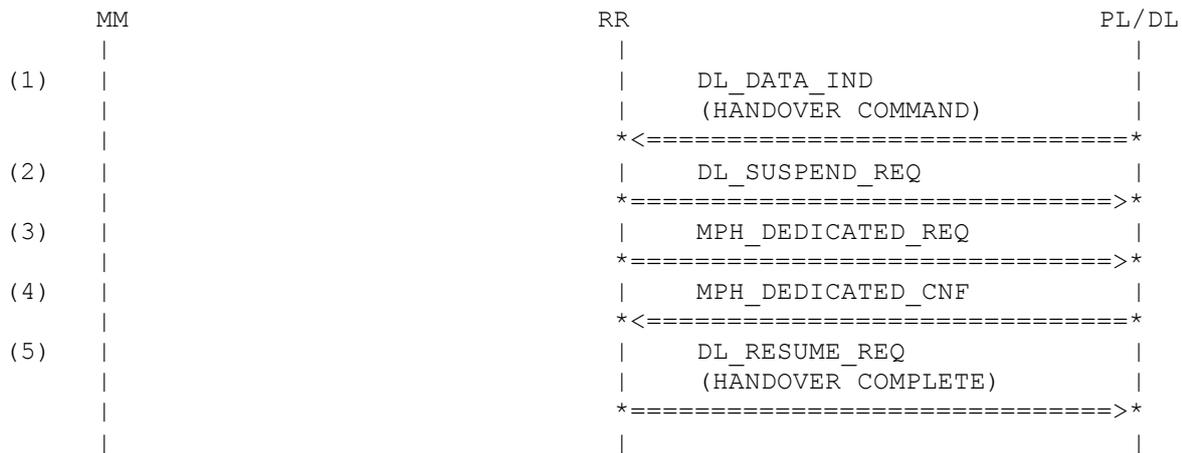
26.05.00	DG	EXT_BCCH_NOT_LIST > BSIC_5 values changed: si3/4_rest_oct:
12.07.00	DG	NOT_USED > SI3_REST_DEF MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
31.03.01	VK	'power' added in rr_abort_ind
05-Jun-01	MSE	adapted to TAP2
25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.6 Handover Command

#### 3.6.1 RR215: Handover Command

**Description:** The base station initiates a handover. RR releases the old connection locally and configures the new channel configuration.

**Preamble:** RR185



**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
	chan_desc_after	CHANNEL_DESC_FACCH3
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
	synch_ind	SYNCH_IND_2
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_1
	chan_mode	CHANNEL_MODE_SPEECH
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	freq_chan_seq_after	NOT_USED
	mob_alloc_after	MOBILE_ALLOCATION_2
	start_time	START_TIME_1
	time_diff	NOT_USED

		time_advance	NOT_USED
		freq_short_list_before	NOT_USED
		freq_list_before	NOT_USED
		chan_desc_before	CHANNEL_DESC_FACCH4
		chan_desc_before_2	NOT_USED
		freq_chan_seq_before	NOT_USED
		mob_alloc_before	MOBILE_ALLOCATION_3
		ciph_mode_set	NOT_USED
		}	
(2)	DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(3)	MPH_DEDICATED_REQ	mod	MODE_PRE_SYNC_HANDOVER
		start	STARTING_TIME_1
		ch_type	PRR_CHANNEL_TYPE_6
		ch_type2	PRR_CHANNEL_TYPE_7
		arfcn	ARFCN_32
		bsic	NOT_USED
		ho_param	HO_PARAM_1
		tr_para	PRR_TR_PARA_HO
		ciph	NO_CIPHERING
		amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF	dedi_res	DEDI_RES_OK
(5)	DL_RESUME_REQ	ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_HANDOV_COMP
		ti	TI_0
		rr_cause	RR_CAUSE_0
		}	
History:	19.05.98	VK	Initial
	25.01.01	DG	DL_DATA_IND: chan_mode2...8 added
	12.02.01.	DG	DL_DATA_REQ deleted
	18.Jan.02.	OT	Synch_ind structure renumbered.
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.6.2 RR216: Handover Command

**Description:** The base station initiates a handover. RR releases the old connection locally and configures the new channel configuration.

**Preamble:** RR185

	MM	RR	PL/DL
(1)		DL_DATA_IND	
		(HANDOVER COMMAND)	
		*<=====*	
(2)		DL_SUSPEND_REQ	
		*=====*>	
(3)		MPH_DEDICATED_REQ	

```

(4) | | *=====>*
    | | | MPH_DEDICATED_CNF |
    | | *<=====*
```

```

(5) | | | DL_RESUME_REQ |
    | | | (HANDOVER COMPLETE) |
    | | *=====>*
    | | |

```

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
	chan_desc_after	CHANNEL_DESC_FACCH3
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
	synch_ind	SYNCH_IND_0
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_1
	chan_mode	CHANNEL_MODE_SPEECH
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	freq_chan_seq_after	NOT_USED
	mob_alloc_after	MOBILE_ALLOCATION_2
	start_time	START_TIME_1
	time_diff	NOT_USED
	time_advance	NOT_USED
	freq_short_list_before	NOT_USED
	freq_list_before	NOT_USED
chan_desc_before	CHANNEL_DESC_FACCH4	
chan_desc_before_2	NOT_USED	
freq_chan_seq_before	NOT_USED	
mob_alloc_before	MOBILE_ALLOCATION_3	
ciph_mode_set	NOT_USED	
}		
(2) DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(3) MPH_DEDICATED_REQ	mod	MODE_ASYNC_HANDOVER
	start	STARTING_TIME_1

		ch_type	PRR_CHANNEL_TYPE_6
		ch_type2	PRR_CHANNEL_TYPE_7
		arfcn	ARFCN_32
		bsic	NOT_USED
		ho_param	HO_PARAM_0
		tr_para	PRR_TR_PARA_ASY_HO
		ciph	NO_CIPHERING
		amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF		
(5)	DL_RESUME_REQ	dedi_res	DEDI_RES_OK
		ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_HANDOV_COMP
		ti	TI_0
		rr_cause	RR_CAUSE_0
		}	
History:	19.05.98	VK	Initial
	25.01.01	DG	DL_DATA_IND: chan_mode2...8 added
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.6.3 RR703: Handover Command - AMR

**Description:** The base station initiates a handover. RR releases the old connection locally and configures the new channel configuration with multirate configuration values.

- <A>: non sync handover, with multirate conf IE & with initial codec mode
- <B>: sync handover, with multirate conf IE & with initial codec mode
- <C>: pre sync handover, with multirate conf IE & with initial codec mode
- <D>: async handover, with multirate conf IE & w/o initial codec mode
- <E>: async handover, w/o multirate conf IE
- <F>: async handover, with FR->HR and different ACS
- <G>: async handover, with HR -> FR and different ACS
- <H>: async handover, with FR -> HR and different ACS Ericsson
- <I>: async handover, with FR -> HR and different ACS Alcatel
- <J>: async handover, with HR -> FR and different ACS Ericsson
- <K>: async handover, with HR -> FR and different ACS Alcatel

**Variants:** <A>...<F>  
**Preamble:** <A>RR185  
 <B>RR185  
 <C>RR185  
 <D>RR185  
 <E>RR185  
 <F> RR700A  
 <G>RR700F  
 <H>RR700G  
 <I>RR700H  
 <J> RR700I  
 <K> RR700J

	MM	RR	PL/DL
COMMAND	(PL CONFIG STD=1)		
(1)			DL_DATA_IND

```

| | | (HANDOVER COMMAND) |
| | | *<=====|
(2) | | | DL_SUSPEND_REQ |
| | | *=====>* |
(3) | | | MPH_DEDICATED_REQ |
| | | *=====>* |
(4) | | | MPH_DEDICATED_CNF |
| | | *<=====|
(5) | | | DL_RESUME_REQ |
| | | (HANDOVER COMPLETE) |
| | | *=====>* |
(6) | | | DL_ESTABLISH_CNF |
| | | *<=====|
| | | |

```

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
<A>	chan_desc_after	CHANNEL_DESC_FACCH3
<B>	chan_desc_after	CHANNEL_DESC_FACCH3
<C>	chan_desc_after	CHANNEL_DESC_FACCH3
<D>	chan_desc_after	CHANNEL_DESC_FACCH3
<E>	chan_desc_after	CHANNEL_DESC_FACCH3
<F>	chan_desc_after	CHANNEL_DESC_FACCH3_HALF
<G>	chan_desc_after	CHANNEL_DESC_FACCH3
<H>	chan_desc_after	CHANNEL_DESC_FACCH3_HALF
<I>	chan_desc_after	CHANNEL_DESC_FACCH3_HALF
<J>	chan_desc_after	CHANNEL_DESC_FACCH3
<K>	chan_desc_after	CHANNEL_DESC_FACCH3
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
<A>	synch_ind	SYNCH_IND_0
<B>	synch_ind	SYNCH_IND_1
<C>	synch_ind	SYNCH_IND_2
<D>	synch_ind	SYNCH_IND_0
<E>	synch_ind	SYNCH_IND_0
<F>	synch_ind	SYNCH_IND_0
<G>	synch_ind	SYNCH_IND_0
<H>	synch_ind	SYNCH_IND_0
<I>	synch_ind	SYNCH_IND_0
<J>	synch_ind	SYNCH_IND_0
<K>	synch_ind	SYNCH_IND_0
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_1
	chan_mode	CHANNEL_MODE_AMR
	chan_mode2	NOT_USED

	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	freq_chan_seq_after	NOT_USED
	mob_alloc_after	MOBILE_ALLOCATION_2
	start_time	START_TIME_1
	time_diff	NOT_USED
	time_advance	NOT_USED
	freq_short_list_before	NOT_USED
	freq_list_before	NOT_USED
<A>	chan_desc_before	CHANNEL_DESC_FACCH4
<B>	chan_desc_before	CHANNEL_DESC_FACCH4
<C>	chan_desc_before	CHANNEL_DESC_FACCH4
<D>	chan_desc_before	CHANNEL_DESC_FACCH4
<E>	chan_desc_before	CHANNEL_DESC_FACCH4
<F>	chan_desc_before	CHANNEL_DESC_FACCH4_HALF
<G>	chan_desc_before	CHANNEL_DESC_FACCH4
<H>	chan_desc_before	CHANNEL_DESC_FACCH4_HALF
<I>		chan_desc_before
	CHANNEL_DESC_FACCH4_HALF	
<J>		chan_desc_before
	CHANNEL_DESC_FACCH4	
<K>		
	chan_desc_before	CHANNEL_DESC_FACCH4
	chan_desc_before_2	NOT_USED
	freq_chan_seq_before	NOT_USED
	mob_alloc_before	MOBILE_ALLOCATION_3
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
<A>	multirate_conf	S_MULTIRATE_CONF_4_ICMI
<B>	multirate_conf	S_MULTIRATE_CONF_4_ICMI
<C>	multirate_conf	S_MULTIRATE_CONF_4_ICMI
<D>	multirate_conf	S_MULTIRATE_CONF_4
<E>	multirate_conf	NOT_USED
<F>	multirate_conf	S_MULTIRATE_CONF_2
<G>	multirate_conf	S_MULTIRATE_CONF_2
<H>	multirate_conf	S_MULTIRATE_CONF_ER_AHS
<I>		multirate_conf
	S_MULTIRATE_CONF_ALC_AHS	
<J>		multirate_conf
	S_MULTIRATE_CONF_ER_AFS	
<K>		
	multirate_conf	S_MULTIRATE_CONF_ALC_AFS
	}	
<b>(2) DL_SUSPEND_REQ</b>		
<A>	ch_type	CH_TYPE_SDCCH
<B>	ch_type	CH_TYPE_SDCCH
<C>	ch_type	CH_TYPE_SDCCH
<D>	ch_type	CH_TYPE_SDCCH
<E>	ch_type	CH_TYPE_SDCCH
<F>	ch_type	CH_TYPE_FACCH
<G>	ch_type	CH_TYPE_FACCH_HR
<H>	ch_type	CH_TYPE_FACCH
<I>		ch_type CH_TYPE_FACCH

<J>		ch_type	CH_TYPE_FACCH_HR
<K>	ch_type		CH_TYPE_FACCH_HR
	sapi		SAPI_0
<b>(3) MPH_DEDICATED_REQ</b>			
<A>	mod		MODE_ASYNC_HANOVER
<B>	mod		MODE_SYNC_HANOVER
<C>	mod		MODE_PRE_SYNC_HANOVER
<D>	mod		MODE_ASYNC_HANOVER
<E>	mod		MODE_ASYNC_HANOVER
<F>	mod		MODE_ASYNC_HANOVER
<G>	mod		MODE_ASYNC_HANOVER
<H>	mod		MODE_ASYNC_HANOVER
<I>		mod	MODE_ASYNC_HANOVER
<J>	mod		MODE_ASYNC_HANOVER
<K>	mod		MODE_ASYNC_HANOVER
	start		STARTING_TIME_1
<A>	ch_type		PRR_CHANNEL_TYPE_6
<B>	ch_type		PRR_CHANNEL_TYPE_6
<C>	ch_type		PRR_CHANNEL_TYPE_6
<D>	ch_type		PRR_CHANNEL_TYPE_6
<E>	ch_type		PRR_CHANNEL_TYPE_6
<F>	ch_type		PRR_CHANNEL_TYPE_HOP_HALF2
<G>	ch_type		PRR_CHANNEL_TYPE_6
<H>	ch_type		PRR_CHANNEL_TYPE_HOP_HALF2
<I>		ch_type	ch_type
		PRR_CHANNEL_TYPE_HOP_HALF2	
<J>	ch_type		PRR_CHANNEL_TYPE_6
<K>	ch_type		PRR_CHANNEL_TYPE_6
<A>	ch_type2		PRR_CHANNEL_TYPE_7
<B>	ch_type2		PRR_CHANNEL_TYPE_7
<C>	ch_type2		PRR_CHANNEL_TYPE_7
<D>	ch_type2		PRR_CHANNEL_TYPE_7
<E>	ch_type2		PRR_CHANNEL_TYPE_7
<F>	ch_type2		PRR_CHANNEL_TYPE_HOP_HALF
<G>	ch_type2		PRR_CHANNEL_TYPE_7
<H>	ch_type2		PRR_CHANNEL_TYPE_HOP_HALF
<I>		ch_type2	ch_type2
		PRR_CHANNEL_TYPE_HOP_HALF	
<J>		ch_type2	PRR_CHANNEL_TYPE_7
<K>	ch_type2		PRR_CHANNEL_TYPE_7
	arfcn		ARFCN_32
	bsic		NOT_USED
<A>	ho_param		HO_PARAM_0
<B>	ho_param		HO_PARAM_1
<C>	ho_param		HO_PARAM_1
<D>	ho_param		HO_PARAM_0
<E>	ho_param		HO_PARAM_0
<F>	ho_param		HO_PARAM_0
<G>	ho_param		HO_PARAM_0
<H>	ho_param		HO_PARAM_0
<I>		ho_param	HO_PARAM_0
<J>		ho_param	HO_PARAM_0
<K>	ho_param		HO_PARAM_0
	tr_para		PRR_TR_PARA_AMR_1
	ciph		NO_CIPHERING
<A>	amr_conf		S_AMR_CONF_4_ICMI
<B>	amr_conf		S_AMR_CONF_4_ICMI

<C>	amr_conf	S_AMR_CONF_4_ICMI
<D>	amr_conf	S_AMR_CONF_4
<E>	amr_conf	S_AMR_CONF_0
<F>	amr_conf	S_AMR_CONF_2
<G>	amr_conf	S_AMR_CONF_2
<H>	amr_conf	S_AMR_CONF_7_ER_AHS
<I>		amr_conf
	S_AMR_CONF_8_ALC_AHS	
<J>		amr_conf S_AMR_CONF_5_ER_AFS
<K>	amr_conf	S_AMR_CONF_6_ALC_AFS
 (4) MPH_DEDICATED_CNF		
	dedi_res	DEDI_RES_OK
 (5) DL_RESUME_REQ		
<A>	ch_type	CH_TYPE_FACCH
<B>	ch_type	CH_TYPE_FACCH
<C>	ch_type	CH_TYPE_FACCH
<D>	ch_type	CH_TYPE_FACCH
<E>	ch_type	CH_TYPE_FACCH
<F>	ch_type	CH_TYPE_FACCH_HR
<G>	ch_type	CH_TYPE_FACCH
<H>	ch_type	CH_TYPE_FACCH_HR
<I>		ch_type CH_TYPE_FACCH_HR
<J>		ch_type CH_TYPE_FACCH
<K>	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_HANDOV_COMP
	ti	TI_0
	rr_cause	RR_CAUSE_0
	}	
 (6) DL_ESTABLISH_CNF		
<A>	ch_type	CH_TYPE_FACCH
<B>	ch_type	CH_TYPE_FACCH
<C>	ch_type	CH_TYPE_FACCH
<D>	ch_type	CH_TYPE_FACCH
<E>	ch_type	CH_TYPE_FACCH
<F>	ch_type	CH_TYPE_FACCH_HR
<G>	ch_type	CH_TYPE_FACCH
<H>	ch_type	CH_TYPE_FACCH_HR
<I>		ch_type CH_TYPE_FACCH_HR
<J>		ch_type CH_TYPE_FACCH
<K>	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0

History: 18.Feb.02 OT Initial

### 3.6.4 RR706: Handover Command - AMR - no Channel Mode element

**Description:** The base station initiates a handover. RR releases the old connection locally and configures the new channel configuration with multirate configuration values:  
async handover, with HR -> FR and different ACS Alcatel 2

**Preamble:**

RR700J

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)	DL_DATA_IND (HANDOVER COMMAND)	
(2)	DL_SUSPEND_REQ	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_RESUME_REQ (HANDOVER COMPLETE)	
(6)	DL_ESTABLISH_CNF	

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	AMR_HO_ALC
(2) DL_SUSPEND_REQ	ch_type	CH_TYPE_FACCH_HR
	sapi	SAPI_0
(3) MPH_DEDICATED_REQ	mod	MODE_ASYNC_HANDOVER
	start	NOT_USED
	ch_type	NOT_USED
	ch_type2	NOT_USED
	arfcn	NOT_USED
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	NOT_USED
	ciph	NOT_USED
	amr_conf	S_AMR_CONF_6_ALC_AFS2
(4) MPH_DEDICATED_CNF	dedi_res	DEDI_RES_OK
(5) DL_RESUME_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_HANDOV_COMP
ti	TI_0	

```

rr_cause          RR_CAUSE_0
}
(6) DL_ESTABLISH_CNF
ch_type          CH_TYPE_FACCH
sapi             SAPI_0
    
```

History:            18.Feb.02            OT            Initial

**3.6.5 RR704: Handover cmd with inconsistent multirate conf IE - AMR**

**Description:** The base station initiates a handover. RR releases the old connection locally and configures the new channel configuration(handover cmd).

- <A>: acs does not include any codec mode
- <B>: acs does include more than four codec modes
- <C>: one codec mode is not supported by the assigned channel
- <D>: thres & hyst values are not set according 05.09 – wrong order
- <D>: thres & hyst values are not set according 05.09 – less values than (acs-1)

**Variants:** <A>....<E>

**Preamble:** RR154B

	MM		RR	PL/DL
COMMAND (PL CONFIG STD=1)				
(1)			DL_DATA_IND	
			(HANDOVER COMMAND)	
			*<=====*	
(2)			DL_SUSPEND_REQ	
			*=====>*	
(3)			DL_RECONNECT_REQ	
			(HANDOVER FAILURE)	
			*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
	chan_desc_after	CHANNEL_DESC_FACCH3
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
	synch_ind	SYNCH_IND_0
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_1
	chan_mode	CHANNEL_MODE_AMR
	chan_mode2	NOT_USED

	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	freq_chan_seq_after	NOT_USED
	mob_alloc_after	MOBILE_ALLOCATION_2
	start_time	START_TIME_1
	time_diff	NOT_USED
	time_advance	NOT_USED
	freq_short_list_before	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	CHANNEL_DESC_FACCH4
	chan_desc_before_2	NOT_USED
	freq_chan_seq_before	NOT_USED
	mob_alloc_before	MOBILE_ALLOCATION_3
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
<A>	multirate_conf	S_MULTIRATE_CONF_4_702A
<B>	multirate_conf	S_MULTIRATE_CONF_4_702B
<C>	multirate_conf	S_MULTIRATE_CONF_4_702C
<D>	multirate_conf	S_MULTIRATE_CONF_4_702D
<E>	multirate_conf	S_MULTIRATE_CONF_4_702E
	}	

(2) DL\_SUSPEND\_REQ

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0

(3) DL\_RECONNECT\_REQ

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0
sdu	
{	
component	RR
direction	UPLINK
pd	U_HANDOV_FAIL
ti	TI_0
rr_cause	RR_CAUSE_09
}	

History:                    18.Feb. 18, 02                    OT                    Initial

**3.6.6 RR217: Handover Command with mandatory errors**

**Description:**    The base station initiates a handover with mandatory errors. RR shall reject the command and answers with a RR-Status message.

**Preamble:**        RR185

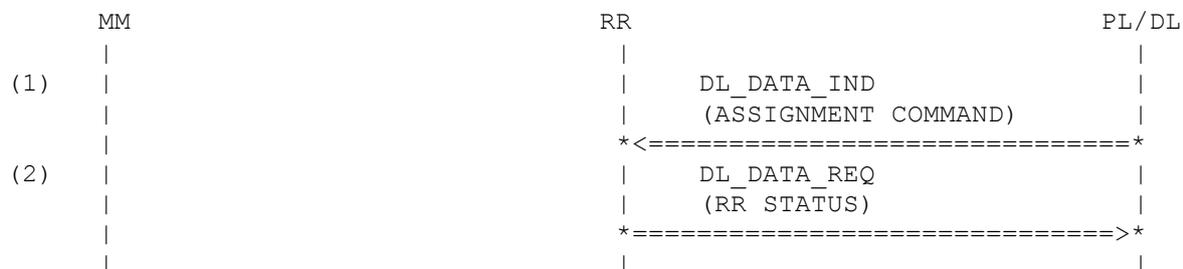
	MM	RR	PL/DL
(1)			
		DL_DATA_IND	
		(HANDOVER COMMAND)	
		*<=====*	
(2)		DL_DATA_REQ	
		(RR STATUS)	

Parametrization			
Primitive	Parameter	Value	
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH	
	sapi	SAPI_0	
	sdu	HANDOVER_CMD_ERROR	
(2) DL_DATA_REQ	ch_type	CH_TYPE_SDCCH	
	sapi	SAPI_0	
	sdu	{	
	component	RR	
	direction	UPLINK	
	pd	B_RR_STATUS	
	ti	TI_0	
	rr_cause	RR_CAUSE_96	
}			
History:	15-Feb-00	LE	Initial

### 3.6.7 RR218: Assignment Command with mandatory errors

**Description:** The base station initiates a handover with mandatory errors. RR shall reject the command and answers with a RR-Status message.

**Preamble:** RR185



#### Parametrization

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	ASSIGNMENT_CMD_ERROR
(2) DL_DATA_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	UPLINK
	pd	B_RR_STATUS
	ti	TI_0
	rr_cause	RR_CAUSE_96
	}	

History:            27-Feb-03            ZMM            Initial

## 3.7 Channel Release

### 3.7.1 RR227: Timeout T3110, same cell

**Description:** RR releases the connection after timeout of the channel release timer. The cell in idle mode is the same as before. So RR sends no RR ACTIVATE IND to MM.

**Preamble:** RR154B

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		DL_UNITDATA_REQ	
		(MEASUREMENT REPORT)	
		*=====*	
(3)		DL_DATA_IND	
		(CHANNEL_RELEASE)	
		*<=====*	
(4)		DL_RELEASE_REQ	
		*=====*	
(5)	RR_RELEASE_IND		
	*<=====*		
(6)		MPH_IDLE_REQ	
		*=====*	
(7)		MPH_NEIGHBOURCELL_REQ	
		*=====*	

#### Parametrization

	Primitive	Parameter	Value
(1)	MPH_MEASUREMENT_IND	arfcn	ARFCN_67
		rx_lev_full	RX_LEV_20
		rx_lev_sub	RX_LEV_20
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	S_NCELLS_0
		gprs_sync	NOT_USED
(2)	DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_MEAS_REP
		ti	TI_0
		meas_result	MEAS_RESULT_NCELL_0
		}	
(3)	DL_DATA_IND	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0

		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_CHAN_REL
		ti	TI_0
		rr_cause	RR_CAUSE_0
		ba_range	NOT_USED
		}	
(4)	DL_RELEASE_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(5)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	NOT_USED
(6)	MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLK_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(7)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_2
		sync_only	NOT_USED
History:	04.07.97	DL	Initial
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	25.01.01	DG	RR_RELEASE_IND: gprs_resumption added
	31.01.01	DG	DL_DATA_REQ added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	12.02.01	DG	DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2

### 3.7.2 RR229: Release by DL\_RELEASE\_IND, same cell

**Description:** DL releases the connection before timeout of the channel release timer using the DL\_RELEASE\_IND primitive. The cell in idle mode is the same as before. So RR sends no RR ACTIVATE IND to MM.

**Preamble:** RR154B

MM	RR	PL/DL
COMMAND (RR CONFIG TIMER_SET=<T3110, 20000>)		
(1)	MPH_MEASUREMENT_IND	
	*<=====	
(2)	DL_UNITDATA_REQ	
	(MEASUREMENT REPORT)	
	*=====>*	
(3)	DL_DATA_IND	
	(CHANNEL_RELEASE)	
	*<=====	
(4)	DL_RELEASE_REQ	
	*=====>*	
(5)	DL_RELEASE_IND	
	*<=====	
(6)   RR_RELEASE_IND		
*<=====		
(7)	MPH_IDLE_REQ	
	*=====>*	
(8)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_0
(2) DL_UNITDATA_REQ	gprs_sync	NOT_USED
	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_MEAS_REP
	ti	TI_0
	meas_result	MEAS_RESULT_NCELL_0
}		
(3) DL_DATA_IND	ch_type	CH_TYPE_SDCCH

		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_CHAN_REL
		ti	TI_0
		rr_cause	RR_CAUSE_0
		ba_range	NOT_USED
		}	
(4)	DL_RELEASE_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(5)	DL_RELEASE_IND	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		cs	NOT_USED
(6)	RR_RELEASE_IND	cause	RRCS_NORM
		sapi	SAPI_0
		gprs_resumption	NOT_USED
(7)	MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLKS_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(8)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_2
		sync_only	NOT_USED
History:	04.07.97	DL	Initial
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	25.01.01	DG	RR_RELEASE_IND: gprs_resumption added
	31.01.01	DG	DL_DATA_REQ (classmark ch.) added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY

12.02.01  
 05-Jun-01

 DG  
 MSE

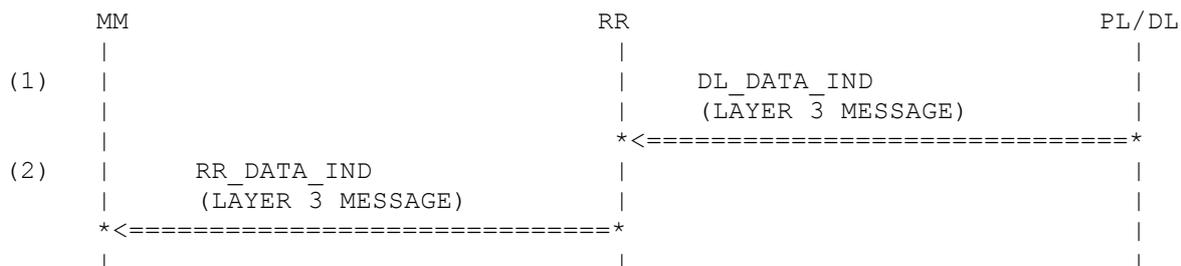
 DL\_DATA\_REQ deleted  
 adapted to TAP2

### 3.8 Layer 3 Messages

#### 3.8.1 RR230: Downlink Messages

**Description:** DL sends complete layer 3 messages to RR. RR checks the protocol discriminator and sends the message to MM.

**Preamble:** RR154B



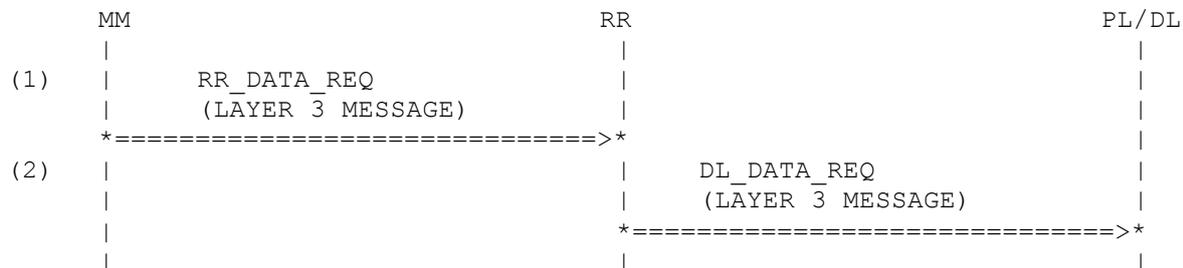
#### Parametrization

	Primitive	Parameter	Value
(1)	DL_DATA_IND	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	MM_MESSAGE
(2)	RR_DATA_IND	d1	NOT_USED
		d2	NOT_USED
		sdu	MM_MESSAGE
History:	04.07.97	DL	Initial
	31.01.01	DG	DL_DATA_REQ (classmark ch.) added
	12.02.01	DG	DL_DATA_REQ deleted

### 3.8.2 RR231: Uplink Message

**Description:** MM sends a complete layer 3 message to RR. RR forwards the message to DL.

**Preamble:** RR154B



#### Parametrization

	Primitive	Parameter	Value
(1)	RR_DATA_REQ	d1	NOT_USED
		d2	NOT_USED
		sdu	MM_MESSAGE
(2)	DL_DATA_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	MM_MESSAGE
History:	04.07.97	DL	Initial
	31.01.01	DG	DL_DATA_REQ (classmark ch.) added
	12.02.01	DG	DL_DATA_REQ deleted

### 3.9 Measurement Report

#### 3.9.1 RR185: Send Measurement Reports on SACCH

**Description:** RR is in state Dedicated. After reception of new measurement information from layer 1 the measurement report is build and forwarded to DL.

**Preamble:** RR154B

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(2)	MPH_NEIGHBOURCELL_REQ	
(3)	MPH_MEASUREMENT_IND	
(4)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_5 TI_0 NCELL_DESC_1
(2) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1D NOT_USED
(3) MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_67 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_NCELLS_3 NOT_USED
(4) DL_UNITDATA_REQ	ch_type sapi sdu	CH_TYPE_SACCH SAPI_0

```
{  
  component      RR  
  direction      UPLINK  
  pd             U_MEAS_REP  
  ti             TI_0  
  meas_result    MEAS_RESULT_NCELL_3  
}
```

History:	04.07.97	DL	Initial
	25.01.01	DG	DL_DATA_REQ added
	05-Jun-01	MSE	adapted to TAP2

### 3.9.2 RR186: Send Measurement Reports on SACCH (including 5ter)

**Description:** RR is in state Dedicated. After reception of new measurement information from layer 1 the measurement report is build and forwarded to DL.

**Preamble:** RR154B

MM	RR	PL/DL
COMMAND (PL CONFIG STD=5)		
(1)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 5Ter)	
	*<=====*	
(2)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(3)	MPH_MEASUREMENT_IND	
	*<=====*	
(4)	DL_UNITDATA_REQ	
	(MEASUREMENT REPORT)	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5TER
	ti	Tl_0
	neigh_cell_desc	NCELL_DESC_5TER
	}	
(2) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_DG_186
	sync_only	NOT_USED
(3) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(4) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
component	RR	

```
direction      UPLINK
pd             U_MEAS_REP
ti            TI_0
meas_result    MEAS_RESULT_NCELL_3_DG_186
}
```

History:	04.07.97	DL	Initial
	14.03.00	DG	values changed: (2) MPH_NCELL_5TER > MPH_NCELL_DG_186, (4) MEAS_RESULT_NCELL_3 > MEAS_RESULT_NCELL_3_DG_186 (NCELLS_3_SACCH_DG_186)
	25.01.01	DG	DL_DATA_REQ added
	12.02.01	DG	DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2

### 3.9.3 RR187: Send Measurement Reports on SACCH (Multiband)

**Description:** This is a an extract of testcase 26.11.2.3. RR is in state Dedicated. After reception of new measurement information from layer 1 the measurement report is build and forwarded to DL. 5ter includes DCS 1800, 5 includes GSM 900.

**Preamble:** RR159

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(2)	MPH_NEIGHBOURCELL_REQ	
(3)	MPH_UNITDATA_IND (SYS INFO TYPE 5ter)	
(4)	MPH_NEIGHBOURCELL_REQ	
(5)	MPH_MEASUREMENT_IND	
(6)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_5_FTA
	}	
(2) MPH_NEIGHBOURCELL_REQ	multi_band	MULTI_BAND_0
	arfcn	A_MPH_NCELL_5_FTA
	sync_only	NOT_USED
(3) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5TER
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_5TER_FTA
	}	
(4) MPH_NEIGHBOURCELL_REQ	multi_band	MULTI_BAND_3

		arfcn	A_MPH_NCELL_5TER_5_FTA
		sync_only	NOT_USED
(5) MPH_MEASUREMENT_IND		arfcn	ARFCN_67
		rx_lev_full	RX_LEV_20
		rx_lev_sub	RX_LEV_20
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	S_NCELLS_6_FTA
		gprs_sync	NOT_USED
(6) DL_UNITDATA_REQ		ch_type	CH_TYPE_SACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_MEAS_REP
		ti	TI_0
		meas_result	
		MEAS_RESULT_NCELL_6_FTA	
		}	
History:	15-Feb-00	LE	Initial
	25.01.01	DG	IMMEDIATE ASSIGNMENT: tma, dl, d_t, pck_chan_desc added, DL_DATA_REQ added
	12.02.01	DG	MPH_SYNC_REQ added DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.9.4 RR188: Send Measurement Reports on SACCH (E-GSM)

**Description:** RR is in state Dedicated. After reception of new system information message the neighbourcell list is build and forwarded to Layer 1. 5bis includes GSM 900 plus E-GSM, 5 includes DCS 1800.

**Preamble:** RR153

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(6)	DL_ESTABLISH_CNF	
(7)	MPH_SYNC_REQ	
(8)	RR_ESTABLISH_IND	
(9)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(10)	MPH_NEIGHBOURCELL_REQ	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 5bis)	
(12)	MPH_NEIGHBOURCELL_REQ	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN
	ti	TI_0
	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL

	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	
(3) MPH_DEDICATED_REQ		
	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_2
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4) MPH_DEDICATED_CNF		
	dedi_res	NOT_USED
(5) DL_ESTABLISH_REQ		
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	NOT_USED
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(6) DL_ESTABLISH_CNF		
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(7) MPH_SYNC_REQ		
	cs	CS_CLEAN_SYS_INFO
(8) RR_ESTABLISH_IND		
	param	NOT_USED
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_5_FTA_A
	}	
(10) MPH_NEIGHBOURCELL_REQ		
	multi_band	MULTI_BAND_0

		arfcn	A_MPH_NCELL_5_FTA_A
		sync_only	NOT_USED
(11) MPH_UNITDATA_IND		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_5BIS
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_5BIS_FTA_A
		}	
(12) MPH_NEIGHBOURCELL_REQ		multi_band	MULTI_BAND_0
		arfcn	A_MPH_NCELL_5_5BIS_FTA_A
		sync_only	NOT_USED
History:	15-Feb-00	LE	Initial
	25.01.01	DG	IMMEDIATE ASSIGNMENT:
			tma, dl, d_t, pck_chan_desc added,
			DL_DATA_REQ added
	12.02.01	DG	MPH_SYNC_REQ added
			DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.9.5 RR189: Send Measurement Reports on SACCH (E-GSM) (II)

**Description:** RR is in state Dedicated. After reception of new system information message the neighbourcell list is build and forwarded to Layer 1. The testcase is build according to 26.10.2.1 tc=5.

**Preamble:** RR153

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(6)	DL_ESTABLISH_CNF	
(7)	MPH_SYNC_REQ	
(8)	RR_ESTABLISH_IND	
(9)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(10)	MPH_NEIGHBOURCELL_REQ	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 5bis)	
(12)	MPH_NEIGHBOURCELL_REQ	
(13)	MPH_MEASUREMENT_IND	
(14)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN

	ti	TI_0
	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	
(3)	MPH_DEDICATED_REQ	
	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_2
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF	
	dedi_res	NOT_USED
(5)	DL_ESTABLISH_REQ	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	NOT_USED
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(6)	DL_ESTABLISH_CNF	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(7)	MPH_SYNC_REQ	
	cs	CS_CLEAN_SYS_INFO
(8)	RR_ESTABLISH_IND	
	param	NOT_USED
(9)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5

		ti	TI_0
		neigh_cell_desc	NCELL_DESC_5_FTA_B
		}	
(10)	MPH_NEIGHBOURCELL_REQ	multi_band	MULTI_BAND_0
		arfcn	A_MPH_NCELL_5_FTA_B
		sync_only	NOT_USED
(11)	MPH_UNITDATA_IND	arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_5BIS
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_5BIS_FTA_B
		}	
(12)	MPH_NEIGHBOURCELL_REQ	multi_band	MULTI_BAND_0
		arfcn	A_MPH_NCELL_5_5BIS_FTA_B
		sync_only	NOT_USED
(13)	MPH_MEASUREMENT_IND	arfcn	ARFCN_67
		rx_lev_full	RX_LEV_20
		rx_lev_sub	RX_LEV_20
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	S_MPH_NCELLS_FTA_B
		gprs_sync	NOT_USED
(14)	DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_MEAS_REP
		ti	TI_0
		meas_result	MEAS_RESULT_NCELL_FTA_B
		}	

History:	15-Feb-00	LE	Initial
	25.01.01	DG	IMMEDIATE ASSIGNMENT:
			tma, dl, d_t, pck_chan_desc added,
			DL_DATA_REQ added
	12.02.01	DG	MPH_SYNC_REQ added
			DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.9.6 RR190: Send Measurement Reports on SACCH (E-GSM) (III)

**Description:** RR is in state Dedicated. After reception of new system information message the neighbourcell list is build and forwarded to Layer 1. The testcase is build according to 26.10.2.1 tc=7.

**Preamble:** RR153

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(6)	DL_ESTABLISH_CNF	
(7)	MPH_SYNC_REQ	
(8)	RR_ESTABLISH_IND	
(9)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(10)	MPH_NEIGHBOURCELL_REQ	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 5bis)	
(12)	MPH_NEIGHBOURCELL_REQ	
(13)	MPH_MEASUREMENT_IND	
(14)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN

	ti	TI_0
	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	
(3)	MPH_DEDICATED_REQ	
	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_2
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF	
	dedi_res	NOT_USED
(5)	DL_ESTABLISH_REQ	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	dpd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	NOT_USED
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(6)	DL_ESTABLISH_CNF	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(7)	MPH_SYNC_REQ	
	cs	CS_CLEAN_SYS_INFO
(8)	RR_ESTABLISH_IND	
	param	NOT_USED
(9)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5

		ti	TI_0
		neigh_cell_desc	NCELL_DESC_5_FTA_C
		}	
(10)	MPH_NEIGHBOURCELL_REQ	multi_band	MULTI_BAND_0
		arfcn	A_MPH_NCELL_5_FTA_C
		sync_only	NOT_USED
(11)	MPH_UNITDATA_IND	arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_5TER
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_5TER_FTA_C
		}	
(12)	MPH_NEIGHBOURCELL_REQ	multi_band	MULTI_BAND_0
		arfcn	A_MPH_NCELL_5_5TER_FTA_C
		sync_only	NOT_USED
(13)	MPH_MEASUREMENT_IND	arfcn	ARFCN_67
		rx_lev_full	RX_LEV_20
		rx_lev_sub	RX_LEV_20
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	S_MPH_NCELLS_FTA_C
		gprs_sync	NOT_USED
(14)	DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_MEAS_REP
		ti	TI_0
		meas_result	MEAS_RESULT_NCELL_FTA_C
		}	
History:	15-Feb-00	LE	Initial
	25.01.01	DG	IMMEDIATE ASSIGNMENT:
			tma, dl, d_t, pck_chan_desc added,
			DL_DATA_REQ added
	12.02.01	DG	MPH_SYNC_REQ added
			DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2
	26-Feb-02	OT	Adaptations for AMR implementation

### 3.9.7 RR191: Send Measurement Reports on SACCH (E-GSM) (IV)

**Description:** RR is in state Dedicated. After reception of new system information message the neighbourcell list is build and forwarded to Layer 1. The testcase is build according to 26.10.2.1 tc=8.

**Preamble:** RR153

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(6)	DL_ESTABLISH_CNF	
(7)	MPH_SYNC_REQ	
(8)	RR_ESTABLISH_IND	
(9)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(10)	MPH_NEIGHBOURCELL_REQ	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 5bis)	
(12)	MPH_NEIGHBOURCELL_REQ	
(13)	MPH_MEASUREMENT_IND	
(14)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN
	ti	TI_0

	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	
(3)	MPH_DEDICATED_REQ	
	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_2
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF	
	dedi_res	NOT_USED
(5)	DL_ESTABLISH_REQ	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	NOT_USED
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(6)	DL_ESTABLISH_CNF	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(7)	MPH_SYNC_REQ	
	cs	CS_CLEAN_SYS_INFO
(8)	RR_ESTABLISH_IND	
	param	NOT_USED
(9)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5
	ti	TI_0

		neigh_cell_desc }	NCELL_DESC_5_FTA_D
(10)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	MULTI_BAND_0 A_MPH_NCELL_5_FTA_D NOT_USED
(11)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_5TER TI_0 NCELL_DESC_5TER_FTA_D
(12)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	MULTI_BAND_0 A_MPH_NCELL_5_5TER_FTA_D NOT_USED
(13)	MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_67 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_MPH_NCELLS_FTA_D NOT_USED
(14)	DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti meas_result }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_MEAS_REP TI_0 MEAS_RESULT_NCELL_FTA_D

History:	15-Feb-00	LE	Initial
	25.01.01	DG	IMMEDIATE ASSIGNMENT: tma, dl, d_t, pck_chan_desc added, DL_DATA_REQ added
	12.02.01	DG	MPH_SYNC_REQ added DL_DATA_REQ deleted
	05-Jun-01 26-Feb-02	MSE OT	adapted to TAP2 Adaptations for AMR implementation

### 3.9.8 RR192: Send Measurement Reports on SACCH (E-GSM) (V)

**Description:** RR is in state Dedicated. After reception of new system information message the neighbourcell list is build and forwarded to Layer 1. The testcase is build according to 26.10.2.1 tc=9.

**Preamble:** RR153

MM	RR	PL/DL
COMMAND (PL CONFIG STD=6)		
(1)	MPH_RANDOM_ACCESS_CNF	
(2)	MPH_UNITDATA_IND (IMMEDIATE ASSIGNMENT)	
(3)	MPH_DEDICATED_REQ	
(4)	MPH_DEDICATED_CNF	
(5)	DL_ESTABLISH_REQ (PAGING RESPONSE)	
(6)	DL_ESTABLISH_CNF	
(7)	MPH_SYNC_REQ	
(8)	RR_ESTABLISH_IND	
(9)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(10)	MPH_NEIGHBOURCELL_REQ	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 5bis)	
(12)	MPH_NEIGHBOURCELL_REQ	
(13)	MPH_MEASUREMENT_IND	
(14)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_RANDOM_ACCESS_CNF	frame_no	FRAME_NUMBER_1
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_IMM_ASSIGN
	ti	TI_0

	tma	NOT_USED
	dl	NOT_USED
	d_t	NOT_USED
	page_mode	PAGING_NORMAL
	chan_desc	CHANNEL_DESC_SDCCH
	pck_chan_desc	NOT_USED
	req_ref	REQUEST_REFERENCE_1
	time_advance	TIMING_ADVANCE_27
	mob_alloc	MOBILE_ALLOCATION_1
	start_time	NOT_USED
	ia_rest_oct	NOT_USED
	}	
(3)	MPH_DEDICATED_REQ	
	mod	MODE_IMM_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_2
	ch_type2	NOT_USED
	arfcn	ARFCN_67
	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_2
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4)	MPH_DEDICATED_CNF	
	dedi_res	NOT_USED
(5)	DL_ESTABLISH_REQ	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_PAG_RES
	ti	TI_0
	ciph_key_num	CKSN_RESERVED
	mob_class_2	NOT_USED
	mob_ident	MOBILE_IDENTITY_IMSI_HPLMN
	}	
(6)	DL_ESTABLISH_CNF	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(7)	MPH_SYNC_REQ	
	cs	CS_CLEAN_SYS_INFO
(8)	RR_ESTABLISH_IND	
	param	NOT_USED
(9)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5
	ti	TI_0

		neigh_cell_desc }	NCELL_DESC_5_FTA_E
(10)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	MULTI_BAND_0 A_MPH_NCELL_5_FTA_E NOT_USED
(11)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_5TER TI_0 NCELL_DESC_5TER_FTA_E
(12)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	MULTI_BAND_0 A_MPH_NCELL_5_5TER_FTA_E NOT_USED
(13)	MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_67 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_MPH_NCELLS_FTA_E NOT_USED
(14)	DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti meas_result }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_MEAS_REP TI_0 MEAS_RESULT_NCELL_FTA_E

History:	15-Feb-00	LE	Initial
	25.01.01	DG	IMMEDIATE ASSIGNMENT: tma, dl, d_t, pck_chan_desc added, DL_DATA_REQ added
	12.02.01	DG	MPH_SYNC_REQ added DL_DATA_REQ deleted
	05-Jun-01 26-Feb-02	MSE OT	adapted to TAP2 Adaptations for AMR implementation

### 3.9.9 RR193: Send Measurement Reports on SACCH / 1900

**Description:** RR is in state Dedicated. After reception of new measurement information from layer 1 the measurement report is build and forwarded to DL. This test case us used only as a part of a suite

**Preamble:** none

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(2)	MPH_NEIGHBOURCELL_REQ	
(3)	MPH_UNITDATA_IND (SYS INFO TYPE 5bis)	
(4)	MPH_NEIGHBOURCELL_REQ	
(5)	MPH_MEASUREMENT_IND	
(6)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_527
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
(2) MPH_NEIGHBOURCELL_REQ	pd	D_SYS_INFO_5
	ti	TI_0
	neigh_cell_desc	BCCH_FREQ_LIST_1900
	}	
	multi_band	MULTI_BAND_0
	arfcn	A_MPH_NCELL_1900a
(3) MPH_UNITDATA_IND	sync_only	FALSE
	arfcn	ARFCN_527
	fn	NOT_USED
	sdu	
	{	
	component	RR
(4) MPH_NEIGHBOURCELL_REQ	direction	DOWNLINK
	pd	D_SYS_INFO_5BIS
	ti	TI_0
	neigh_cell_desc	BCCH_FREQ_LIST_1900_bis
	}	
	multi_band	MULTI_BAND_0

	arfcn	A_MPH_NCELL_1900	
	sync_only	FALSE	
(5) MPH_MEASUREMENT_IND			
	arfcn	ARFCN_527	
	rx_lev_full	RX_LEV_20	
	rx_lev_sub	RX_LEV_20	
	rx_qual_full	RX_QUAL_1	
	rx_qual_sub	RX_QUAL_1	
	dtx	DTX_NOT_USED	
	otd	TIME_ADV_27	
	valid	TRUE	
	fn_offset	FN_OFFSET_1_SEC	
	ncells	S_NCELLS_6	
	gprs_sync	NOT_USED	
(6) DL_UNITDATA_REQ			
	ch_type	CH_TYPE_SACCH	
	sapi	SAPI_0	
	sdu		
	{		
	component	RR	
	direction	UPLINK	
	pd	U_MEAS_REP	
	ti	TI_0	
	meas_result	MEAS_RESULT_NCELL_1900	
	}		
History:	4-Jul-02	MPA	Initial

### 3.10 Extended Measurement Report on SACCH (EMO)

#### 3.10.1 RR250: EMO, Normal case including NC reconfig

**Description:** When in dedicated mode or group transmit mode, a mobile station may receive an EXTENDED MEASUREMENT ORDER (EMO) message, from the network. The mobile station shall then, as defined in 3GPP TS 05.08, for one reporting period perform measurements on the frequencies specified by this EMO message. The mobile station shall thereafter send an EXTENDED MEASUREMENT REPORT message. This message contains the measurement results as defined in 3GPP TS 05.08.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	MPH_EMO_MEAS_IND	
(4)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(5)	MPH_NEIGHBOURCELL_REQ	
(6)	MPH_MEASUREMENT_IND	
(7)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti ext_meas_freq }	ARFCN_67 NOT_USED  RR DOWNLINK D_EXT_MEAS_ORDER TL_0 EXT_MEAS_FREQ_000
(2) MPH_EMO_REQ	ba_id arfcn	CONST_129 A_ARFCN_EMO_000
(3) MPH_EMO_MEAS_IND	ba_id dtx meas_results	CONST_129 CONST_1 S_EMO_MEAS_RES_000
(4) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH

	sapi	SAPI_0	
	sdu		
	{		
	component	RR	
	direction	UPLINK	
	pd	U_EXT_MEAS_REPORT	
	ti	TI_0	
	ext_meas_res	S_EXT_MEAS_RES_000	
	}		
(5) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED	
	arfcn	A_MPH_NCELL_1D	
	sync_only	NOT_USED	
(6) MPH_MEASUREMENT_IND	arfcn	ARFCN_67	
	rx_lev_full	RX_LEV_20	
	rx_lev_sub	RX_LEV_20	
	rx_qual_full	RX_QUAL_1	
	rx_qual_sub	RX_QUAL_1	
	dtx	DTX_NOT_USED	
	otd	TIME_ADV_27	
	valid	TRUE	
	fn_offset	FN_OFFSET_1_SEC	
	ncells	S_NCELLS_3	
	gprs_sync	NOT_USED	
(7) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH	
	sapi	SAPI_0	
	sdu		
	{		
	component	RR	
	direction	UPLINK	
	pd	U_MEAS_REP	
	ti	TI_0	
	meas_result	MEAS_RESULT_NCELL_3	
	}		
History:	30.10.02	VK	Initial

### 3.10.2 RR251: EMO, 10 sec expiry

**Description:** If the mobile station has not started to send its EXTENDED MEASUREMENT REPORT within 10 seconds after the reception of the EMO message, no EXTENDED MEASUREMENT REPORT shall be sent.

**Preamble:** RR250

	MM	RR	PL/DL
(1)			
		MPH_UNITDATA_IND	
		(EXT MEAS ORDER)	
		*<=====*	
(2)		MPH_EMO_REQ	
		*=====*>	
	MUTE (9000)		
	TIMEOUT (1000)		

```

(3) | | MPH_NEIGHBOURCELL_REQ |
| | *=====>*
(4) | | MPH_MEASUREMENT_IND |
| | *<=====*
```

**Parametrization**

Primitive	Parameter	Value	
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67	
	fn	NOT_USED	
	sdu		
	{		
	component	RR	
	direction	DOWNLINK	
	pd	D_EXT_MEAS_ORDER	
(2) MPH_EMO_REQ	ti	TI_0	
	ext_meas_freq	EXT_MEAS_FREQ_000	
	}		
	(3) MPH_NEIGHBOURCELL_REQ	ba_id	CONST_130
		arfcn	A_ARFCN_EMO_000
		multi_band	NOT_USED
	(4) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
rx_lev_full		RX_LEV_20	
rx_lev_sub		RX_LEV_20	
(5) DL_UNITDATA_REQ	rx_qual_full	RX_QUAL_1	
	rx_qual_sub	RX_QUAL_1	
	dtx	DTX_NOT_USED	
	otd	TIME_ADV_27	
	valid	TRUE	
	fn_offset	FN_OFFSET_1_SEC	
	ncells	S_NCELLS_3	
	gprs_sync	NOT_USED	
	ch_type	CH_TYPE_SACCH	
	sapi	SAPI_0	
(5) DL_UNITDATA_REQ	sdu		
	{		
	component	RR	
	direction	UPLINK	
	pd	U_MEAS_REP	
	ti	TI_0	
	meas_result	MEAS_RESULT_NCELL_3	
}			

History: 30.10.02  
06.03.03

VK  
LG

Initial  
MUTE inserted

### 3.10.3 RR252: EMO, before first neighbour cell configuration

**Description:** This test case is similar to RR250, except that the EXTENDED MEASUREMENT ORDER (EMO) message is received before the Neighbour Cells are configured. Therefore no MPH\_NEIGHBOURCELL\_REQ must be sent after the (first) EMO procedure. In order to check this, a second EMO procedure is started.

**Preamble:** RR154B

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	MPH_EMO_MEAS_IND	
(4)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(5)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(6)	MPH_EMO_REQ	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
(2) MPH_EMO_REQ	ba_id	CONST_129
	arfcn	A_ARFCN_EMO_000
(3) MPH_EMO_MEAS_IND	ba_id	CONST_129
	dtx	CONST_1
	meas_results	S_EMO_MEAS_RES_000
(4) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	UPLINK
	pd	U_EXT_MEAS_REPORT

	ti	TI_0
	ext_meas_res	S_EXT_MEAS_RES_000
	}	
(5)	MPH_UNITDATA_IND	
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
	ext_meas_freq	EXT_MEAS_FREQ_000
	}	
(6)	MPH_EMO_REQ	
	ba_id	CONST_130
	arfcn	A_ARFCN_EMO_000

History:            30.10.02            VK            Initial

### 3.10.4 RR253: EMO, successful Channel Change during EMO

**Description:** The mobile station shall abort after a successful channel change any pending measurements or reporting related to an EMO message received on the old channel. The neighbour cell description of the cell valid before EMO is configured.

Note: this test depends on a IUT change requested in ConQuest 8072.

**Preamble:** RR185

	MM	RR	PL/DL
(1)			
		MPH_UNITDATA_IND	
		(EXT MEAS ORDER)	
		*<=====*	
(2)		MPH_EMO_REQ	
		*=====*	
(3)		DL_DATA_IND	
		(ASSIGNMENT COMMAND)	
		*<=====*	
(4)		DL_SUSPEND_REQ	
		*=====*	
(5)		MPH_DEDICATED_REQ	
		*=====*	
(6)		MPH_DEDICATED_CNF	
		*<=====*	
(7)		DL_RESUME_REQ	
		(ASSIGNMENT COMPLETE)	
		*=====*	
(8)		DL_ESTABLISH_CNF	
		*<=====*	
(9)		MPH_NEIGHBOURCELL_REQ	
		*=====*	
(10)		MPH_MEASUREMENT_IND	
		*<=====*	
(11)		DL_UNITDATA_REQ	
		(MEASUREMENT REPORT)	
		*=====*	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
	ext_meas_freq	EXT_MEAS_FREQ_000
	}	
(2) MPH_EMO_REQ	ba_id	CONST_129
	arfcn	A_ARFCN_EMO_000
(3) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_SDCCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
	multirate_conf	S_MULTIRATE_CONF_1
	}	
	(4) DL_SUSPEND_REQ	ch_type
sapi		SAPI_0

(5) MPH_DEDICATED_REQ	mod start ch_type ch_type2 arfcn bsic ho_param tr_para ciph amr_conf	MODE_CHAN_ASSIGN NO_STARTING_TIME PRR_CHANNEL_TYPE_3 NOT_USED ARFCN_67 NOT_USED NOT_USED PRR_TR_PARA_3 NO_CIPHERING NOT_USED
(6) MPH_DEDICATED_CNF	dedi_res	DEDI_RES_OK
(7) DL_RESUME_REQ	ch_type sapi sdu { component direction pd ti rr_cause }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_ASSIGN_COMP TI_0 RR_CAUSE_0
(8) DL_ESTABLISH_CNF	ch_type sapi	CH_TYPE_SDCCH SAPI_0
(9) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1D NOT_USED
(10)MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_67 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_NCELLS_3 NOT_USED
(11)DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti meas_result }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_MEAS_REP TI_0 MEAS_RESULT_NCELL_3

History:  
04.03.03  
Quest 8072)

30.10.02  
LG

VK Initial  
removed MPH\_SYNC\_REQ (see Con

### 3.10.5 RR254: EMO, failed Channel Change with successful reconnection during EMO

**Description:** The mobile station shall abort after a successful channel change any pending measurements or reporting related to an EMO message received on the old channel. In case of a successful reconnection to the old channel the EMO procedure continues.

Note: this test depends on a IUT change requested in ConQuest 8072.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	DL_DATA_IND (ASSIGNMENT COMMAND)	
(4)	DL_SUSPEND_REQ	
(5)	MPH_DEDICATED_REQ	
(6)	MPH_DEDICATED_CNF	
(7)	DL_RESUME_REQ (ASSIGNMENT COMPLETE)	
(8)	DL_RELEASE_IND	
(9)	MPH_DEDICATED_FAIL_REQ	
(10)	MPH_DEDICATED_FAIL_CNF	
(11)	DL_RECONNECT_REQ (ASSIGNMENT FAILURE)	
(12)	MPH_EMO_MEAS_IND	
(13)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(14)	MPH_NEIGHBOURCELL_REQ	
(15)	MPH_MEASUREMENT_IND	
(16)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67

	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
	ext_meas_freq	EXT_MEAS_FREQ_000
	}	
(2) MPH_EMO_REQ	ba_id	CONST_129
	arfcn	A_ARFCN_EMO_000
(3) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_SDCCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
	multirate_conf	S_MULTIRATE_CONF_1
	}	
(4) DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(5) MPH_DEDICATED_REQ	mod	MODE_CHAN_ASSIGN
	start	NO_STARTING_TIME
	ch_type	PRR_CHANNEL_TYPE_3
	ch_type2	NOT_USED
	arfcn	ARFCN_67

	bsic	NOT_USED
	ho_param	NOT_USED
	tr_para	PRR_TR_PARA_3
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(6) MPH_DEDICATED_CNF	dedi_res	DEDI_RES_OK
(7) DL_RESUME_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_ASSIGN_COMP
	ti	TI_0
	rr_cause	RR_CAUSE_0
	}	
(8) DL_RELEASE_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	cs	NOT_USED
(9) MPH_DEDICATED_FAIL_REQ	param	NOT_USED
(10) MPH_DEDICATED_FAIL_CNF	param	NOT_USED
(11) DL_RECONNECT_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_ASSIGN_FAIL
	ti	TI_0
	rr_cause	RR_CAUSE_6F
	}	
(12) MPH_EMO_MEAS_IND	ba_id	CONST_129
	dtx	CONST_1
	meas_results	S_EMO_MEAS_RES_000
(13) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_EXT_MEAS_REPORT
	ti	TI_0
	ext_meas_res	S_EXT_MEAS_RES_000
	}	

(14)MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1D
	sync_only	NOT_USED
(15)MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(16)DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_MEAS_REP
	ti	TI_0
	meas_result	MEAS_RESULT_NCELL_3
	}	
History:	30.10.02	VK Initial

### 3.10.6 RR255: EMO, new system info 5\* (new NC config) during EMO

**Description:** When in dedicated mode or group transmit mode, a mobile station may receive an EXTENDED MEASUREMENT ORDER (EMO) message, from the network. The mobile station shall then, as defined in 3GPP TS 05.08, for one reporting period perform measurements on the frequencies specified by this EMO message. The mobile station shall thereafter send an EXTENDED MEASUREMENT REPORT message. This message contains the measurement results as defined in 3GPP TS 05.08. This test checks that a System Information Type 5 Message received during EMO is handled correctly.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_UNITDATA_IND (SYS INFO TYPE 5)	
(3)	MPH_EMO_REQ	
(4)	MPH_EMO_MEAS_IND	
(5)	DL_UNITDATA_REQ (EXT MEAS REPORT)	

```

(6) | | MPH_NEIGHBOURCELL_REQ |
    | | *=====>* |
(7) | | MPH_MEASUREMENT_IND |
    | | *<===== |
(8) | | DL_UNITDATA_REQ |
    | | (MEASUREMENT REPORT) |
    | | *=====>* |
    | | |
  
```

**Parametrization**

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
	ext_meas_freq	EXT_MEAS_FREQ_000
	}	
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_5
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1_EMO
	}	
(3) MPH_EMO_REQ	ba_id	CONST_129
	arfcn	A_ARFCN_EMO_000
(4) MPH_EMO_MEAS_IND	ba_id	CONST_129
	dtx	CONST_1
	meas_results	S_EMO_MEAS_RES_000
(5) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_EXT_MEAS_REPORT
	ti	TI_0
	ext_meas_res	S_EXT_MEAS_RES_000
	}	
(6) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1D_EMO
	sync_only	NOT_USED

## (7) MPH\_MEASUREMENT\_IND

arfcn	ARFCN_67
rx_lev_full	RX_LEV_20
rx_lev_sub	RX_LEV_20
rx_qual_full	RX_QUAL_1
rx_qual_sub	RX_QUAL_1
dtx	DTX_NOT_USED
otd	TIME_ADV_27
valid	TRUE
fn_offset	FN_OFFSET_1_SEC
ncells	S_NCELLS_3
gprs_sync	NOT_USED

## (8) DL\_UNITDATA\_REQ

ch_type	CH_TYPE_SACCH
sapi	SAPI_0
sdu	
{	
component	RR
direction	UPLINK
pd	U_MEAS_REP
ti	TI_0
meas_result	MEAS_RESULT_NCELL_3
}	

History:                   30.10.02                   VK                   Initial

**3.10.7 RR256: EMO, frequencies out of band in EMO request**

**Description:** When in dedicated mode or group transmit mode, a mobile station may receive an EXTENDED MEASUREMENT ORDER (EMO) message, from the network. The mobile station shall then, as defined in 3GPP TS 05.08, for one reporting period perform measurements on the frequencies specified by this EMO message. The mobile station shall thereafter send an EXTENDED MEASUREMENT REPORT message. This message contains the measurement results as defined in 3GPP TS 05.08. If the EMO message contains frequencies outside the MS' frequency band, the MS shall set the corresponding RXLEV value(s) to zero.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	MPH_EMO_MEAS_IND	
(4)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(5)	MPH_NEIGHBOURCELL_REQ	
(6)	MPH_MEASUREMENT_IND	
(7)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
ext_meas_freq	EXT_MEAS_FREQ_001	
}		
(2) MPH_EMO_REQ	ba_id	CONST_129
	arfcn	A_ARFCN_EMO_001
(3) MPH_EMO_MEAS_IND	ba_id	CONST_129
	dtx	CONST_1
	meas_results	S_EMO_MEAS_RES_001
(4) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_EXT_MEAS_REPORT
	ti	TI_0
ext_meas_res	S_EXT_MEAS_RES_001	
}		
(5) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1D
	sync_only	NOT_USED
(6) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(7) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
direction	UPLINK	

```

pd          U_MEAS_REP
ti          TI_0
meas_result MEAS_RESULT_NCELL_3
}
    
```

History: 30.10.02 VK Initial

**3.10.8 RR257: EMO, Frequency List contains frequency ARFCN=0**

**Description:** When in dedicated mode or group transmit mode, a mobile station may receive an EXTENDED MEASUREMENT ORDER (EMO) message, from the network. The mobile station shall then, as defined in 3GPP TS 05.08, for one reporting period perform measurements on the frequencies specified by this EMO message. The mobile station shall thereafter send an EXTENDED MEASUREMENT REPORT message. This message contains the measurement results as defined in 3GPP TS 05.08. If the EMO message contains frequencies outside the MS' frequency band, the MS shall set the corresponding RXLEV value(s) to zero. This test checks that ARFCN = 0 is handled correctly.

**Preamble:** RR185

MM	RR	PL/DL
COMMAND (PL CONFIG STD=2)		
(1)	MPH_UNITDATA_IND	
	(EXT MEAS ORDER)	
	*<=====*	
(2)	MPH_EMO_REQ	
	*=====>*	
(3)	MPH_EMO_MEAS_IND	
	*<=====*	
(4)	DL_UNITDATA_REQ	
	(EXT MEAS REPORT)	
	*=====>*	
(5)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(6)	MPH_MEASUREMENT_IND	
	*<=====*	
(7)	DL_UNITDATA_REQ	
	(MEASUREMENT REPORT)	
	*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_EXT_MEAS_ORDER
	ti	TI_0
	ext_meas_freq	EXT_MEAS_FREQ_002
	}	
(2) MPH_EMO_REQ	ba_id	CONST_129
	arfcn	A_ARFCN_EMO_002

(3) MPH_EMO_MEAS_IND	ba_id dtx meas_results	CONST_129 CONST_1 S_EMO_MEAS_RES_002
(4) DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti ext_meas_res }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_EXT_MEAS_REPORT TI_0 S_EXT_MEAS_RES_002
(5) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1D NOT_USED
(6) MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_67 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_NCELLS_3 NOT_USED
(7) DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti meas_result }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_MEAS_REP TI_0 MEAS_RESULT_NCELL_3
History:	30.10.02	VK Initial

### 3.10.9 RR258: EMO, too many (more than 21) frequencies

**Description:** When in dedicated mode or group transmit mode, a mobile station may receive an EXTENDED MEASUREMENT ORDER (EMO) message, from the network. The mobile station shall then, as defined in 3GPP TS 05.08, for one reporting period perform measurements on the frequencies specified by this EMO message. The mobile station shall thereafter send an EXTENDED MEASUREMENT REPORT message. This message contains the measurement results as defined in 3GPP TS 05.08.

If the EMO contains more than 21 carriers, only the 21 first carriers in the sorted EXTENDED MEASUREMENT FREQUENCY LIST (in the EMO) are measured and reported.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	MPH_EMO_MEAS_IND	
(4)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(5)	MPH_NEIGHBOURCELL_REQ	
(6)	MPH_MEASUREMENT_IND	
(7)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

**Parametrization**

Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti ext_meas_freq }	ARFCN_67 NOT_USED  RR DOWNLINK D_EXT_MEAS_ORDER TI_0 EXT_MEAS_FREQ_003
(2) MPH_EMO_REQ	ba_id arfcn	CONST_129 A_ARFCN_EMO_003
(3) MPH_EMO_MEAS_IND	ba_id dtx meas_results	CONST_129 CONST_1 S_EMO_MEAS_RES_003
(4) DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti ext_meas_res }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_EXT_MEAS_REPORT TI_0 S_EXT_MEAS_RES_003
(5) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED

	arfcn	A_MPH_NCELL_1D
	sync_only	NOT_USED
(6) MPH_MEASUREMENT_IND	arfcn	ARFCN_67
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_3
	gprs_sync	NOT_USED
(7) DL_UNITDATA_REQ	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_MEAS_REP
	ti	TI_0
	meas_result	MEAS_RESULT_NCELL_3
	}	
History:	30.10.02	VK Initial

### 3.10.10 RR259: EMO, Multiple EMO requests, same sequence number

**Description:** If a mobile station receives an EMO message indicating the same value of the sequence code as an EMO message received earlier on the same channel without having received any EMO message indicating a different value of the sequence code in between, that EMO message shall be ignored.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(4)	MPH_EMO_MEAS_IND	
(5)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(6)	MPH_NEIGHBOURCELL_REQ	
(7)	MPH_MEASUREMENT_IND	
(8)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

Parametrization Primitive	Parameter	Value
(1) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti ext_meas_freq }	ARFCN_67 NOT_USED  RR DOWNLINK D_EXT_MEAS_ORDER TI_0 EXT_MEAS_FREQ_000
(2) MPH_EMO_REQ	ba_id arfcn	CONST_129 A_ARFCN_EMO_000
(3) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti ext_meas_freq }	ARFCN_67 NOT_USED  RR DOWNLINK D_EXT_MEAS_ORDER TI_0 EXT_MEAS_FREQ_000
(4) MPH_EMO_MEAS_IND	ba_id dtx meas_results	CONST_129 CONST_1 S_EMO_MEAS_RES_000
(5) DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti ext_meas_res }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_EXT_MEAS_REPORT TI_0 S_EXT_MEAS_RES_000
(6) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1D NOT_USED
(7) MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub	ARFCN_67 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1

```

dtx          DTX_NOT_USED
otd          TIME_ADV_27
valid       TRUE
fn_offset   FN_OFFSET_1_SEC
ncells      S_NCELLS_3
gprs_sync   NOT_USED
    
```

(8) DL\_UNITDATA\_REQ

```

ch_type      CH_TYPE_SACCH
sapi         SAPI_0
sdu          {
component    RR
direction    UPLINK
pd           U_MEAS_REP
ti           TI_0
meas_result  MEAS_RESULT_NCELL_3
}
    
```

History:            30.10.02            VK            Initial

**3.10.11 RR260: EMO, Multiple EMO requests, different sequence number**

**Description:** If the mobile station, before the reporting related to an EMO message has started, receives a new EMO message with a different value of the sequence code, any pending measurements or reporting related to the earlier EMO message shall be aborted and the new message treated.

**Preamble:** RR185

MM	RR	PL/DL
(1)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(2)	MPH_EMO_REQ	
(3)	MPH_UNITDATA_IND (EXT MEAS ORDER)	
(4)	MPH_EMO_REQ	
(5)	MPH_EMO_MEAS_IND	
(6)	MPH_EMO_MEAS_IND	
(7)	DL_UNITDATA_REQ (EXT MEAS REPORT)	
(8)	MPH_NEIGHBOURCELL_REQ	
(9)	MPH_MEASUREMENT_IND	
(10)	DL_UNITDATA_REQ (MEASUREMENT REPORT)	

**Parametrization**

Primitive	Parameter	Value
-----------	-----------	-------

(1) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti ext_meas_freq }	ARFCN_67 NOT_USED  RR DOWNLINK D_EXT_MEAS_ORDER TI_0 EXT_MEAS_FREQ_004
(2) MPH_EMO_REQ	ba_id arfcn	CONST_129 A_ARFCN_EMO_000
(3) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti ext_meas_freq }	ARFCN_67 NOT_USED  RR DOWNLINK D_EXT_MEAS_ORDER TI_0 EXT_MEAS_FREQ_000
(4) MPH_EMO_REQ	ba_id arfcn	CONST_130 A_ARFCN_EMO_000
(5) MPH_EMO_MEAS_IND	ba_id dtx meas_results	CONST_129 CONST_1 S_EMO_MEAS_RES_000
(6) MPH_EMO_MEAS_IND	ba_id dtx meas_results	CONST_130 CONST_1 S_EMO_MEAS_RES_000
(7) DL_UNITDATA_REQ	ch_type sapi sdu { component direction pd ti ext_meas_res }	CH_TYPE_SACCH SAPI_0  RR UPLINK U_EXT_MEAS_REPORT TI_0 S_EXT_MEAS_RES_000
(8) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1D NOT_USED
(9) MPH_MEASUREMENT_IND	arfcn rx_lev_full	ARFCN_67 RX_LEV_20

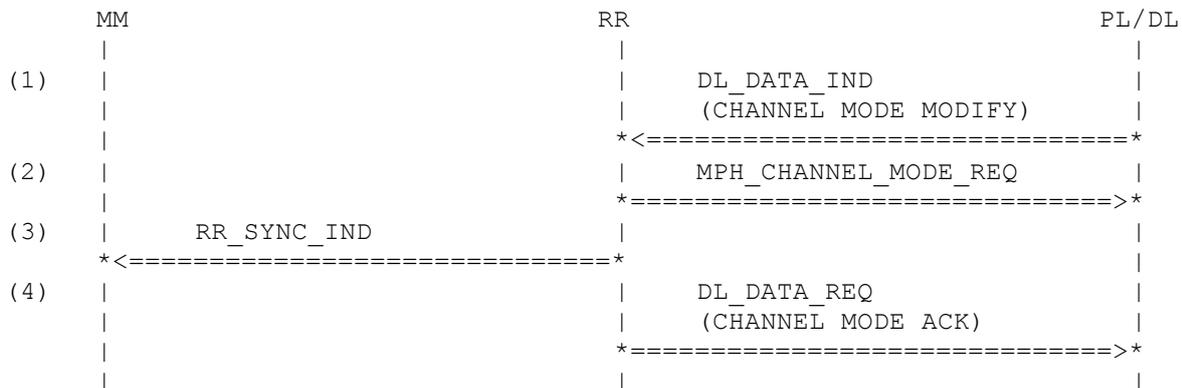
		rx_lev_sub	RX_LEV_20
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	S_NCELLS_3
		gprs_sync	NOT_USED
(10)DL_UNITDATA_REQ		ch_type	CH_TYPE_SACCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_MEAS_REP
		ti	TI_0
		meas_result	MEAS_RESULT_NCELL_3
		}	
History:	30.10.02	VK	Initial

### 3.11 Channel Mode Modify

#### 3.11.1 RR225: Channel Mode Modify Procedure

**Description:** The base station configures the channel mode. MM and PL are informed and an acknowledge is sent to the base station.

**Preamble:** RR154C



#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_CHAN_MOD
	ti	TI_0
	chan_desc	CHANNEL_DESC_SDCCH
	chan_mode	CHANNEL_MODE_SPEECH
}		
(2) MPH_CHANNEL_MODE_REQ	mode	CHANNEL_MODE_SPEECH
	ch	CH_SDCCH_4_1
	amr_conf	NOT_USED
(3) RR_SYNC_IND	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	NOT_USED
	synccs	NOT_PRESENT_16BIT
	chm	S_CHM_SPEECH_FULL
(4) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_CHAN_MOD_ACK
	ti	TI_0
	}	

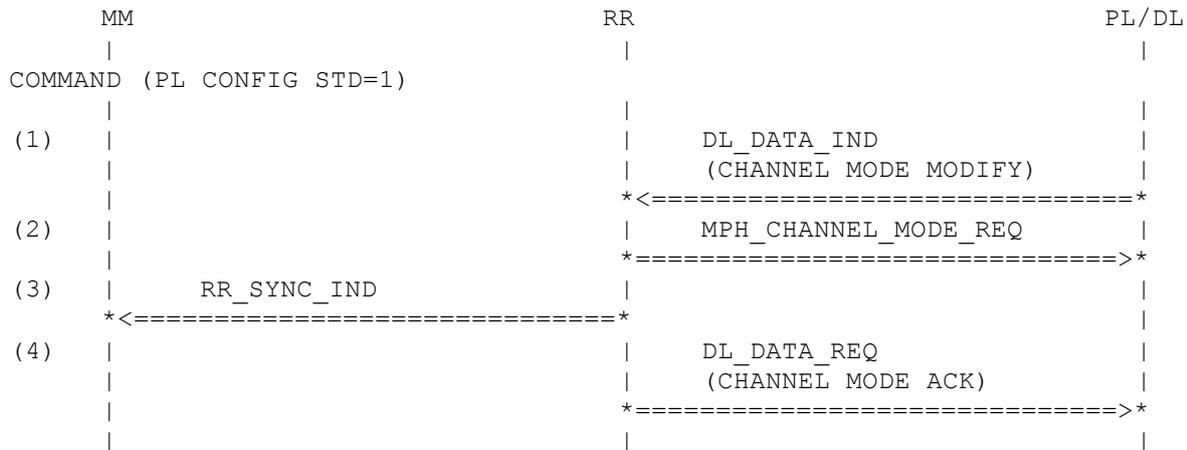
```
chan_desc      CHANNEL_DESC_FACCH2
chan_mode      CHANNEL_MODE_SPEECH
}
```

History:	04.07.97	DL	Initial
	26.01.01	DG	DL_DATA_REQ added
	12.02.01	DG	DL_DATA_REQ deleted
	05-Jun-01	MSE	adapted to TAP2

**3.11.2 RR705: Channel Mode Modify Procedure - AMR**

**Description:** The base station configures the channel mode. MM and PL are informed and an acknowledge is sent to the base station.

**Preamble:** RR154C



**Parametrization**

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	DL_DATA_IND	ch_type sapi sdu { component direction pd ti chan_desc chan_mode vgcs_tmi multirate_conf }	CH_TYPE_FACCH SAPI_0  RR DOWNLINK D_CHAN_MOD TI_0 CHANNEL_DESC_SDCCH CHANNEL_MODE_AMR NOT_USED S_MULTIRATE_CONF_4
(2)	MPH_CHANNEL_MODE_REQ	mode ch amr_conf	CHANNEL_MODE_AMR CH_SDCCH_4_1 S_AMR_CONF_4
(3)	RR_SYNC_IND	ciph mm_info bcch_info syncss chm	NOT_PRESENT_8BIT NOT_USED NOT_USED NOT_PRESENT_16BIT S_CHM_SPEECH_AMR_FULL

(4) DL\_DATA\_REQ

```

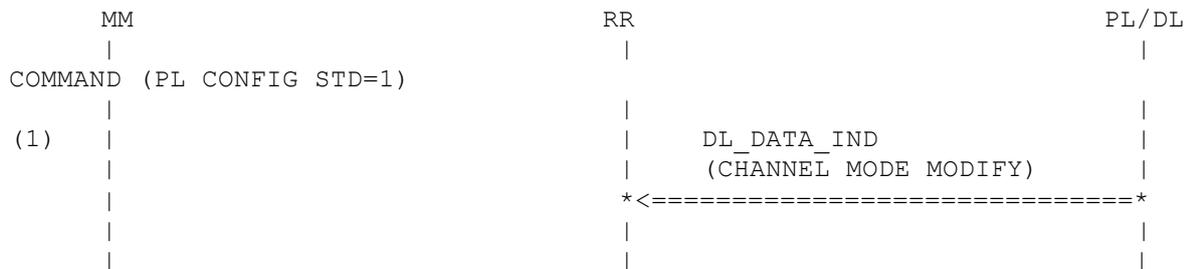
ch_type      CH_TYPE_FACCH
sapi         SAPI_0
sdu         {
component    RR
direction    UPLINK
pd           U_CHAN_MOD_ACK
ti           TI_0
chan_desc    CHANNEL_DESC_FACCH2
chan_mode    CHANNEL_MODE_AMR
}
    
```

History:            04.07.97            DL            Initial

**3.11.3 RR705A: Channel Mode Modify Procedure – AMR (with inconsistent Multirate IE)**

**Description:** The base station configures the channel mode with inconsistent Multirate IE. RR will ignore the channel mode modify message and shall not send any channel mode modify ack to the base station.

**Preamble:** RR154C



**Parametrization**

Primitive	Parameter	Value
-----------	-----------	-------

(5) DL\_DATA\_IND

```

ch_type      CH_TYPE_FACCH
sapi         SAPI_0
sdu         {
component    RR
direction    DOWNLINK
pd           D_CHAN_MOD
ti           TI_0
chan_desc    CHANNEL_DESC_SDCCH
chan_mode    CHANNEL_MODE_AMR
vgcs_tmi     NOT_USED
multirate_conf S_MULTIRATE_CONF_4_702F
}
    
```

MUTE (100)

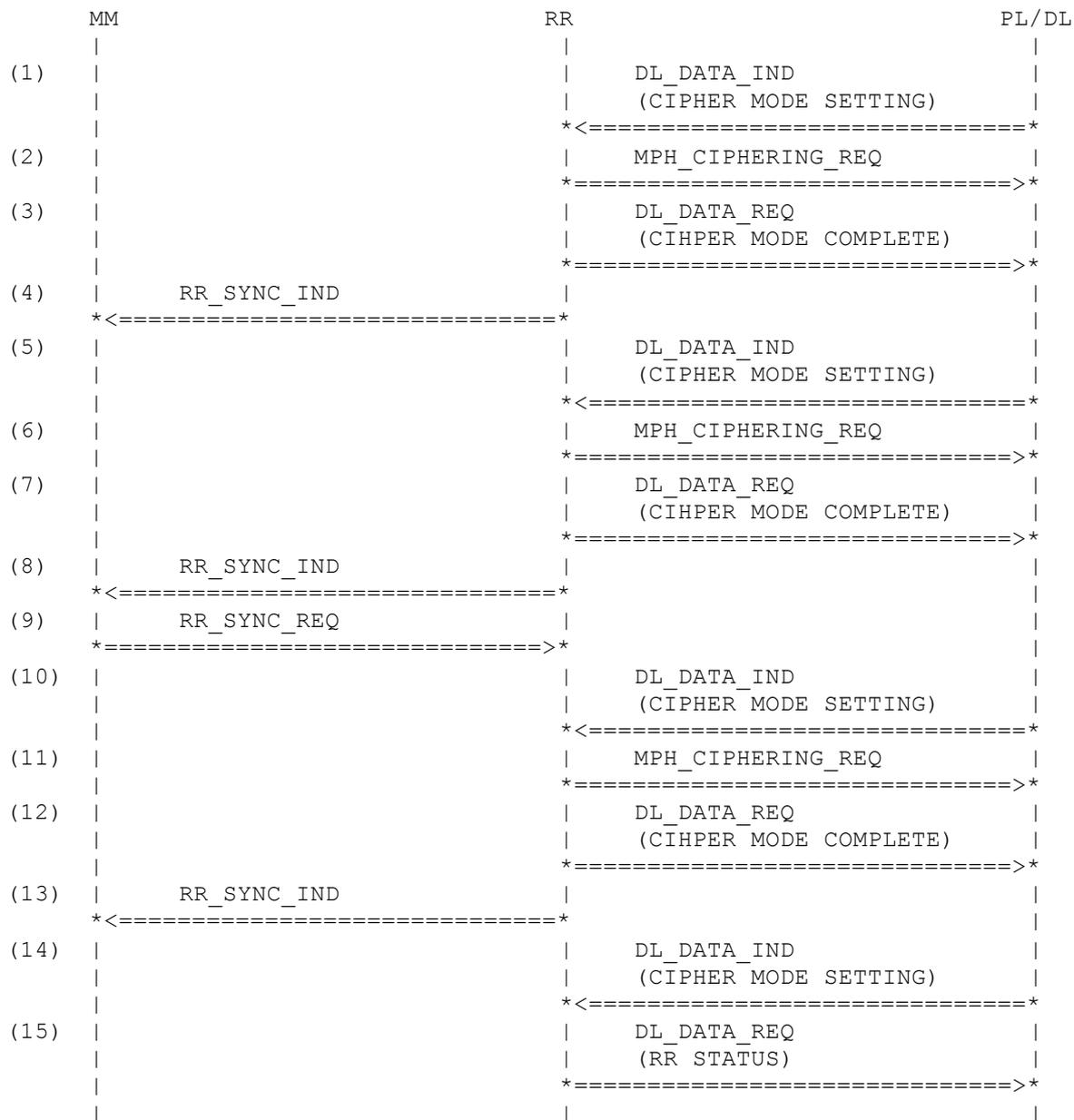
History            23.07.04            xvmadapp            Initial

## 3.12 Cipher Mode Setting

### 3.12.1 RR226: Cipher Mode Setting Procedure

**Description:** The base station configures ciphering. MM and PL are informed and an acknowledge is sent to the base station.

**Preamble:** RR154B



**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) DL_DATA_IND	ch_type sapi sdu { component direction pd ti ciph_mode_set ciph_res }	CH_TYPE_SDCCH SAPI_0  RR DOWNLINK D_CIPH_CMD TI_0 CIPH_MODE_ON CIPH_RESP_NO_IMEI
(2) MPH_CIPHERING_REQ	ciph	CIPHERING_2
(3) DL_DATA_REQ	ch_type sapi sdu { component direction pd ti mob_ident }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_CIPH_COMP TI_0 NOT_USED
(4) RR_SYNC_IND	ciph mm_info bcch_info syncs chm	CIPH_ON NOT_USED NOT_USED NOT_PRESENT_16BIT NOT_USED
(5) DL_DATA_IND	ch_type sapi sdu { component direction pd ti ciph_mode_set ciph_res }	CH_TYPE_SDCCH SAPI_0  RR DOWNLINK D_CIPH_CMD TI_0 CIPH_MODE_OFF CIPH_RESP_NO_IMEI

(6) MPH_CIPHERING_REQ	ciph	NO_CIPHERING
(7) DL_DATA_REQ	ch_type sapi sdu { component direction pd ti mob_ident }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_CIPH_COMP TI_0 NOT_USED
(8) RR_SYNC_IND	ciph mm_info bcch_info synccs chm	CIPH_OFF NOT_USED NOT_USED NOT_PRESENT_16BIT NOT_USED
(9) RR_SYNC_REQ	op cksn kcv tmsi_struct plmn lac synccs acc thplmn	NOT_USED CKSN_6 KCV_00112233 NOT_USED NOT_USED NOT_USED NOT_PRESENT_16BIT ACC_CTRL_CLASS_0000 TIME_HPLMN_EMPTY
(10) DL_DATA_IND	ch_type sapi sdu { component direction pd ti ciph_mode_set ciph_res }	CH_TYPE_SDCCH SAPI_0  RR DOWNLINK D_CIPH_CMD TI_0 CIPH_MODE_ON CIPH_RESP_WITH_IMEI
(11) MPH_CIPHERING_REQ	ciph	CIPHERING_3

(12) DL\_DATA\_REQ

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0
sdu	
{	
component	RR
direction	UPLINK
pd	U_CIPH_COMP
ti	TI_0
mob_ident	MOBILE_IDENTITY_IMEISV
}	

(13) RR\_SYNC\_IND

ciph	CIPH_ON
mm_info	NOT_USED
bcch_info	NOT_USED
synccs	NOT_PRESENT_16BIT
chm	NOT_USED

(14) DL\_DATA\_IND

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_CIPH_CMD
ti	TI_0
ciph_mode_set	CIPH_MODE_ON
ciph_res	CIPH_RESP_WITH_IMEI
}	

(15) DL\_DATA\_REQ

ch_type	CH_TYPE_SDCCH
sapi	SAPI_0
sdu	
{	
component	RR
direction	UPLINK
pd	B_RR_STATUS
ti	TI_0
rr_cause	RR_CAUSE_6F
}	

History:	04.07.97	DL	Initial
	31.01.01	DG	DL_DATA_REQ (classmark ch.) added
	12.02.01	DG	DL_DATA_REQ deleted

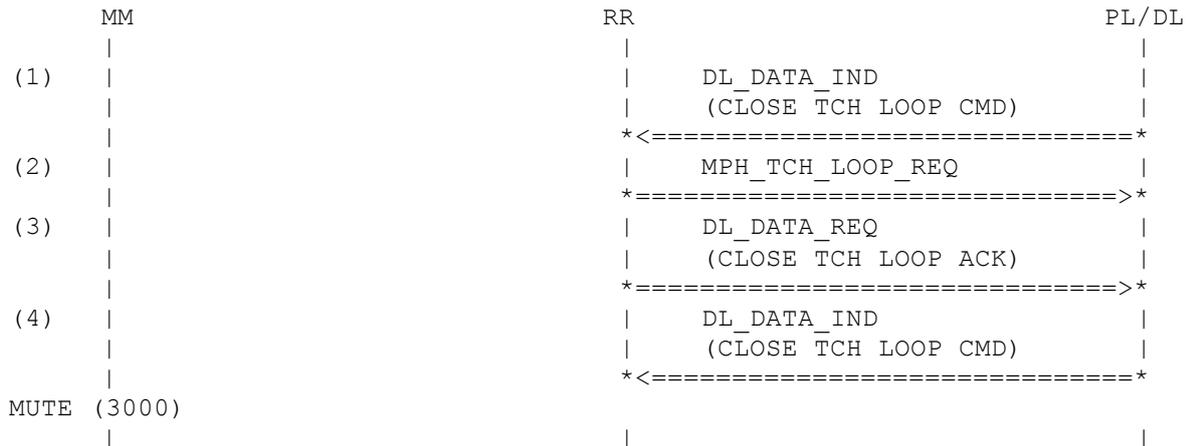
### 3.13 Test Functions

#### 3.13.1 RR300: Close TCH Loop

**Description:** The base station closes the TCH loop. Additional close attempts are ignored by RR.  
 <A>: Loop Type not C  
 <B>: Loop Type is C.

**Preamble:** RR210A

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



**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH
<A>	sapi	SAPI_0
<B>	sdu	CLOSE_TCH_LOOP_A
(2) MPH_TCH_LOOP_REQ	tch_loop	LOOP_A
<A>	tch_loop	LOOP_C
(3) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	CLOSE_TCH_LOOP_ACK
(4) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	CLOSE_TCH_LOOP_A

History: 12.12.97 LE Initial  
 06.03.03 LG TIMEOUT replaced by MUTE

### 3.13.2 RR301: Open TCH Loop (Loop unequal Type C)

**Description:** The base station opens the TCH loop. The loop type is unequal type C. So no open loop acknowledge is expected. Additional open commands are ignored by RR.

**Preamble:** RR300A

MM	RR	PL/DL
(1)	DL_DATA_IND	
	(OPEN TCH LOOP CMD)	
	*<=====*	
(2)	MPH_TCH_LOOP_REQ	
	*=====>*	
TIMEOUT (3000)		
(3)	DL_DATA_IND	
	(OPEN TCH LOOP CMD)	
	*<=====*	
MUTE (3000)		

#### Parametrization

Primitive	Parameter	Value	
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	OPEN_TCH_LOOP_CMD	
(2) MPH_TCH_LOOP_REQ	tch_loop	NOT_PRESENT_8BIT	
(3) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	OPEN_TCH_LOOP_CMD	
History:	12.12.97	LE	Initial
	06.03.03	LG	TIMEOUT replaced by MUTE

### 3.13.3 RR302: Open TCH Loop (Loop equal Type C)

**Description:** The base station opens the TCH loop. The loop type is equal type C. So an open loop acknowledge is expected. Additional open commands are ignored by RR.

**Preamble:** RR300B

MM	RR	PL/DL
(1)	DL_DATA_IND (OPEN TCH LOOP CMD)	
(2)	MPH_TCH_LOOP_REQ	
(3)	DL_DATA_REQ (OPEN TCH LOOP CMD)	
(4)	DL_DATA_IND (OPEN TCH LOOP CMD)	
MUTE (3000)		

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type sapi sdu	CH_TYPE_FACCH SAPI_0 OPEN_TCH_LOOP_CMD
(2) MPH_TCH_LOOP_REQ	tch_loop	NOT_PRESENT_8BIT
(3) DL_DATA_REQ	ch_type sapi sdu	CH_TYPE_FACCH SAPI_0 OPEN_TCH_LOOP_ACK
(4) DL_DATA_IND	ch_type sapi sdu	CH_TYPE_FACCH SAPI_0 OPEN_TCH_LOOP_CMD

History:	12.12.97	LE	Initial
	06.03.03	LG	TIMEOUT replaced by MUTE

### 3.13.4 RR303: Test Interface

**Description:** The base station sends test interface messages. The messages are forwarded to the lower layer.

**Preamble:** RR210A

MM	RR	PL/DL
(1)	DL_DATA_IND (TEST INTERFACE)	
(2)	MPH_DAI_REQ	
(3)	DL_DATA_IND (TEST INTERFACE)	
(4)	MPH_DAI_REQ	
(5)	DL_DATA_IND (TEST INTERFACE)	
(6)	MPH_DAI_REQ	
(7)	DL_DATA_IND (TEST INTERFACE)	
(8)	MPH_DAI_REQ	

#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	TEST_INTERFACE_4
(2) MPH_DAI_REQ	device	DAI_AD_DA
(3) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	TEST_INTERFACE_2
(4) MPH_DAI_REQ	device	DAI_SPEECH_UL
(5) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	TEST_INTERFACE_1
(6) MPH_DAI_REQ	device	DAI_SPEECH_DL
(7) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	TEST_INTERFACE_0

(8) MPH\_DAI\_REQ

device

DAI\_NO\_TEST

History:

12.12.97

LE

Initial

### 3.14 Error Handling

#### 3.14.1 RR500: Frequency not implemented

**Description:** The base station initiates a handover.  
 <A> The BCCH arfcn in the cell channel description is not in the GSM range, it is a PCN channel number.  
 <B> The TCH arfcn in the channel description is not in the GSM range, it is a PCN channel number.  
 This shall lead to handover failure message with the cause frequency not implemented.

**Preamble:** RR154B  
**Variants:** <A>....<B>

	MM	RR	PL/DL
(1)		DL_DATA_IND	
		(HANDOVER COMMAND)	
		*<=====*	
(2)		DL_SUSPEND_REQ	
		*=====>*	
(3)		DL_RECONNECT_REQ	
		(HANDOVER FAILURE)	
		*=====>*	

**Parametrization**

	Primitive	Parameter	Value
(1)	DL_DATA_IND	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	{
		component	RR
		direction	DOWNLINK
		pd	D_HANDOV_CMD
		ti	TI_0
<A>	cell_desc	cell_desc	CELL_DESC_BAD_BCCH
<B>	cell_desc	cell_desc	CELL_DESC_1
<A>	chan_desc_after	chan_desc_after	CHANNEL_DESC_SDCCH2
<B>	chan_desc_after	chan_desc_after	CHANNEL_DESC_BAD
	handov_ref	handov_ref	HANDOV_REF_1
	pow_cmd_access	pow_cmd_access	POW_05_HO
	synch_ind	synch_ind	NOT_USED
	freq_short_list_after	freq_short_list_after	NOT_USED
	freq_list_after	freq_list_after	NOT_USED
	cell_chan_desc	cell_chan_desc	NOT_USED
	chan_mode	chan_mode	NOT_USED
	chan_mode2	chan_mode2	NOT_USED
	chan_mode3	chan_mode3	NOT_USED
	chan_mode4	chan_mode4	NOT_USED
	chan_mode5	chan_mode5	NOT_USED
	chan_mode6	chan_mode6	NOT_USED
	chan_mode7	chan_mode7	NOT_USED
	chan_mode8	chan_mode8	NOT_USED
	chan_desc_after_2	chan_desc_after_2	NOT_USED
	chan_mode_2	chan_mode_2	NOT_USED
	freq_chan_seq_after	freq_chan_seq_after	NOT_USED

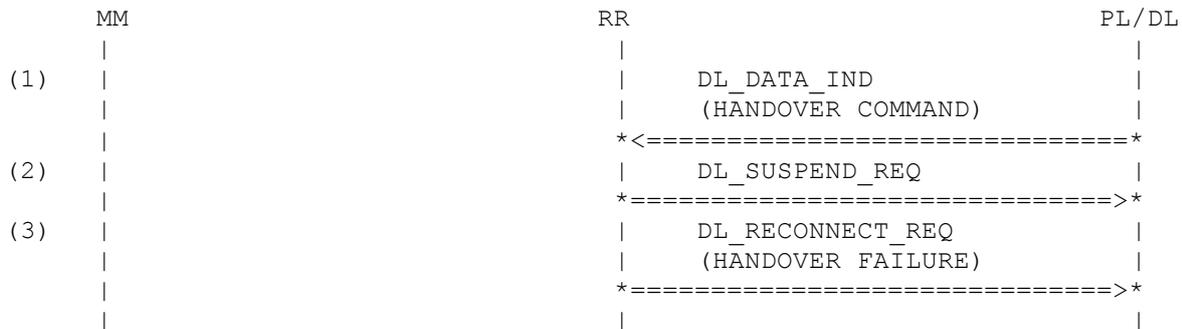
		mob_alloc_after	NOT_USED
		start_time	NOT_USED
		time_diff	NOT_USED
		time_advance	NOT_USED
		freq_short_list_before	NOT_USED
		freq_list_before	NOT_USED
		chan_desc_before	NOT_USED
		chan_desc_before_2	NOT_USED
		freq_chan_seq_before	NOT_USED
		mob_alloc_before	NOT_USED
		ciph_mode_set	NOT_USED
		}	
(2)	DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(3)	DL_RECONNECT_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_HANDOV_FAIL
		ti	TI_0
		rr_cause	RR_CAUSE_0A
		}	
History:	16.05.98	LE	Initial
	25.01.01	DG	DL_DATA_IND: chan_mode2...8 added, DL_DATA_REQ added
	12.02.01	DG	DL_DATA_REQ deleted

**3.14.2 RR501: Channel mode unacceptable**

**Description:** The base station initiates a handover.  
 <A> The channel type in the channel description is halfrate, not fullrate.  
 <B> The channel mode is not supported  
 This shall lead to handover failure message with the cause channel mode unacceptable.

**Preamble:** RR154B

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



**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	{
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
	<A> chan_desc_after	CHANNEL_DESC_HALFRATE
	<B> chan_desc_after	CHANNEL_DESC_SDCCH2
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
	synch_ind	NOT_USED
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	<A> chan_mode	NOT_USED
	<B> chan_mode	CHANNEL_MODE_UNDEF
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
chan_mode4	NOT_USED	
chan_mode5	NOT_USED	
chan_mode6	NOT_USED	
chan_mode7	NOT_USED	
chan_mode8	NOT_USED	
chan_desc_after_2	NOT_USED	
chan_mode_2	NOT_USED	
freq_chan_seq_after	NOT_USED	
mob_alloc_after	NOT_USED	
start_time	NOT_USED	
time_diff	NOT_USED	
time_advance	NOT_USED	

		freq_short_list_before	NOT_USED
		freq_list_before	NOT_USED
		chan_desc_before	NOT_USED
		chan_desc_before_2	NOT_USED
		freq_chan_seq_before	NOT_USED
		mob_alloc_before	NOT_USED
		ciph_mode_set	NOT_USED
		}	
(2)	DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
(3)	DL_RECONNECT_REQ	ch_type	CH_TYPE_SDCCH
		sapi	SAPI_0
		sdu	
		{	
		component	RR
		direction	UPLINK
		pd	U_HANDOV_FAIL
		ti	TI_0
		rr_cause	RR_CAUSE_09
		}	
History:	16.05.98	LE	Initial
	25.01.01	DG	DL_DATA_IND: chan_mode2...8 added, DL_DATA_REQ added
	12.02.01	DG	DL_DATA_REQ deleted

### 3.15 Registration (Limited Service)

#### 3.15.1 RR600: Cell with insufficient SYS INFO

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages. The cell has not enough information. After a timeout the detection of the next channel is requested.

**Preamble:** RR001A

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
	*<=====*	
(2)	MPH_BSIC_REQ	
	*=====>*	
(3)	MPH_BSIC_CNF	
	*<=====*	
(4)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(5)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
MUTE (9000)		
TIMEOUT (1000)		
(7)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(4) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_2
	}	

## (5) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_3
ti	TI_0
cell_ident	CELL_IDENT_3748
loc_area_ident	LOC_AREA_IDENT_123_2147
ctrl_chan_desc	CTRL_CHAN_DESC_1
cell_opt_bcch	CELL_OPT_BCCH_1
cell_select	CELL_SELECT_1
rach_ctrl	RACH_CTRL_2
si3_rest_oct	S_SI3_REST_EMPTY
}	

## (6) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_4
ti	TI_0
loc_area_ident	LOC_AREA_IDENT_123_2147
cell_select	CELL_SELECT_1
rach_ctrl	RACH_CTRL_2
chan_desc	NOT_USED
mob_alloc	NOT_USED
si4_rest_oct	S_SI4_REST_EMPTY
}	

## (7) MPH\_BSIC\_REQ

		arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info
			added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF >
			SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	MUTE inserted, times changed

**3.15.2 RR601: Cell with unreadable SYS INFO**

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages. The cell has only unreadable BCCH messages. After 15 errors the detection of the next channel is requested.

**Preamble:** RR001A

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_ERROR_IND	
(5)	MPH_ERROR_IND	
(6)	MPH_ERROR_IND	
(7)	MPH_ERROR_IND	
(8)	MPH_ERROR_IND	
(9)	MPH_ERROR_IND	
(10)	MPH_ERROR_IND	
(11)	MPH_ERROR_IND	
(12)	MPH_ERROR_IND	
(13)	MPH_ERROR_IND	
(14)	MPH_ERROR_IND	
(15)	MPH_ERROR_IND	
(16)	MPH_ERROR_IND	
(17)	MPH_ERROR_IND	
(18)	MPH_ERROR_IND	
(19)	MPH_BSIC_REQ	
MUTE (500)		

**Parametrization**

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67

(3) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(4) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(5) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(6) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(7) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(8) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(9) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(10) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(11) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(12) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(13) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(14) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(15) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(16) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(17) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(18) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67

(19) MPH\_BSIC\_REQ

		arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	17.04.00	DG	number of "MPH_ERROR_IND" increased from 3 to 15
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added

### 3.15.3 RR602: Second cell is okay

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages.

**Preamble:** RR601

	MM	RR	PL/DL
(1)		MPH_BSIC_CNF	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(3)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(4)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(5)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(6)		MPH_CLASSMARK_REQ	
		*=====>*	
(7)		MPH_IDLE_REQ	
		*=====>*	
(8)		MPH_CBCH_REQ	
		*=====>*	
(9)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(10)	RR_ACTIVATE_CNF		
	*<=====*		
(11)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

	Primitive	Parameter	Value
(1)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(2)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(3)	MPH_UNITDATA_IND	arfcn fn sdu	ARFCN_32 NOT_USED

	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(4) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(5) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(6) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(7) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_LIMITED
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_7
	power	MS_TXPWR_MAX_CCH_02

		ncc_permitted	NCC_PERMITTED_FF
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(8)	MPH_CBCH_REQ	cbch	NOT_USED
(9)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1
		sync_only	NOT_USED
(10)	RR_ACTIVATE_CNF	op	OP_MODE_EMPTY
		mm_info	MM_INFO_1
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(11)	MPH_IDENTITY_REQ	mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

**3.15.4 RR603: No further BCCH detected, enter no service condition**

**Description:** PL checks the rest of BCCH carrier. There is no further BCCH carrier and RR enters no service condition.

**Preamble:** RR601

	MM	RR	PL/DL
(1)		MPH_BSIC_CNF	
		*<=====*	
(2)		MPH_BSIC_REQ	
		*=====>*	
(3)		MPH_BSIC_CNF	
		*<=====*	
(4)		MPH_SYNC_REQ	
		*=====>*	
(5)	RR_ABORT_IND		
	*<=====*		
MUTE (500)			

**Parametrization**

	Primitive	Parameter	Value
(1)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(2)	MPH_BSIC_REQ	arfcn	ARFCN_124
(3)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL
(4)	MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE
(5)	RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_EMPTY_NO_SERV RRCS_ABORT_CEL_SEL_FAIL NO_PLMN_AVAILABLE NOT_USED NOT_USED NOT_USED NOT_USED
History:	04.07.97 19.01.01  25.01.01 12.02.01  31.03.01 25.02.03	DL DG  DG DG  VK LG	Initial MPH_BSIC_REQ: cell_type, timing_info added final MPH_BSIC_REQ added final MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) replaced by MPH_SYNC_REQ 'power' added in rr_abort_ind 'lac_list' added in rr_abort_ind

### 3.15.5 RR604: Second Cell with insufficient SYS INFO

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages. The cell has not enough information. After a timeout the detection of the next channel is requested.

**Preamble:** RR600

MM	RR	PL/DL
(1)	MPH_BSIC_CNF	
	*<=====*	
(2)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(3)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(4)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
MUTE (9000)		
TIMEOUT (1000)		
(5)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_BSIC_CNF	arfcn	ARFCN_32
	bsic	BSIC_6
	cs	CS_NO_ERROR
(2) MPH_UNITDATA_IND	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_2
	}	
(3) MPH_UNITDATA_IND	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1

		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_2
		si3_rest_oct	S_SI3_REST_EMPTY
		}	
(4) MPH_UNITDATA_IND		arfcn	ARFCN_32
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_4
		ti	TI_0
		loc_area_ident	LOC_AREA_IDENT_123_2147
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_2
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
		si4_rest_oct	S_SI4_REST_EMPTY
		}	
(5) MPH_BSIC_REQ		arfcn	ARFCN_124
History:	04.07.97	DL	Initial
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info
			added
	08.02.01.	DG	si3/4_rest_oct: SI3_REST_DEF >
			SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	MUTE inserted, times changed

**3.15.6 RR605: Second Cell with unreadable SYS INFO**

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages. The cell has only unreadable BCCH messages. After three errors the detection of the next channel is requested.

**Preamble:** RR601

MM	RR	PL/DL
(1)	MPH_BSIC_CNF	
(2)	MPH_ERROR_IND	
(3)	MPH_ERROR_IND	
(4)	MPH_ERROR_IND	
(5)	MPH_ERROR_IND	
(6)	MPH_ERROR_IND	
(7)	MPH_ERROR_IND	
(8)	MPH_ERROR_IND	
(9)	MPH_ERROR_IND	
(10)	MPH_ERROR_IND	
(11)	MPH_ERROR_IND	
(12)	MPH_ERROR_IND	
(13)	MPH_ERROR_IND	
(14)	MPH_ERROR_IND	
(15)	MPH_ERROR_IND	
(16)	MPH_ERROR_IND	
(17)	MPH_BSIC_REQ	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(2) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(3) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32

(4)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(5)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(6)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(7)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(8)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(9)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(10)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(11)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(12)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(13)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(14)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(15)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(16)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(17)	MPH_BSIC_REQ	arfcn	ARFCN_124

History:	04.07.97	DL	Initial number of "MPH_ERROR_IND" increased from 3 to 15 MPH_BSIC_REQ: cell_type, timing_info added
	15.05.00	DG	
	19.01.01	DG	

### 3.15.7 RR606: Restart by MM for limited service, successful

**Description:** MM starts a new attempt for limited service during the actual attempt.

**Preamble:** RR602

MM	RR	PL/DL
(1)		
RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(10)	MPH_CLASSMARK_REQ	
	*=====>*	
(11)	MPH_IDLE_REQ	
	*=====>*	
(12)	MPH_CBCH_REQ	
	*=====>*	
(13)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(14)		
RR_ACTIVATE_CNF		
*<=====*		
(15)	MPH_IDENTITY_REQ	
	*=====>*	
MUTE (40000)		

#### Parametrization

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY
	op	OP_MODE_EMPTY
	cksn	CKSN_NOT_PRES
	kcv	KCV_EMPTY
	acc	ACC_CTRL_CLASS_0000
	imsi_struct	MOBILE_ID_NOT_SET
	tmsi_struct	MOBILE_ID_NOT_SET
	thplmn	TIME_HPLMN_EMPTY
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED

(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1

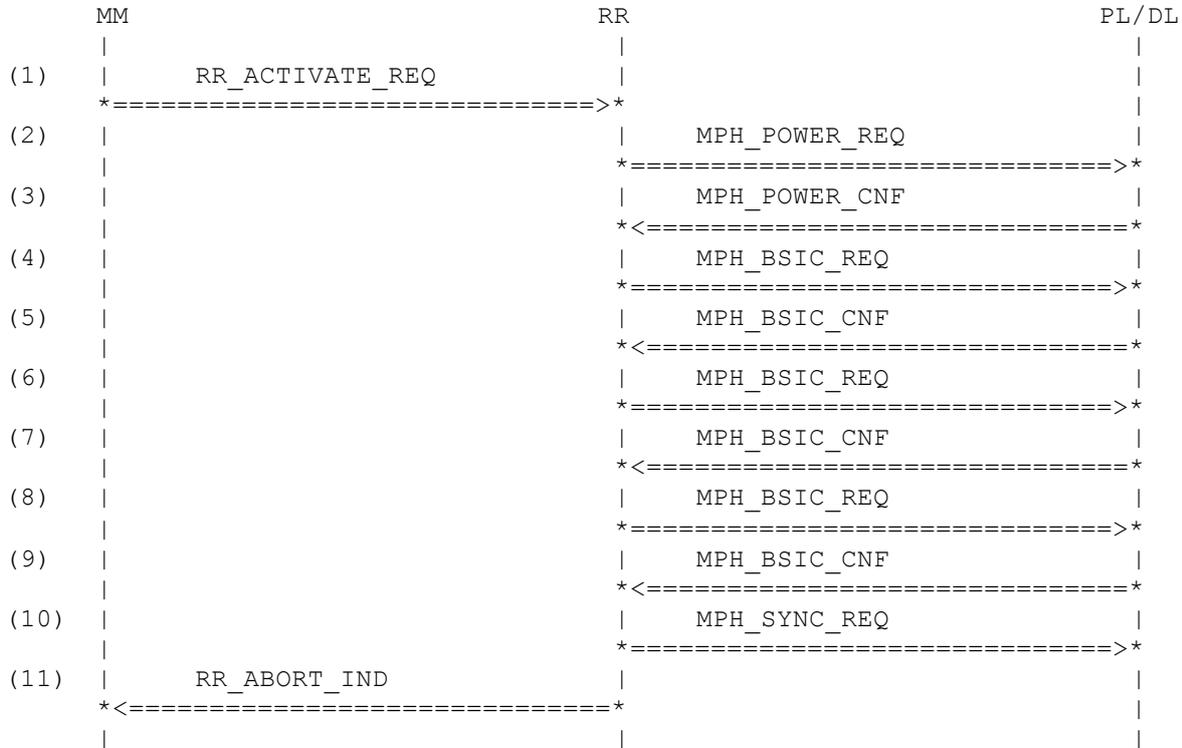
	si3_rest_oct }	S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(10) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(11) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_LIMITED PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_7 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_FF NOT_USED CONST_0 NOT_USED
(12) MPH_CBCH_REQ	cbch	NOT_USED
(13) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1C NOT_USED
(14) RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_EMPTY MM_INFO_1 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(15) MPH_IDENTITY_REQ	mid	S_MS_ID_NO_IMSI_NO_TMSI

History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	TIMEOUT replaced by MUTE

**3.15.8 RR607: Restart by MM for limited service fails, no BSIC**

**Description:** PL detects no further BCCH carrier and RR enters the no service state.

**Preamble:** RR602



**Parametrization**

Primitive	Parameter	Value	
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY	
	op	OP_MODE_EMPTY	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_EMPTY	
	acc	ACC_CTRL_CLASS_0000	
	imsi_struct	MOBILE_ID_NOT_SET	
	tmsi_struct	MOBILE_ID_NOT_SET	
	thplmn	TIME_HPLMN_EMPTY	
	bcch_info	S_BCCH_INFO_EMPTY	
	cell_test	CELL_TEST_DISABLE	
	gprs_indication	NOT_USED	
	(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3	
	arfcn	ARFCN_67_32_124	
	rx_lev	RXLEV_22_21_20	
(4) MPH_BSIC_REQ	arfcn	ARFCN_67	

(5) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(6) MPH_BSIC_REQ		arfcn	ARFCN_32
(7) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(8) MPH_BSIC_REQ		arfcn	ARFCN_124
(9) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL
(10) MPH_SYNC_REQ		cs	
		CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(11) RR_ABORT_IND		op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_EMPTY_NO_SERV RRCS_ABORT_CEL_SEL_FAIL NO_PLMN_AVAILABLE NOT_USED NOT_USED NOT_USED NOT_USED
History:	04.07.97 15.05.00 19.01.01  09.02.01  31.03.01 05-Jun-01 16-Nov-01  25.02.03	DL DG DG  DG  VK MSE VK  LG	Initial RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) replaced by MPH_SYNC_REQ 'power' added in rr_abort_ind adapted to TAP2 remove step 7-13 (repeated sync attempt to ARFCN 43 and 124) 'lac_list' added in rr_abort_ind

**3.15.9 RR608: Restart by MM for limited service fails, insufficient SYS INFOS**

**Description:** PL detects a further BCCH carrier with insufficient SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR602

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
MUTE (9000)			
TIMEOUT (1000)			
(9)		MPH_BSIC_REQ	
		*=====>*	

**Parametrization**

	Primitive	Parameter	Value
(1)	RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY
		op	OP_MODE_EMPTY
		cksn	CKSN_NOT_PRES
		kcv	KCV_EMPTY
		acc	ACC_CTRL_CLASS_0000
		imsi_struct	MOBILE_ID_NOT_SET
		tmsi_struct	MOBILE_ID_NOT_SET
		thplmn	TIME_HPLMN_EMPTY
		bcch_info	S_BCCH_INFO_EMPTY
		cell_test	CELL_TEST_DISABLE
		gprs_indication	NOT_USED
(2)	MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
(3)	MPH_POWER_CNF	num_of_chan	CHANNELS_3
		arfcn	ARFCN_67_32_124
		rx_lev	RXLEV_22_21_20
(4)	MPH_BSIC_REQ	arfcn	ARFCN_67

(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR	
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_2	
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_2 S_SI3_REST_EMPTY	
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_2 NOT_USED NOT_USED S_SI4_REST_EMPTY	
(9) MPH_BSIC_REQ	arfcn	ARFCN_32	
History:	04.07.97 15.05.00 26.05.00	DL DG DG	Initial RR_ACTIVATE_REQ: cell_test added values changed:

19.01.01	DG	si3/4_rest_oct: NOT_USED > SI3_REST_DEF RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2
06.03.03	LG	MUTE inserted, times changed

**3.15.10 RR609: Restart by MM for limited service fails, unreadable SYS INFOS**

**Description:** PL detects a further BCCH carrier with unreadable SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR602

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_ERROR_IND	
		*<=====*	
(7)		MPH_ERROR_IND	
		*<=====*	
(8)		MPH_ERROR_IND	
		*<=====*	
(9)		MPH_ERROR_IND	
		*<=====*	
(10)		MPH_ERROR_IND	
		*<=====*	
(11)		MPH_ERROR_IND	
		*<=====*	
(12)		MPH_ERROR_IND	
		*<=====*	
(13)		MPH_ERROR_IND	
		*<=====*	
(14)		MPH_ERROR_IND	
		*<=====*	
(15)		MPH_ERROR_IND	
		*<=====*	
(16)		MPH_ERROR_IND	
		*<=====*	
(17)		MPH_ERROR_IND	
		*<=====*	
(18)		MPH_ERROR_IND	
		*<=====*	
(19)		MPH_ERROR_IND	
		*<=====*	
(20)		MPH_ERROR_IND	
		*<=====*	
(21)		MPH_BSIC_REQ	
		*=====>*	

**Parametrization**

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY
		op	OP_MODE_EMPTY
		cksn	CKSN_NOT_PRES

	kcv	KCV_EMPTY
	acc	ACC_CTRL_CLASS_0000
	imsi_struct	MOBILE_ID_NOT_SET
	tmsi_struct	MOBILE_ID_NOT_SET
	thplmn	TIME_HPLMN_EMPTY
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(5) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(6) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(7) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(8) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(9) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(10) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(11) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(12) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(13) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(14) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67

(15)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(16)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(17)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(18)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(19)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(20)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(21)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	18.04.00	DG	number of "MPH_ERROR_IND" increased from 3 to 15
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	05-Jun-01	MSE	adapted to TAP2

### 3.15.11 RR618: Restart by MM for full service, successful, with bcch info

**Description:** MM starts a new attempt for full service. The request contains BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_32 shall be used. It is member of the BCCH information.

**Preamble:** RR601

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
MUTE (3000)			
(2)		MPH_BSIC_CNF	
		*<=====*	
(3)		MPH_POWER_REQ	
		*=====>*	
(4)		MPH_POWER_CNF	
		*<=====*	
(5)		MPH_BSIC_REQ	
		*=====>*	
(6)		MPH_BSIC_CNF	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(11)		MPH_CLASSMARK_REQ	
		*=====>*	
(12)		MPH_IDLE_REQ	
		*=====>*	
(13)		MPH_CBCH_REQ	
		*=====>*	
(14)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(15)	RR_ACTIVATE_CNF		
	*<=====*		
(16)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	accb	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI

	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_32
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_BSIC_CNF		
	arfcn	ARFCN_32
	bsic	BSIC_5
	cs	CS_NO_ERROR
(3) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(4) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(5) MPH_BSIC_REQ		
	arfcn	ARFCN_32
(6) MPH_BSIC_CNF		
	arfcn	ARFCN_32
	bsic	BSIC_5
	cs	CS_NO_ERROR
(7) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK

	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(10) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(11) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(12) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(13) MPH_CBCH_REQ		
	cbch	NOT_USED
(14) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1
	sync_only	NOT_USED
(15) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123

		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(16)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	TIMEOUT replaced by MUTE

### 3.15.12 RR619: Restart by MM for full service, successful, without bcch info

**Description:** MM starts a new attempt for full service. The request contains no BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_67 shall be used. It is the channel with the highest fieldstrength.

**Preamble:** RR601

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_BSIC_CNF	
		*<=====*	
(3)		MPH_POWER_REQ	
		*=====>*	
(4)		MPH_POWER_CNF	
		*<=====*	
(5)		MPH_BSIC_REQ	
		*=====>*	
(6)		MPH_BSIC_CNF	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(11)		MPH_CLASSMARK_REQ	
		*=====>*	
(12)		MPH_IDLE_REQ	
		*=====>*	
(13)		MPH_CBCH_REQ	
		*=====>*	
(14)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(15)	RR_ACTIVATE_CNF		
	*<=====*		
(16)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	accv	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID

	bcch_info cell_test gprs_indication	S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(2) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_5 CS_NO_ERROR
(3) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(4) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(5) MPH_BSIC_REQ	arfcn	ARFCN_67
(6) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3

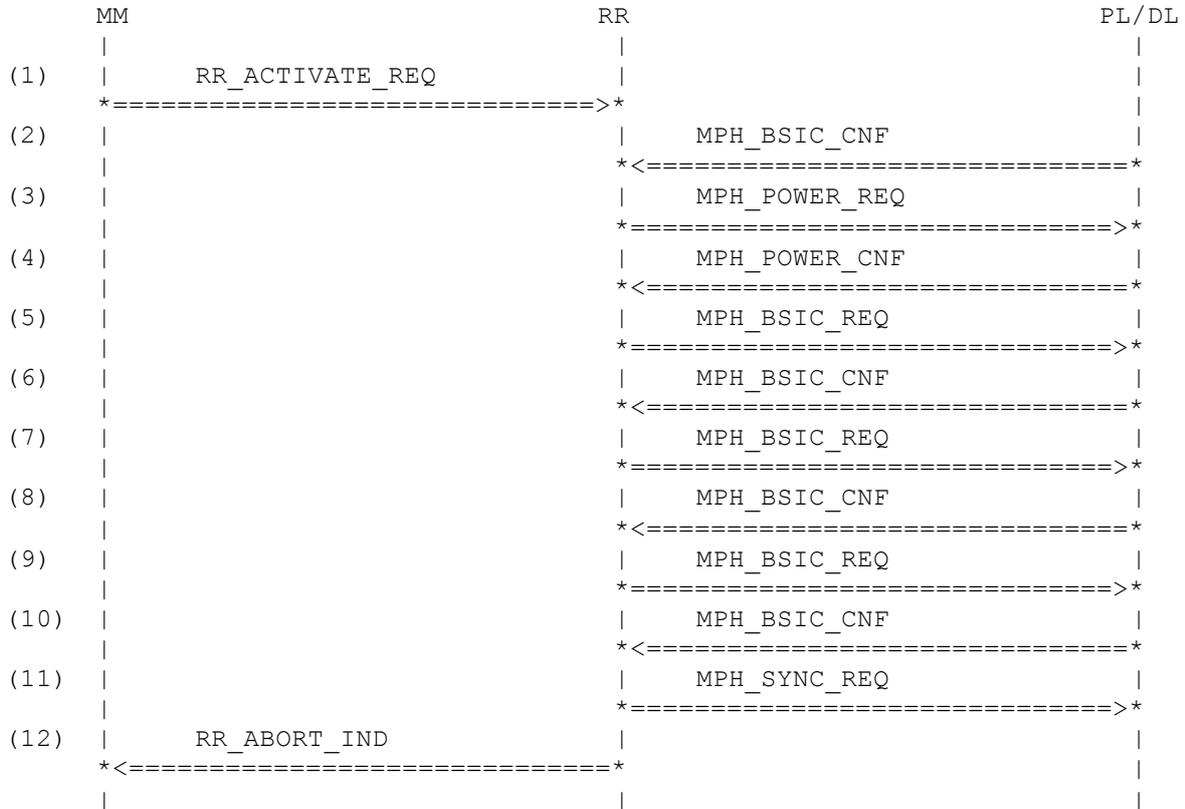
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(10) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(11) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(12) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(13) MPH_CBCH_REQ		
	cbch	NOT_USED
(14) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(15) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(16)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indic added si3/4_rest_oct: SI3_REST_DEF >
	05-Jun-01	SI3_REST_EMPTY MSE	adapted to TAP2

**3.15.13 RR620: Restart by MM for full service fails, no BSIC**

**Description:** PL detects no further BCCH carrier and RR enters the no service state.

**Preamble:** RR601



**Parametrization**

	Primitive	Parameter	Value
(1)	RR_ACTIVATE_REQ	plmn op cksn kcv acc imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	PLMN_ID_123 OP_MODE_TEST_SIM CKSN_NOT_PRES KCV_12345678 ACC_CTRL_CLASS_0008 MOBILE_ID_IMSI_HPLMN MOBILE_ID_TMSI TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(2)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_ERROR
(3)	MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(4)	MPH_POWER_CNF	num_of_chan	CHANNELS_3

		arfcn	ARFCN_67_32_124
		rx_lev	RXLEV_22_21_20
(5)	MPH_BSIC_REQ		
		arfcn	ARFCN_67
(6)	MPH_BSIC_CNF		
		arfcn	ARFCN_67
		bsic	BSIC_0
		cs	CS_NO_BCCH_AVAIL
(7)	MPH_BSIC_REQ		
		arfcn	ARFCN_32
(8)	MPH_BSIC_CNF		
		arfcn	ARFCN_32
		bsic	BSIC_0
		cs	CS_NO_BCCH_AVAIL
(9)	MPH_BSIC_REQ		
		arfcn	ARFCN_124
(10)	MPH_BSIC_CNF		
		arfcn	ARFCN_124
		bsic	BSIC_0
		cs	CS_NO_BCCH_AVAIL
(11)	cs	MPH_SYNC_REQ	
		CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(12)		RR_ABORT_IND	
		op	OP_MODE_TEST_SIM_NO_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_AVAILABLE
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	NOT_USED
History:	04.07.97	DL	Initial
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added
			MPH_BSIC_REQ: cell_type, timing_info added
	29.01.01	DG	final MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) added
	13.02.01	DG	final MPH_BSIC_REQ replaced by MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.15.14 RR621: Restart by MM for full service fails, insufficient SYS INFOS

**Description:** PL detects a further BCCH carrier with insufficient SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR601

	MM	RR	PL/DL
(1)	   RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_BSIC_CNF	
		*<=====*	
(3)		MPH_POWER_REQ	
		*=====>*	
(4)		MPH_POWER_CNF	
		*<=====*	
(5)		MPH_BSIC_REQ	
		*=====>*	
(6)		MPH_BSIC_CNF	
		*<=====*	
(7)		MPH_UNITDATA_IND   (SYS INFO TYPE 1)	
		*<=====*	
(8)		MPH_UNITDATA_IND   (SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_UNITDATA_IND   (SYS INFO TYPE 4)	
		*<=====*	
	MUTE (9000)		
	TIMEOUT (1000)		
(10)		MPH_BSIC_REQ	
		*=====>*	

#### Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn	PLMN_ID_123
		op	OP_MODE_TEST_SIM
		cksn	CKSN_NOT_PRES
		kcv	KCV_12345678
		acc	ACC_CTRL_CLASS_0008
		imsi_struct	MOBILE_ID_IMSI_HPLMN
		tmsi_struct	MOBILE_ID_TMSI
		thplmn	TIME_HPLMN_VALID
		bcch_info	S_BCCH_INFO_EMPTY
		cell_test	CELL_TEST_DISABLE
		gprs_indication	NOT_USED
(2)	MPH_BSIC_CNF	arfcn	ARFCN_32
		bsic	BSIC_0
		cs	CS_NO_ERROR
(3)	MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED

(4) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(5) MPH_BSIC_REQ	arfcn	ARFCN_67
(6) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_2
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_2 S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_2 NOT_USED NOT_USED S_SI4_REST_EMPTY

## (10) MPH\_BSIC\_REQ

		arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01 06.03.03	MSE LG	adapted to TAP2 MUTE inserted, time changed

**3.15.15 RR622: Restart by MM for full service fails , unreadable SYS INFOS**

**Description:** PL detects a further BCCH carrier with unreadable SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR601

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_BSIC_CNF	
		*<=====*	
(3)		MPH_SYNC_REQ	
		*=====>*	
(4)		MPH_POWER_REQ	
		*=====>*	
(5)		MPH_POWER_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_ERROR_IND	
		*<=====*	
(9)		MPH_ERROR_IND	
		*<=====*	
(10)		MPH_ERROR_IND	
		*<=====*	
(11)		MPH_ERROR_IND	
		*<=====*	
(12)		MPH_ERROR_IND	
		*<=====*	
(13)		MPH_ERROR_IND	
		*<=====*	
(14)		MPH_ERROR_IND	
		*<=====*	
(15)		MPH_ERROR_IND	
		*<=====*	
(16)		MPH_ERROR_IND	
		*<=====*	
(17)		MPH_ERROR_IND	
		*<=====*	
(18)		MPH_ERROR_IND	
		*<=====*	
(19)		MPH_ERROR_IND	
		*<=====*	
(20)		MPH_ERROR_IND	
		*<=====*	
(21)		MPH_ERROR_IND	
		*<=====*	
(22)		MPH_ERROR_IND	
		*<=====*	
(23)		MPH_BSIC_REQ	
		*=====>*	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
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## (1) RR\_ACTIVATE\_REQ

plmn	PLMN_ID_123
op	OP_MODE_TEST_SIM
cksn	CKSN_NOT_PRES
kcv	KCV_12345678
acc	ACC_CTRL_CLASS_0008
imsi_struct	MOBILE_ID_IMSI_HPLMN
tmsi_struct	MOBILE_ID_TMSI
thplmn	TIME_HPLMN_VALID
bcch_info	S_BCCH_INFO_EMPTY
cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED

## (2) MPH\_BSIC\_CNF

arfcn	ARFCN_32
bsic	BSIC_0
cs	CS_NO_ERROR

(3) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(4) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(5) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(6) MPH_BSIC_REQ	arfcn	ARFCN_67
(7) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(8) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(9) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(10) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(11) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(12) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(13) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(14) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(15) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(16) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(17) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(18) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67

(19)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(20)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(21)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(22)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(23)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	17.04.00	DG	number of "MPH_ERROR_IND" increased from 3 to 15
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	05-Jun-01	MSE	adapted to TAP2

### 3.15.16 RR623: Restart by MM for full service fails, limited service available

**Description:** PL detects a BCCH carrier and RR listen to the BCCH messages. The cell has a wrong PLMN identification. The third cell is not available. RR selects the second cell for limited service.

**Preamble:** RR622

MM	RR	PL/DL
(1)	MPH_BSIC_CNF	
(2)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(3)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(4)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(5)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(6)	MPH_BSIC_REQ	
(7)	MPH_BSIC_CNF	
(8)	MPH_BSIC_REQ	
(9)	MPH_BSIC_CNF	
(10)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(12)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(13)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(14)	MPH_CLASSMARK_REQ	
(15)	MPH_IDLE_REQ	
(16)	MPH_CBCH_REQ	
(17)	MPH_NEIGHBOURCELL_REQ	
(18)	RR_ABORT_IND	
(19)	MPH_IDENTITY_REQ	

#### Parametrization

Primitive	Parameter	Value
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(1) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(2) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(3) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(4) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(5) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0

	loc_area_ident	LOC_AREA_IDENT_122_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(6) MPH_BSIC_REQ	arfcn	ARFCN_124
(7) MPH_BSIC_CNF	arfcn	ARFCN_124
	bsic	BSIC_0
	cs	CS_NO_BCCH_AVAIL
(8) MPH_BSIC_REQ	arfcn	ARFCN_32
(9) MPH_BSIC_CNF	arfcn	ARFCN_32
	bsic	BSIC_6
	cs	CS_NO_ERROR
(10) MPH_UNITDATA_IND	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(11) MPH_UNITDATA_IND	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(12) MPH_UNITDATA_IND	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748

	loc_area_ident	LOC_AREA_IDENT_122_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(13) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_122_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(14) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(15) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_LIMITED
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_7
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_FF
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(16) MPH_CBCH_REQ		
	cbch	NOT_USED
(17) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1
	sync_only	NOT_USED
(18) RR_ABORT_IND		
	op	OP_MODE_TEST_SIM_LIM_SERV
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	AS_PLMN
	lac_list	A_LAC_LIST1
	rxlevel	A_RXLEVEL_21
	power	NOT_USED

## (19) MPH\_IDENTITY\_REQ

		mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	12.02.01	DG	new: MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
25.02.03	LG	'lac_list' added in rr_abort_ind	

### 3.15.17 RR624: Restart by RR for full service is successful

**Description:** MM has requested a full service search and RR is in limited service. After timeout of the registration timer RR starts the full service search again. The search is successful and MM is informed.

**Preamble:** RR623

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(8)	MPH_SYNC_REQ	
	*=====>*	
(9)	MPH_IDLE_REQ	
	*=====>*	
(10)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(11)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(12)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(13)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(14)	MPH_CLASSMARK_REQ	
	*=====>*	
(15)	MPH_IDLE_REQ	
	*=====>*	
(16)	MPH_CBCH_REQ	
	*=====>*	
(17)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(18)	RR_ACTIVATE_IND	
	*<=====*	
(19)	MPH_IDENTITY_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(2) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_ERROR
(5) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
}		
(6) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
rach_ctrl	RACH_CTRL_1	
}		
(7) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
ctrl_chan_desc	CTRL_CHAN_DESC_1	
cell_opt_bcch	CELL_OPT_BCCH_1	

	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(8) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(9) MPH_IDLE_REQ	mod	MODE_CELL_RESELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_10
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_7
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_FF
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_PRESENT_8BIT
(10) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(11) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(12) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3

	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(13) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(14) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(15) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(16) MPH_CBCH_REQ		
	cbch	NOT_USED
(17) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(18) RR_ACTIVATE_IND		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147

		power	NOT_USED
		gprs_indication	GPRS_NO
(19) MPH_IDENTITY_REQ		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	07.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	MUTE/TIMEOUT inserted

### 3.15.18 RR625: Restart by RR for full Service fails, no BSIC

**Description:** In the preamble MM has requested full service. This fails and the limited service was indicated to MM. After 10 seconds RR starts a new registration attempt from limited service to full service. This fails, because the next carrier is no BCCH. Checking of the next carrier is started. After checking all BCCHs RR enters no service.

**Preamble:** RR623

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_BSIC_REQ	
	*=====>*	
(6)	MPH_BSIC_CNF	
	*<=====*	
(7)	MPH_BSIC_REQ	
	*=====>*	
(8)	MPH_BSIC_CNF	
	*<=====*	
(9)	MPH_SYNC_REQ	
	*=====>*	
(10)   RR_ABORT_IND		
	*<=====*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	NO_PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(5) MPH_BSIC_REQ	arfcn	ARFCN_32
(6) MPH_BSIC_CNF	arfcn	ARFCN_32

		bsic	BSIC_0
		cs	CS_NO_BCCH_AVAIL
(7) MPH_BSIC_REQ			
		arfcn	ARFCN_124
(8) MPH_BSIC_CNF			
		arfcn	ARFCN_124
		bsic	BSIC_0
		cs	CS_NO_BCCH_AVAIL
(9) MPH_SYNC_REQ			
		cs	
		CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(10) RR_ABORT_IND			
		op	OP_MODE_TEST_SIM_NO_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_AVAILABLE
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	NOT_USED
History:	04.07.97	DL	Initial
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	12.02.01	DG	new: MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted



		bsic	BSIC_0
		cs	CS_NO_ERROR
(7)	MPH_SYNC_REQ		
		cs	CS_STOP_BCCH_READING
(8)	MPH_BSIC_REQ		
		arfcn	ARFCN_124
(9)	MPH_BSIC_CNF		
		arfcn	ARFCN_124
		bsic	BSIC_0
		cs	CS_NO_BCCH_AVAIL
(10)	MPH_SYNC_REQ		
		cs	CS_STOP_PLMN_SEARCH
(11)	RR_ABORT_IND		
		op	OP_MODE_TEST_SIM_LIM_SERV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	ONE_PLMN_AVAILABLE
		plmn	AS_PLMN
		lac_list	A_LAC_LIST1
		rxlevel	A_RXLEVEL_21
		power	NOT_USED
History:	04.07.97	DL	Initial
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	12.02.01	DG	new: MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted

### 3.15.20 RR626: Restart by RR for full Service fails, insufficient SYS INFOS

**Description:** In the preamble MM has requested full service. This fails and the limited service was indicated to MM. After 10 seconds RR starts a new registration attempt from limited service to full service. This fails, because the checked carrier has insufficient SYS INFOS. Checking of the next carrier is started.

**Preamble:** RR623

```

      MM                                RR                                PL/DL
      |                                |                                |
MUTE (9000)                            |                                |
TIMEOUT (1000)                         |                                |
(1)  |                                | MPH_POWER_REQ                |
      |                                | *=====>*                  |
(2)  |                                | MPH_POWER_CNF                |
      |                                | *<=====*                  |
(3)  |                                | MPH_BSIC_REQ                 |
      |                                | *=====>*                  |
(4)  |                                | MPH_BSIC_CNF                |
      |                                | *<=====*                  |
(5)  |                                | MPH_UNITDATA_IND            |
      |                                | (SYS INFO TYPE 1)          |
      |                                | *<=====*                  |
(6)  |                                | MPH_UNITDATA_IND            |
      |                                | (SYS INFO TYPE 2)          |
      |                                | *<=====*                  |
MUTE (9000)                            |                                |
TIMEOUT (1000)                         |                                |
(7)  |                                | MPH_BSIC_REQ                 |
      |                                | *=====>*                  |
      |                                |                                |

```

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(2) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(5) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
direction	DOWNLINK	
pd	D_SYS_INFO_1	

		ti	TI_0
		cell_chan_desc	CELL_CHAN_DESC_1
		rach_ctrl	RACH_CTRL_1
		}	
(6)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_2
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_1
		ncc_permit	NCC_PERMITTED_1
		rach_ctrl	RACH_CTRL_1
		}	
(7)	MPH_BSIC_REQ		
		arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info
			added
	08.02.01	DG	si3_rest_oct: SI3_REST_DEF >
			SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	MUTE inserted, time changed

### 3.15.21 RR627: Restart by RR for full Service fails, unreadable SYS INFOS

**Description:** In the preamble MM has requested full service. This fails and the limited service was indicated to MM. After 10 seconds RR starts a new registration attempt from limited service to full service. This fails, because the checked carrier has unreadable SYS INFOS. Checking of the next carrier is started.

**Preamble:** RR623

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_ERROR_IND	
	*<=====*	
(6)	MPH_ERROR_IND	
	*<=====*	
(7)	MPH_ERROR_IND	
	*<=====*	
(8)	MPH_ERROR_IND	
	*<=====*	
(9)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	NO_PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(5) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(6) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67

(7) MPH_ERROR_IND		cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(8) MPH_ERROR_IND		cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(9) MPH_BSIC_REQ		arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	17.04.00	DG	number of "MPH_ERROR_IND" increased from 3 to 15
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	15.02.01	DG	number of "MPH_ERROR_IND" reduced from 15 to 4
	06.03.03	LG	MUTE inserted

## 3.16 Registration (No Service)

### 3.16.1 RR610: Restart by RR for limited Service, successful

**Description:** In the preamble MM has requested limited service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to limited service. This is successful. The limited mode is configured, MM is informed about limited service and RR enters the idle mode.

**Preamble:** RR603

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
(2)	MPH_POWER_CNF	
(3)	MPH_BSIC_REQ	
(4)	MPH_BSIC_CNF	
(5)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
(6)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
(7)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
(8)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
(9)	MPH_CLASSMARK_REQ	
(10)	MPH_IDLE_REQ	
(11)	MPH_CBCH_REQ	
(12)	MPH_NEIGHBOURCELL_REQ	
(13)	RR_ACTIVATE_IND	
(14)	MPH_IDENTITY_REQ	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan	CHANNELS_3

	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(3) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(4) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(5) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(6) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(7) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	

		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_4
		ti	TI_0
		loc_area_ident	LOC_AREA_IDENT_123_2147
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
		si4_rest_oct	S_SI4_REST_EMPTY
		}	
(9)	MPH_CLASSMARK_REQ		
		classmark	CLASS_MS
(10)	MPH_IDLE_REQ		
		mod	MODE_CELL_SELECTION
		arfcn	ARFCN_67
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_LIMITED
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLK_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_7
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_FF
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(11)	MPH_CBCH_REQ		
		cbch	NOT_USED
(12)	MPH_NEIGHBOURCELL_REQ		
		multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(13)	RR_ACTIVATE_IND		
		op	OP_MODE_EMPTY
		mm_info	MM_INFO_1
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(14)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	06.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_6
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF

31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1
12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
08.02.01	DG	RR_ACTIVATE_IND: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2
06.03.03	LG	MUTE inserted

### 3.16.2 RR611: Restart by RR for limited Service fails, no BSIC

**Description:** In the preamble MM has requested limited service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to limited service. This fails, because the next carrier is no BCCH. Checking of the next carrier is started.

**Preamble:** RR603

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(5) MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97 19.01.01  06.03.03	DL Initial DG MPH_BSIC_REQ: cell_type, timing_info added LG MUTE inserted

### 3.16.3 RR612: Restart by RR for limited Service fails, insufficient SYS INFOS

**Description:** In the preamble MM has requested limited service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to limited service. This fails, because the checked carrier has insufficient SYS INFOS. Checking of the next carrier is started.

**Preamble:** RR603

```

      MM                                RR                                PL/DL
      |                                |                                |
MUTE (9000)                            |                                |
TIMEOUT (1000)                         |                                |
(1)  |                                | MPH_POWER_REQ                |
      |                                | *=====>*                  |
(2)  |                                | MPH_POWER_CNF                |
      |                                | *<=====*                  |
(3)  |                                | MPH_BSIC_REQ                 |
      |                                | *=====>*                  |
(4)  |                                | MPH_BSIC_CNF                 |
      |                                | *<=====*                  |
(5)  |                                | MPH_UNITDATA_IND            |
      |                                | (SYS INFO TYPE 1)           |
      |                                | *<=====*                  |
(6)  |                                | MPH_UNITDATA_IND            |
      |                                | (SYS INFO TYPE 2)           |
      |                                | *<=====*                  |
(7)  |                                | MPH_UNITDATA_IND            |
      |                                | (SYS INFO TYPE 3)           |
      |                                | *<=====*                  |
MUTE (9000)                            |                                |
TIMEOUT (1000)                         |                                |
(8)  |                                | MPH_BSIC_REQ                 |
      |                                | *=====>*                  |
      |                                |                                |

```

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(5) MPH_UNITDATA_IND	arfcn fn sdu {	ARFCN_67 NOT_USED

		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_1
		ti	TI_0
		cell_chan_desc	CELL_CHAN_DESC_1
		rach_ctrl	RACH_CTRL_1
		}	
(6)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_2
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_1
		ncc_permit	NCC_PERMITTED_1
		rach_ctrl	RACH_CTRL_1
		}	
(7)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_3
		ti	TI_0
		cell_ident	CELL_IDENT_3748
		loc_area_ident	LOC_AREA_IDENT_123_2147
		ctrl_chan_desc	CTRL_CHAN_DESC_1
		cell_opt_bcch	CELL_OPT_BCCH_1
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		si3_rest_oct	S_SI3_REST_EMPTY
		}	
(8)	MPH_BSIC_REQ		
		arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info
			added
	08.02.01	DG	si3_rest_oct: SI3_REST_DEF >
			SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	MUTE inserted, time changed

**3.16.4 RR613: Restart by RR for limited Service fails, unreadable SYS INFOS**

**Description:** In the preamble MM has requested limited service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to limited service. This fails, because the checked carrier has unreadable SYS INFOS. Checking of the next carrier is started.

**Preamble:** RR603

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_ERROR_IND	
	*<=====*	
(6)	MPH_ERROR_IND	
	*<=====*	
(7)	MPH_ERROR_IND	
	*<=====*	
(8)	MPH_ERROR_IND	
	*<=====*	
(9)	MPH_ERROR_IND	
	*<=====*	
(10)	MPH_ERROR_IND	
	*<=====*	
(11)	MPH_ERROR_IND	
	*<=====*	
(12)	MPH_ERROR_IND	
	*<=====*	
(13)	MPH_ERROR_IND	
	*<=====*	
(14)	MPH_ERROR_IND	
	*<=====*	
(15)	MPH_ERROR_IND	
	*<=====*	
(16)	MPH_ERROR_IND	
	*<=====*	
(17)	MPH_ERROR_IND	
	*<=====*	
(18)	MPH_ERROR_IND	
	*<=====*	
(19)	MPH_ERROR_IND	
	*<=====*	
(20)	MPH_BSIC_REQ	
	*=====>*	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
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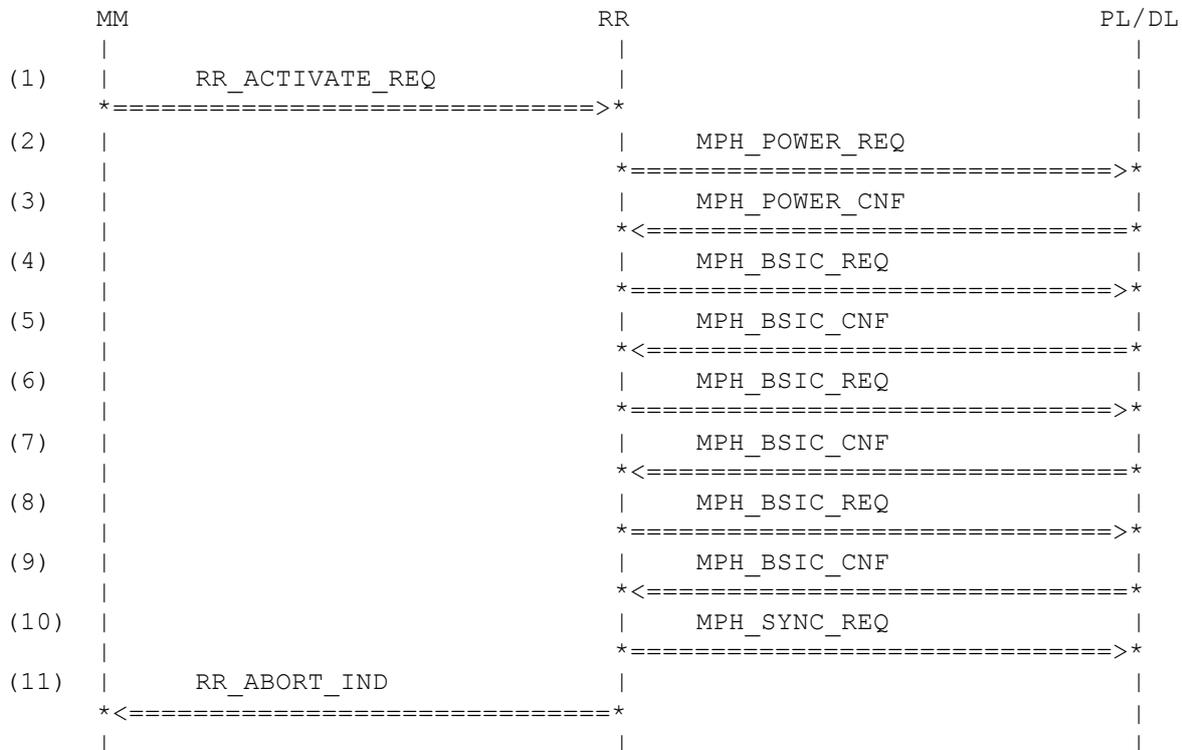
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_67
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(5) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(6) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(7) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(8) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(9) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(10) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(11) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(12) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(13) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(14) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(15) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(16) MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67

(17)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(18)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(19)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(20)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	18.04.00	DG	number of "MPH_ERROR_IND" increased from 3 to 15
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	06.03.03	LG	MUTE inserted

### 3.16.5 RR615: Restart by MM for limited service fails, no BSIC

**Description:** During no service condition MM starts a new attempt for limited service. PL detects no further BCCH carrier and RR enters the no service state.

**Preamble:** RR603



#### Parametrization

Primitive	Parameter	Value	
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY	
	op	OP_MODE_EMPTY	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_EMPTY	
	acc	ACC_CTRL_CLASS_0000	
	imsi_struct	MOBILE_ID_NOT_SET	
	tmsi_struct	MOBILE_ID_NOT_SET	
	thplmn	TIME_HPLMN_EMPTY	
	bcch_info	S_BCCH_INFO_EMPTY	
	cell_test	CELL_TEST_DISABLE	
	gprs_indication	NOT_USED	
	(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
	(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
arfcn		ARFCN_67_32_124	
rx_lev		RXLEV_22_21_20	
(4) MPH_BSIC_REQ	arfcn	ARFCN_67	

(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL	
(6) MPH_BSIC_REQ	arfcn	ARFCN_32	
(7) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL	
(8) MPH_BSIC_REQ	arfcn	ARFCN_124	
(9) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL	
(10) MPH_SYNC_REQ	cs		
	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE		
(11) RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_EMPTY_NO_SERV RRCS_ABORT_CEL_SEL_FAIL NO_PLMN_AVAILABLE NOT_USED NOT_USED NOT_USED NOT_USED	
History:	04.07.97 15.05.00 19.01.01  15.02.01 31.03.01 05-Jun-01 25.02.03	DL DG DG  DG VK MSE LG	Initial RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added all MPH_BSIC_REQ/CNF deleted 'power' added in rr_abort_ind adapted to TAP2 'lac_list' added in rr_abort_ind

### 3.16.6 RR628: Restart by MM for full service, successful, with bcch info

**Description:** MM starts a new attempt for full service. The request contains BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_32 shall be used. It is member of the BCCH information.

**Preamble:** RR615

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(10)		MPH_CLASSMARK_REQ	
		*=====>*	
(11)		MPH_IDLE_REQ	
		*=====>*	
(12)		MPH_CBCH_REQ	
		*=====>*	
(13)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(14)	RR_ACTIVATE_CNF		
	*<=====*		
(15)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ		
		plmn	PLMN_ID_123
		op	OP_MODE_TEST_SIM
		cksn	CKSN_NOT_PRES
		kcv	KCV_12345678
		acc	ACC_CTRL_CLASS_0008
		imsi_struct	MOBILE_ID_IMSI_HPLMN
		tmsi_struct	MOBILE_ID_TMSI
		thplmn	TIME_HPLMN_VALID
		bcch_info	S_BCCH_INFO_32

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_32
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1

	si3_rest_oct }	S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(10) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(11) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_32 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_23 PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_2 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_1 NOT_USED CONST_0 NOT_USED
(12) MPH_CBCH_REQ	cbch	NOT_USED
(13) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1 NOT_USED
(14) RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_TEST_SIM MM_INFO_2 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(15) MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI

History:	04.07.97	DL	Initial
	07.03.00	DG	MPH_POWER_REQ/_CNF, RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

### 3.16.7 RR629: Restart by MM for full service, successful, without bcch info

**Description:** MM starts a new attempt for full service. The request contains no BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_67 shall be used. It is the channel with the highest fieldstrength.

**Preamble:** RR615

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(10)		MPH_CLASSMARK_REQ	
		*=====>*	
(11)		MPH_IDLE_REQ	
		*=====>*	
(12)		MPH_CBCH_REQ	
		*=====>*	
(13)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(14)	RR_ACTIVATE_CNF		
	*<=====*		
(15)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(5) MPH_BSIC_CNF		
	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1

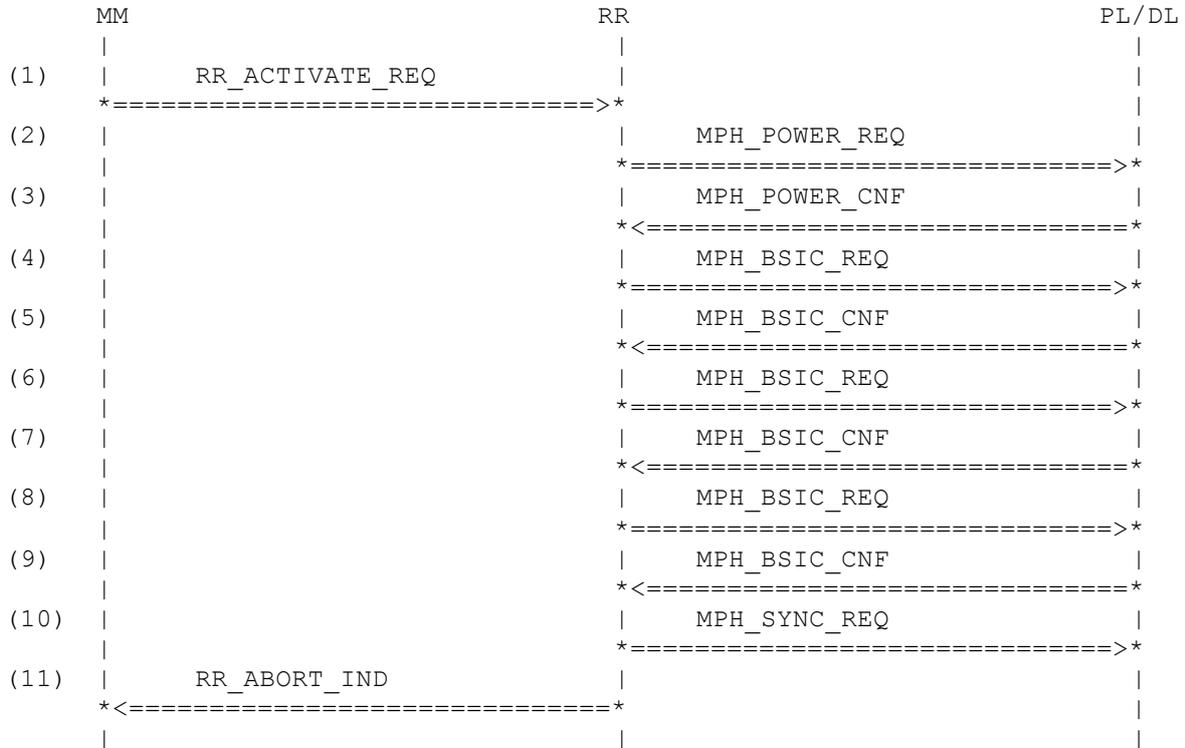
	rach_ctrl si3_rest_oct }	RACH_CTRL_1 S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(10) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(11) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_23 PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_2 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_1 NOT_USED CONST_0 NOT_USED
(12) MPH_CBCH_REQ	cbch	NOT_USED
(13) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1C NOT_USED
(14) RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_TEST_SIM MM_INFO_2 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(15) MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI

History:	04.07.97	DL	Initial deleted: (1) RR_ACTIVATE_REQ, (2) MPH_BSIC_REQ values changed: (1-5,7) ARFCN_67 > ARFCN_32, (7) DLT_23 > DLT_LIMITED, BS_PA_MFRMS_2 > BS_PA_MFRMS_7,  NCC_PERMITTED_1 > NCC_PERMITTED_FF
	03.04.00	DG	
	17.04.00	DG	(9) MPH_NCELL_1 > MPH_NCELL_1_LIM, added: (10) RR_SYNC_IND (11) OP_MODE_TEST_SIM > OP_MODE_EMPTY, NOT_USED > POW_01_DG_629 (12) MS_ID_IMSI_HPLMN_TMSI > MS_ID_NO_IMSI_NO_TMSI value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	31.05.00	DG	value changed: MPH_NEIGHBOURCELL_REQ: MPH_NCELL_1_LIM > MPH_NCELL_1
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

**3.16.8 RR630: Restart by MM for full service fails, no BSIC**

**Description:** PL detects no further BCCH carrier and RR enters the no service state.

**Preamble:** RR615



**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67

(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(6) MPH_BSIC_REQ	arfcn	ARFCN_32
(7) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(8) MPH_BSIC_REQ	arfcn	ARFCN_124
(9) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL
(10) MPH_SYNC_REQ	cs	
	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(11) RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_TEST_SIM_NO_SERV RRCS_ABORT_CEL_SEL_FAIL NO_PLMN_AVAILABLE NOT_USED NOT_USED NOT_USED NOT_USED

History:	04.07.97	DL	Initial
	07.03.00	DG	MPH_POWER_REQ/_CNF, values changed (6)/(7) <> (8)/(9)
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	16.02.01	DG	new: MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
25.02.03	LG	'lac_list' added in rr_abort_ind	

### 3.16.9 RR631: Restart by MM for full service fails, insufficient SYS INFOS

**Description:** PL detects a further BCCH carrier with insufficient SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR615

MM	RR	PL/DL
(1)		
RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
MUTE (9000)		
TIMEOUT (1000)		
(9)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67

(5)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(6)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_2
(7)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_2 S_SI3_REST_EMPTY
(8)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_2 NOT_USED NOT_USED S_SI4_REST_EMPTY
(9)	MPH_BSIC_REQ	arfcn	ARFCN_32

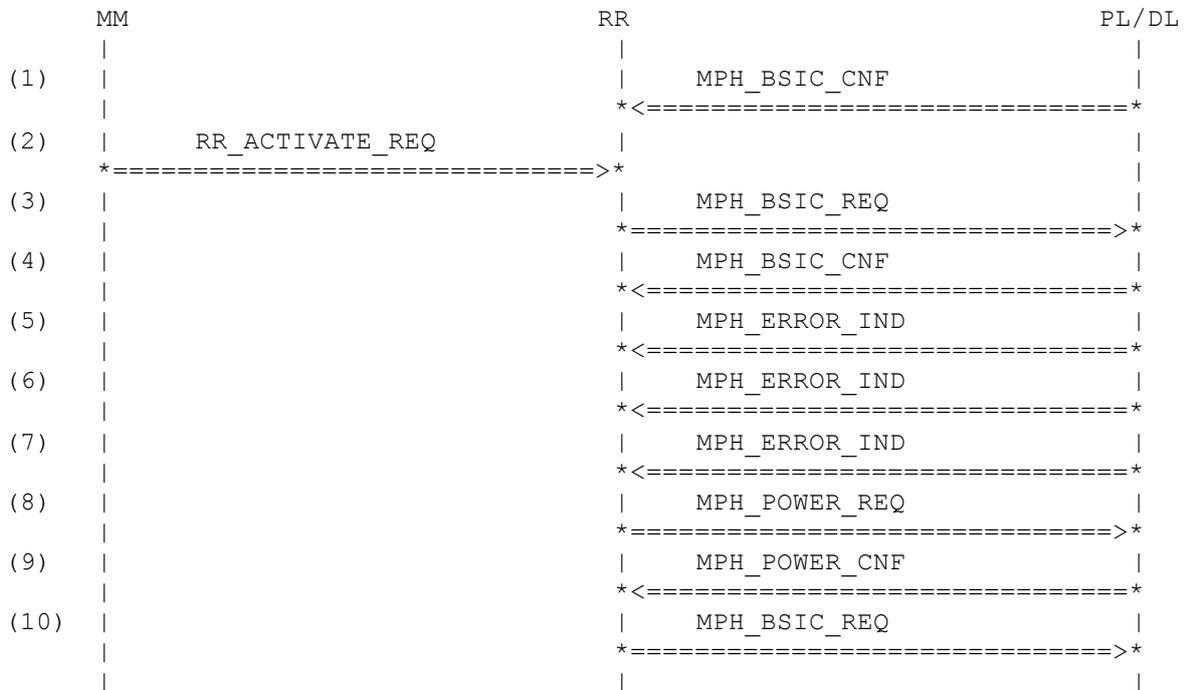
History:	04.07.97 07.03.00	DL DG	Initial MPH_POWER_REQ/_CNF, (9) value changed 124 > 20
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15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
19.01.01	DG	RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2
06.03.03	LG	MUTE inserted, time changed

**3.16.10 RR632: Restart by MM for full service fails, unreadable SYS INFOS**

**Description:** PL detects a further BCCH carrier with unreadable SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR613



**Parametrization**

Primitive	Parameter	Value
(1) MPH_BSIC_CNF	arfcn	ARFCN_124
	bsic	BSIC_6
	cs	CS_NO_BCCH_AVAIL
(2) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(3) MPH_BSIC_REQ	arfcn	ARFCN_124
(4) MPH_BSIC_CNF	arfcn	ARFCN_124
	bsic	BSIC_6
	cs	CS_NO_ERROR

(5)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(6)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(7)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(8)	MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(9)	MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(10)	MPH_BSIC_REQ	arfcn	ARFCN_67
History:	04.07.97 27.03.00	DL DG	Initial new: (1) MPH_BSIC_CNF (8)/(9) MPH_POWER_REQ/CNF values changed: (3)/(4) ARFCN_67>ARFCN_124 (10)ARFCN_124>ARFCN_67
	15.05.00 19.01.01	DG DG	RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added
	05-Jun-01	MSE	adapted to TAP2

### 3.16.11 RR633: Restart by RR for full service is successful

**Description:** MM has requested a full service search and RR is in no service. After timeout of the registration timer RR starts the full service search again. The search is successful and MM is informed.

**Preamble:** RR625

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(9)	MPH_CLASSMARK_REQ	
	*=====>*	
(10)	MPH_IDLE_REQ	
	*=====>*	
(11)	MPH_CBCH_REQ	
	*=====>*	
(12)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(13)	RR_ACTIVATE_IND	
	*<=====*	
(14)	MPH_IDENTITY_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_32

(4)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_5 CS_NO_ERROR
(5)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(6)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(7)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(8)	MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0

		loc_area_ident	LOC_AREA_IDENT_123_2147
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
		si4_rest_oct	S_SI4_REST_EMPTY
		}	
(9)	MPH_CLASSMARK_REQ	classmark	CLASS_MS
(10)	MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
		arfcn	ARFCN_32
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLK_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(11)	MPH_CBCH_REQ	cbch	NOT_USED
(12)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1E
		sync_only	NOT_USED
(13)	RR_ACTIVATE_IND	op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(14)	MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	07.03.00	DG	RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added

08.02.01	DG	RR_ACTIVATE_IND: gprs_indic added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2
06.03.03	LG	MUTE/TIMEOUT inserted

### 3.16.12 RR634: Restart by RR for full Service fails, no BSIC

**Description:** In the preamble MM has requested full service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to full service. This fails, because the next carrier is no BCCH. Checking of the next carrier is started.

**Preamble:** RR625

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT(1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_32
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(5) MPH_BSIC_REQ	arfcn	ARFCN_124
History:	04.07.97 08.03.00 19.01.01  06.03.03	DL DG DG  LG Initial (5) value changed (124 > 20) MPH_BSIC_REQ: cell_type, timing_info added MUTE inserted

### 3.16.13 RR635: Restart by RR for full Service fails, insufficient SYS INFOS

**Description:** In the preamble MM has requested full service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to full service. This fails, because the checked carrier has insufficient SYS INFOS. Checking of the next carrier is started.

**Preamble:** RR625

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
MUTE (9000)		
TIMEOUT (1000)		
(8)	MPH_BSIC_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3) MPH_BSIC_REQ	arfcn	ARFCN_32
(4) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(5) MPH_UNITDATA_IND	arfcn fn sdu {	ARFCN_67 NOT_USED

		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_1
		ti	TI_0
		cell_chan_desc	CELL_CHAN_DESC_1
		rach_ctrl	RACH_CTRL_1
		}	
(6)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_2
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_1
		ncc_permit	NCC_PERMITTED_1
		rach_ctrl	RACH_CTRL_1
		}	
(7)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_3
		ti	TI_0
		cell_ident	CELL_IDENT_3748
		loc_area_ident	LOC_AREA_IDENT_123_2147
		ctrl_chan_desc	CTRL_CHAN_DESC_1
		cell_opt_bcch	CELL_OPT_BCCH_1
		cell_select	CELL_SELECT_1
		rach_ctrl	RACH_CTRL_1
		si3_rest_oct	S_SI3_REST_EMPTY
		}	
(8)	MPH_BSIC_REQ		
		arfcn	ARFCN_124
History:	04.07.97	DL	Initial
	08.03.00	DG	(8) value changed (124 > 20)
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	si3_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2
	06.03.03	LG	MUTE/TIMEOUT inserted, time changed

**3.16.14 RR636: Restart by RR for full Service fails, unreadable SYS INFOS**

**Description:** In the preamble MM has requested full service. This fails and the no service was indicated to MM. After 10 seconds RR starts a new registration attempt from no service to full service. This fails, because the checked carrier has unreadable SYS INFOS. Checking of the next carrier is started.

**Preamble:** RR625

MM	RR	PL/DL
MUTE (9000)		
TIMEOUT (1000)		
(1)	MPH_POWER_REQ	
	*=====>*	
(2)	MPH_POWER_CNF	
	*<=====*	
(3)	MPH_BSIC_REQ	
	*=====>*	
(4)	MPH_BSIC_CNF	
	*<=====*	
(5)	MPH_ERROR_IND	
	*<=====*	
(6)	MPH_ERROR_IND	
	*<=====*	
(7)	MPH_ERROR_IND	
	*<=====*	
(8)	MPH_ERROR_IND	
	*<=====*	
(9)	MPH_ERROR_IND	
	*<=====*	
(10)	MPH_ERROR_IND	
	*<=====*	
(11)	MPH_ERROR_IND	
	*<=====*	
(12)	MPH_ERROR_IND	
	*<=====*	
(13)	MPH_ERROR_IND	
	*<=====*	
(14)	MPH_ERROR_IND	
	*<=====*	
(15)	MPH_ERROR_IND	
	*<=====*	
(16)	MPH_ERROR_IND	
	*<=====*	
(17)	MPH_ERROR_IND	
	*<=====*	
(18)	MPH_ERROR_IND	
	*<=====*	
(19)	MPH_ERROR_IND	
	*<=====*	
(20)	MPH_BSIC_REQ	
	*=====>*	

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
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(1)	MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(2)	MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(3)	MPH_BSIC_REQ	arfcn	ARFCN_32
(4)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(5)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(6)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(7)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(8)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(9)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(10)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(11)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(12)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(13)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(14)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(15)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(16)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32

(17)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(18)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(19)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(20)	MPH_BSIC_REQ	arfcn	ARFCN_124
History:	04.07.97	DL	Initial
	08.03.00	DG	(8) value changed (124 > 20)
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added
	06.03.03	LG	MUTE inserted

### 3.17 Registration (Full Service)

#### 3.17.1 RR637: Start by MM for full service, successful, with bcch info info (used as preamble only)

**Description:** MM starts an attempt for full service. The request contains BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_32 shall be used. It is member of the BCCH information.

All stored BCCH should be cleared at the end of this tc for appropriate use as preamble of RR642-RR650.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(10)   RR_SYNC_IND		
(BCCH info)		
*<=====*		
(11)	MPH_CLASSMARK_REQ	
	*=====>*	
(12)	MPH_IDLE_REQ	
	*=====>*	
(13)	MPH_CBCH_REQ	
	*=====>*	
(14)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(15)   RR_ACTIVATE_CNF		
*<=====*		
(16)	MPH_IDENTITY_REQ	
	*=====>*	
COMMAND (RR CONFIG CLEAR_BCCH_INFO)		

#### Parametrization

Primitive	Parameter	Value
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(1) RR_ACTIVATE_REQ	plmn op cksn kcv accn imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	PLMN_ID_123 OP_MODE_TEST_SIM CKSN_NOT_PRES KCV_12345678 ACC_CTRL_CLASS_0008 MOBILE_ID_IMSI_HPLMN MOBILE_ID_TMSI TIME_HPLMN_VALID S_BCCH_INFO_32 CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_32
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu	ARFCN_32 NOT_USED

	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(10) RR_SYNC_IND		
	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	S_BCCH_INFO_NCELL_DESC_1
	syncs	NOT_PRESENT_16BIT
	chm	NOT_USED
(11) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(12) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(13) MPH_CBCH_REQ		
	cbch	NOT_USED

(14)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1 NOT_USED
(15)	RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_TEST_SIM MM_INFO_2 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(16)	MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97 07.03.00 13.04.00  15.05.00 26.05.00  12.07.00  19.01.01  08.02.01  05-Jun-01	DL DG LE (DG)  DG DG  DG  DG  DG  SI3_REST_EMPTY MSE	Initial RR_SYNC_IND MPH_IDLE_REQ/ext_bcch: EXT_BCCCH_NOT_LIST > BSIC_5 RR_ACTIVATE_REQ: cell_test added values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057) RR_ACTIVATE_REQ: gprs_indic added MPH_BSIC_REQ: cell_type, timing_info added RR_ACTIVATE_CNF: gprs_indication  si3/4_rest_oct: SI3_REST_DEF > adapted to TAP2
added			

### 3.17.2 RR638: Restart by MM for full service, successful, without bcch info

**Description:** MM starts a new attempt for full service. The request contains no BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_67 shall be used. It is the channel with the highest fieldstrength.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(10)	MPH_CLASSMARK_REQ	
	*=====>*	
(11)	MPH_IDLE_REQ	
	*=====>*	
(12)	MPH_CBCH_REQ	
	*=====>*	
(13)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(14)   RR_ACTIVATE_CNF		
*<=====*		
(15)	MPH_IDENTITY_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	accv	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1

	rach_ctrl si3_rest_oct }	RACH_CTRL_1 S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(10) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(11) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_23 PG_0 BS_AG_BLKS_RES_5 BS_PA_MFRMS_2 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_1 NOT_USED CONST_0 NOT_USED
(12) MPH_CBCH_REQ	cbch	NOT_USED
(13) MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1C NOT_USED
(14) RR_ACTIVATE_CNF	op mm_info cid plmn lac power gprs_indication	OP_MODE_TEST_SIM MM_INFO_2 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(15) MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI

History:	04.07.97	DL	Initial
	07.03.00	DG	RR_SYNC_IND
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication
added			MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication
added			si3/4_rest_oct: SI3_REST_DEF >
	05-Jun-01	SI3_REST_EMPTY MSE	adapted to TAP2

### 3.17.3 RR639: Restart by MM for full service fails, no BSIC

**Description:** PL detects no further BCCH carrier and RR enters the no service state.

**Preamble:** RR000

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

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_BSIC_REQ	
	*=====>*	
(7)	MPH_BSIC_CNF	
	*<=====*	
(8)	MPH_BSIC_REQ	
	*=====>*	
(9)	MPH_BSIC_CNF	
	*<=====*	
(10)	MPH_SYNC_REQ	
	*=====>*	
(11)   RR_ABORT_IND		
*<=====*		
(12)   RR_ACTIVATE_REQ		
*=====>*		
(13)	MPH_POWER_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ		
<A>	plmn	PLMN_ID_123
<B>		op OP_MODE_TEST_SIM
		op OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	accc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3

	arfcn	ARFCN_67_32_124	
	rx_lev	RXLEV_22_21_20	
(4) MPH_BSIC_REQ			
	arfcn	ARFCN_67	
(5) MPH_BSIC_CNF			
	arfcn	ARFCN_67	
	bsic	BSIC_0	
	cs	CS_NO_BCCH_AVAIL	
(6) MPH_BSIC_REQ			
	arfcn	ARFCN_32	
(7) MPH_BSIC_CNF			
	arfcn	ARFCN_32	
	bsic	BSIC_0	
	cs	CS_NO_BCCH_AVAIL	
(8) MPH_BSIC_REQ			
	arfcn	ARFCN_124	
(9) MPH_BSIC_CNF			
	arfcn	ARFCN_124	
	bsic	BSIC_0	
	cs	CS_NO_BCCH_AVAIL	
(10) MPH_SYNC_REQ			
	cs		
	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE		
(11) RR_ABORT_IND			
<A>	op	OP_MODE_TEST_SIM_NO_SERV	
<B>	op	OP_MODE_NORMAL_NO_SERV	
	cause	RRCS_ABORT_CEL_SEL_FAIL	
	plmn_avail	NO_PLMN_AVAILABLE	
	plmn	NOT_USED	
	lac_list	NOT_USED	
	rxlevel	NOT_USED	
	power	NOT_USED	
(12) RR_ACTIVATE_REQ			
<A>	plmn	PLMN_ID_123	
<B>	op	OP_MODE_TEST_SIM	
	op	OP_MODE_NORMAL	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_12345678	
	acc	ACC_CTRL_CLASS_0008	
	imsi_struct	MOBILE_ID_IMSI_HPLMN	
	tmsi_struct	MOBILE_ID_TMSI	
	thplmn	TIME_HPLMN_VALID	
	bcch_info	S_BCCH_INFO_EMPTY	
	cell_test	CELL_TEST_DISABLE	
	gprs_indication	NOT_USED	
(13) MPH_POWER_REQ			
	pch_interrupt	PCH_INTERRUPT	
	freq_bands	NOT_USED	
History:	04.07.97	DL	Initial
	07.03.00	DG	ARFCN-values changed (6)/(7) <> (8)/(9)

15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_infoadded
31.01.01	DG	final MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) added
13.02.01	DG	final MPH_BSIC_REQ replaced by MPH_SYNC_REQ
31.03.01	VK	'power' added in rr_abort_ind
16-Nov-01	VK	Add variant B, add second RR_ACTIVATE_REQ
25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.17.4 RR640: Restart by MM for full service fails, insufficient SYS INFOS

**Description:** PL detects a BCCH carrier with insufficient SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
MUTE (9000)		
TIMEOUT (1000)		
(9)	MPH_BSIC_REQ	
	*=====>*	
(10)	MPH_BSIC_CNF	
	*<=====*	
(11)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(12)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(13)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(14)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(15)	MPH_BSIC_REQ	
	*=====>*	
(16)	MPH_BSIC_CNF	
	*<=====*	
(17)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(18)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(19)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	

```

(20) | | MPH_UNITDATA_IND |
      | | (SYS INFO TYPE 4) |
      | | *<===== |
(21) | | MPH_CLASSMARK_REQ |
      | | *=====> |
(22) | | MPH_IDLE_REQ |
      | | *=====> |
(23) | | MPH_CBCH_REQ |
      | | *=====> |
(24) | | MPH_NEIGHBOURCELL_REQ |
      | | *=====> |
(25) | | RR_ACTIVATE_CNF |
      | | *<===== |
(26) | | MPH_IDENTITY_REQ |
      | | *=====> |
      | | |
  
```

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1

	rach_ctrl }	RACH_CTRL_2
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_2 S_SI3_REST_EMPTY
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147 CELL_SELECT_1 RACH_CTRL_2 NOT_USED NOT_USED S_SI4_REST_EMPTY
(9) MPH_BSIC_REQ	arfcn	ARFCN_32
(10) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(11) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1

(12) MPH_UNITDATA_IND	<pre> arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl } </pre>	<pre> ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1 </pre>
(13) MPH_UNITDATA_IND	<pre> arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct } </pre>	<pre> ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY </pre>
(14) MPH_UNITDATA_IND	<pre> arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct } </pre>	<pre> ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY </pre>
(15) MPH_BSIC_REQ	<pre> arfcn </pre>	<pre> ARFCN_124 </pre>
(16) MPH_BSIC_CNF	<pre> arfcn bsic cs </pre>	<pre> ARFCN_124 BSIC_6 CS_NO_ERROR </pre>
(17) MPH_UNITDATA_IND	<pre> arfcn fn </pre>	<pre> ARFCN_124 NOT_USED </pre>

	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(18) MPH_UNITDATA_IND		
	arfcn	ARFCN_124
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_2
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(19) MPH_UNITDATA_IND		
	arfcn	ARFCN_124
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(20) MPH_UNITDATA_IND		
	arfcn	ARFCN_124
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	

(21) MPH_CLASSMARK_REQ		classmark	CLASS_MS
(22) MPH_IDLE_REQ		mod	MODE_CELL_SELECTION
		arfcn	ARFCN_124
		ext_bcch	NOT_USED
		comb_ccch	CCD_CCCH_1_NOT_COMB
		tn	TN_0
		dlt	DLT_23
		pg	PG_0
		bs_ag_blocks_res	BS_AG_BLKES_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(23) MPH_CBCH_REQ		cbch	NOT_USED
(24) MPH_NEIGHBOURCELL_REQ		multi_band	NOT_USED
		arfcn	A_MPH_NCELL_2
		sync_only	NOT_USED
(25) RR_ACTIVATE_CNF		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_1
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	RF_CLASS_4
		gprs_indication	GPRS_NO
(26) MPH_IDENTITY_REQ		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	23.05.00	DG	RR_ACTIVATE_REQ: cell_test added
			Values changed:
			(9)MPH_BSIC_REQ to
			(14)MPH_UNITDATA_IND:
			ARFCN124 > ARFCN20
			(18)-(20)MPH_UNITDATA_IND:
			NCELL_DESC_1 > NCELL_DESC_2,
			LOC_AREA_IDENT_122_2147 >
			LOC_AREA_IDENT_123_2147
			siX_rest_oct: NOT_USED >
			SIX_REST_DEF
			MPH_IDLE_REQ:
			EXT_BCCH_NOT_LIST > BSIC_6,
			DLT_LIMITED > DLT_23,
			BS_PA_MFRMS_7 >BS_PA_MFRMS_2;
			NCC_PERMITTED_FF >
NCC_PERMITTED_1			MPH_NEIGHBOURCELL_REQ:
			MPH_NCELL_1_LIM > MPH_NCELL_2
			MPH_IDENTITY_REQ:

			MS_ID_NO_IMSI_NO_TMSI > MS_ID_IMSI_HPLMN_TMSI new: RR_SYNC_IND, RR_ACTIVATE_CNF values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	26.05.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	12.07.00	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	19.01.01	DG	values changed: last bunch of Sysinfos3/4: SI3_REST_DEF ->
	30.01.01	DG	
SI3_REST_OPT_SEL_PAR	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added si3/4_rest_oct: SI3_REST_OPT_SEL_PAR
>			
	05-Jun-01	MSE	SI3_REST_EMPTY adapted to TAP2
	06.03.03	LG	MUTE/TIMEOUT inserted

**3.17.5 RR641: Restart by MM for full service fails, unreadable SYS INFOS**

**Description:** PL detects a BCCH carrier with unreadable SYS INFOS. The detection of the next carrier is started. At the end of the testcase RR enters the limited service.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1) RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_ERROR_IND	
	*<=====*	
(7)	MPH_ERROR_IND	
	*<=====*	
(8)	MPH_ERROR_IND	
	*<=====*	
(9)	MPH_ERROR_IND	
	*<=====*	
(10)	MPH_ERROR_IND	
	*<=====*	
(11)	MPH_ERROR_IND	
	*<=====*	
(12)	MPH_ERROR_IND	
	*<=====*	
(13)	MPH_ERROR_IND	
	*<=====*	
(14)	MPH_ERROR_IND	
	*<=====*	
(15)	MPH_ERROR_IND	
	*<=====*	
(16)	MPH_ERROR_IND	
	*<=====*	
(17)	MPH_ERROR_IND	
	*<=====*	
(18)	MPH_ERROR_IND	
	*<=====*	
(19)	MPH_ERROR_IND	
	*<=====*	
(20)	MPH_ERROR_IND	
	*<=====*	
(21)	MPH_BSIC_REQ	
	*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn op	PLMN_ID_123 OP_MODE_TEST_SIM

	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2)	MPH_POWER_REQ	
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3)	MPH_POWER_CNF	
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4)	MPH_BSIC_REQ	
	arfcn	ARFCN_67
(5)	MPH_BSIC_CNF	
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(6)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(7)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(8)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(9)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(10)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(11)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(12)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(13)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(14)	MPH_ERROR_IND	
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67

(15)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(16)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(17)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(18)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(19)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(20)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(21)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97	DL	Initial
	07.03.00	DG	value changed: (9) 124 > 20
	18.04.00	DG	number of "MPH_ERROR_IND" increased from 3 to 15
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	05-Jun-01	MSE	adapted to TAP2

### 3.17.6 RR642: Restart by MM for full service, successful, with bcch info

**Description:** MM starts a new attempt for full service. The request contains BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_32 shall be used. It is member of the BCCH information.

**Preamble:** RR637

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
	MUTE (9000)		
	TIMEOUT (1000)		
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(11)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(12)	RR_SYNC_IND		
	(BCCH Info)		
	*<=====*		
(13)		MPH_CLASSMARK_REQ	
		*=====>*	
(14)		MPH_IDLE_REQ	
		*=====>*	
(15)		MPH_CBCH_REQ	
		*=====>*	
(16)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(17)	RR_ACTIVATE_CNF		
	*<=====*		
(18)		MPH_IDENTITY_REQ	
		*=====>*	

#### Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn	PLMN_ID_122

	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_32
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_32
(5) MPH_BSIC_CNF		
	arfcn	ARFCN_32
	bsic	BSIC_5
	cs	CS_NO_ERROR
(6) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(7) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_ERROR
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1

	rach_ctrl }	RACH_CTRL_1
(10) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147_V CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(11) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_2147_V CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(12) RR_SYNC_IND	ciph mm_info bcch_info synccs chm	NOT_PRESENT_8BIT NOT_USED S_BCCH_INFO_NCELL_DESC_1 NOT_PRESENT_16BIT NOT_USED
(13) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(14) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted	MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_23 PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_2 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_1

		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(15)	MPH_CBCH_REQ	cbch	NOT_USED
(16)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(17)	RR_ACTIVATE_CNF	op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_122
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(18)	MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	16.05.00	DG	RR_ACTIVATE_REQ: cell_test added value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5 new: RR_SYNC_IND
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
added	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication
	30.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added values changed: Sysinfos3/4: SI3_REST_DEF -> SI3_REST_OPT_SEL_PAR
added	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication
	05-Jun-01	MSE	si3/4_rest_oct: SI3_REST_OPT_SEL_PAR > SI3_REST_EMPTY
	06.03.03	LG	adapted to TAP2 MUTE inserted, time changed

**3.17.7 RR643: Restart by MM for full service, successful, without bcch info**

**Description:** MM starts a new attempt for full service. The request contains no BCCH information from the SIM card. The attempt is successful. The channel ARFCN\_67 shall be used. It is the channel with the highest fieldstrength.

**Preamble:** RR637

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(7)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(10)	RR_SYNC_IND		
	(BCCH Info)		
	*<=====*		
(11)		MPH_CLASSMARK_REQ	
		*=====>*	
(12)		MPH_IDLE_REQ	
		*=====>*	
(13)		MPH_CBCH_REQ	
		*=====>*	
(14)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	
(15)	RR_ACTIVATE_CNF		
	*<=====*		
(16)		MPH_IDENTITY_REQ	
		*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_122
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	accb	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI

	thplmn bcch_info cell_test gprs_indication	TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147_V CTRL_CHAN_DESC_1

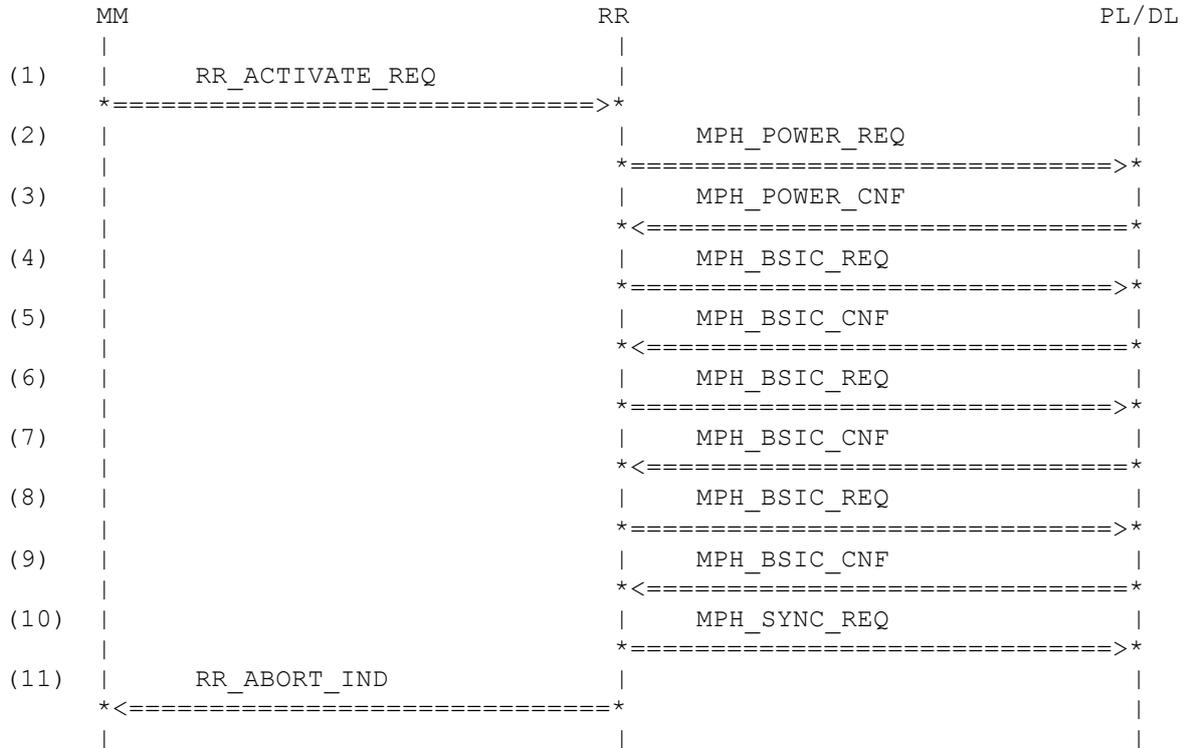
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_122_2147_V
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(10) RR_SYNC_IND		
	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	S_BCCH_INFO_NCELL_DESC_1
	syncchs	NOT_PRESENT_16BIT
	chm	NOT_USED
(11) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(12) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(13) MPH_CBCH_REQ		
	cbch	NOT_USED
(14) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(15) RR_ACTIVATE_CNF		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748

		plmn	PLMN_ID_122
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(16)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	23.03.00	DG	new:
			(2)/(3):MPH_POWER_REQ/CNF,
			(14) RR_SYNC_IND
	14.04.00	DG	value changed:
			MPH_IDLE_REQ/ext_bcch:
			EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ:
			class changed into classmark
			(Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication
added			
			MPH_BSIC_REQ: cell_type,
			timing_info added
	30.01.01	DG	values changed:
			Sysinfos3/4:
			SI3_REST_DEF ->
			SI3_REST_OPT_SEL_PAR
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication
added			
			si3/4_rest_oct:
			SI3_REST_OPT_SEL_PAR >
			SI3_REST_EMPTY
	05-Jun-01	MSE	adapted to TAP2

**3.17.8 RR644: Restart by MM for full service fails, no BSIC**

**Description:** PL detects no further BCCH carrier and RR enters the no service state.

**Preamble:** RR637



**Parametrization**

Primitive	Parameter	Value	
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_122	
	op	OP_MODE_TEST_SIM	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_12345678	
	acc	ACC_CTRL_CLASS_0008	
	imsi_struct	MOBILE_ID_IMSI_HPLMN	
	tmsi_struct	MOBILE_ID_TMSI	
	thplmn	TIME_HPLMN_VALID	
	bcch_info	S_BCCH_INFO_EMPTY	
	cell_test	CELL_TEST_DISABLE	
	gprs_indication	NOT_USED	
	(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3	
	arfcn	ARFCN_67_32_124	
	rx_lev	RXLEV_22_21_20	
(4) MPH_BSIC_REQ	arfcn	ARFCN_67	

(5)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(6)	MPH_BSIC_REQ	arfcn	ARFCN_32
(7)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(8)	MPH_BSIC_REQ	arfcn	ARFCN_124
(9)	MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL
(10)	MPH_SYNC_REQ	cs	
	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE		
(11)	RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_TEST_SIM_NO_SERV RRCS_ABORT_CEL_SEL_FAIL NO_PLMN_AVAILABLE NOT_USED NOT_USED NOT_USED NOT_USED
History:	04.07.97 23.03.00	DL DG	Initial new: (2)/(3)MPH_POWER_REQ/CNF values changed: (6)/(7) ARFCN_124>ARFCN_32, (8)/(9)ARFCN_32>ARFCN_124
	15.05.00 19.01.01	DG DG	RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	31.01.01	DG	final MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) added
	13.02.01	DG	final MPH_BSIC_REQ replaced by MPH_SYNC_REQ
	31.03.01 05-Jun-01 25.02.03	VK MSE LG	'power' added in rr_abort_ind adapted to TAP2 'lac_list' added in rr_abort_ind

**3.17.9 RR645: Restart by MM for full service fails, insufficient SYS INFOS**

**Description:** PL detects a further BCCH carrier with insufficient SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR637

MM	RR	PL/DL
(1)		
RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
MUTE (9000)		
TIMEOUT (1000)		
(9)	MPH_BSIC_REQ	
	*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_122
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67

(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_2
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_2 S_SI3_REST_EMPTY
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_2147 CELL_SELECT_1 RACH_CTRL_2 NOT_USED NOT_USED S_SI4_REST_EMPTY
(9) MPH_BSIC_REQ	arfcn	ARFCN_32

History:	04.07.97	DL	Initial
	23.03.00	DG	new: (2)/(3)MPH_POWER_REQ/CNF
			value changed: (9) ARFCN_124>ARFCN_32

15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
05-Jun-01	MSE	adapted to TAP2
06.03.03	LG	MUTE inserted, time changed

**3.17.10 RR646: Restart by MM for full service fails, unreadable SYS INFOS**

**Description:** PL detects a further BCCH carrier with unreadable SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR637

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_ERROR_IND	
		*<=====*	
(7)		MPH_ERROR_IND	
		*<=====*	
(8)		MPH_ERROR_IND	
		*<=====*	
(9)		MPH_ERROR_IND	
		*<=====*	
(10)		MPH_ERROR_IND	
		*<=====*	
(11)		MPH_ERROR_IND	
		*<=====*	
(12)		MPH_ERROR_IND	
		*<=====*	
(13)		MPH_ERROR_IND	
		*<=====*	
(14)		MPH_ERROR_IND	
		*<=====*	
(15)		MPH_ERROR_IND	
		*<=====*	
(16)		MPH_ERROR_IND	
		*<=====*	
(17)		MPH_ERROR_IND	
		*<=====*	
(18)		MPH_ERROR_IND	
		*<=====*	
(19)		MPH_ERROR_IND	
		*<=====*	
(20)		MPH_ERROR_IND	
		*<=====*	
(21)		MPH_BSIC_REQ	
		*=====>*	

**Parametrization**

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn	PLMN_ID_122
		op	OP_MODE_TEST_SIM
		cksn	CKSN_NOT_PRES

	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_leve	RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(5) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(6) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(7) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(8) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(9) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(10) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(11) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(12) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(13) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67
(14) MPH_ERROR_IND		
	cs	CS_BCCH_READ_ERROR
	arfcn	ARFCN_67

(15)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(16)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(17)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(18)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(19)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(20)	MPH_ERROR_IND	cs arfcn	CS_BCCH_READ_ERROR ARFCN_67
(21)	MPH_BSIC_REQ	arfcn	ARFCN_32
History:	04.07.97 23.03.00 18.04.00 15.05.00 19.01.01  05-Jun-01	DL DG DG DG DG  MSE	Initial new: (2)/(3)MPH_POWER_REQ/CNF value changed: (9) ARFCN_124>ARFCN_32 number of "MPH_ERROR_IND" increased from 3 to 15 RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added adapted to TAP2

### 3.17.11 RR647: Restart by MM for limited service, successful

**Description:** MM starts a new attempt for limited service during full service.

**Preamble:** RR637

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1) RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_BSIC_REQ	
	*=====>*	
(7)	MPH_BSIC_CNF	
	*<=====*	
(8)	MPH_UNITDATA_IND (SYS INFO TYPE 1)	
	*<=====*	
(9)	MPH_UNITDATA_IND (SYS INFO TYPE 2)	
	*<=====*	
(10)	MPH_UNITDATA_IND (SYS INFO TYPE 3)	
	*<=====*	
(11)	MPH_UNITDATA_IND (SYS INFO TYPE 4)	
	*<=====*	
(12)	MPH_CLASSMARK_REQ	
	*=====>*	
(13)	MPH_IDLE_REQ	
	*=====>*	
(14)	MPH_CBCH_REQ	
	*=====>*	
(15)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(16) RR_ACTIVATE_CNF		
*<=====*		
(17)	MPH_IDENTITY_REQ	
	*=====>*	

#### Parametrization

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY
	op	OP_MODE_EMPTY
	cksn	CKSN_NOT_PRES
	kcv	KCV_EMPTY
	acc	ACC_CTRL_CLASS_0000
	imsi_struct	MOBILE_ID_NOT_SET
	tmsi_struct	MOBILE_ID_NOT_SET

	thplmn	TIME_HPLMN_EMPTY
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(5) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_BCCH_AVAIL
(6) MPH_BSIC_REQ		
	arfcn	ARFCN_32
(7) MPH_BSIC_CNF		
	arfcn	ARFCN_32
	bsic	BSIC_5
	cs	CS_NO_ERROR
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(10) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	

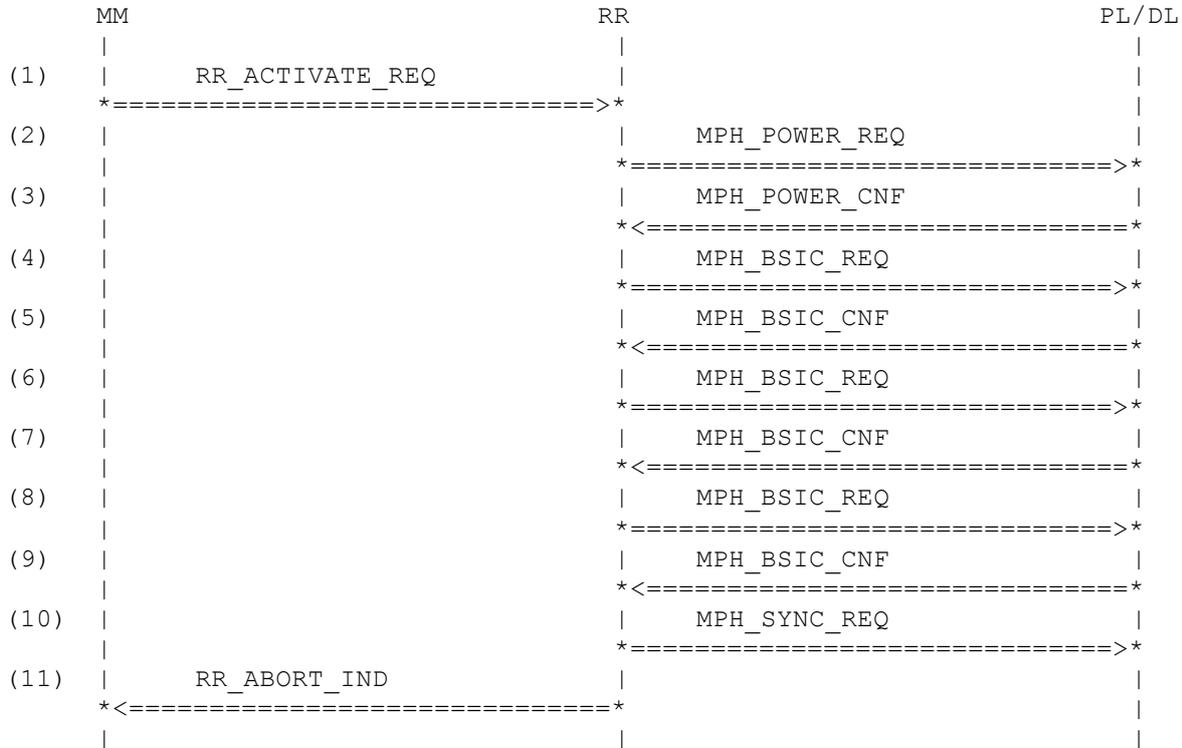
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(11) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(12) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(13) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_32
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_LIMITED
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_7
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_FF
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(14) MPH_CBCH_REQ		
	cbch	NOT_USED
(15) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1
	sync_only	NOT_USED
(16) RR_ACTIVATE_CNF		
	op	OP_MODE_EMPTY
	mm_info	MM_INFO_2

		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(17)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_NO_IMSI_NO_TMSI
History:	04.07.97	DL	Initial
	24.03.00	DG	values changed: (2)/(3) ARFCN_32 > ARFCN_67, (4) NOT_PRESENT_16BIT > ARFCN_32 new: (5)/(6) MPH_BSIC_CNF/REQ,
		(11) RR_SYNC_IND	
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	16.05.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	05.06.00	DG	TIMEOUT added MPH_NEIGHBOURCELL_REQ: value changed: MPH_NCELL_1_LIM > MPH_NCELL_EMPTY
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_CNF: gprs_indication added
	19.02.01	DG	
		(6) MPH_BSIC_REQ(NOT_PRESENT_16BIT)	
	05-Jun-01	MSE	replaced by MPH_SYNC_REQ adapted to TAP2

**3.17.12 RR648: Restart by MM for limited service fails, no BSIC**

**Description:** PL detects no further BCCH carrier and RR enters the no service state. is buggy

**Preamble:** RR637



**Parametrization**

Primitive	Parameter	Value	
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY	
	op	OP_MODE_EMPTY	
	cksn	CKSN_NOT_PRES	
	kcv	KCV_EMPTY	
	acc	ACC_CTRL_CLASS_0000	
	imsi_struct	MOBILE_ID_NOT_SET	
	tmsi_struct	MOBILE_ID_NOT_SET	
	thplmn	TIME_HPLMN_EMPTY	
	bcch_info	S_BCCH_INFO_EMPTY	
	cell_test	CELL_TEST_DISABLE	
	gprs_indication	NOT_USED	
	(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3	
	arfcn	ARFCN_67_32_124	
	rx_lev	RXLEV_22_21_20	
(4) MPH_BSIC_REQ	arfcn	ARFCN_67	

(5) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_67 BSIC_0 CS_NO_BCCH_AVAIL
(6) MPH_BSIC_REQ		arfcn	ARFCN_32
(7) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_BCCH_AVAIL
(8) MPH_BSIC_REQ		arfcn	ARFCN_124
(9) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_BCCH_AVAIL
(10) MPH_SYNC_REQ		cs	
		CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(11) RR_ABORT_IND		op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_EMPTY_NO_SERV RRCS_ABORT_CEL_SEL_FAIL NO_PLMN_AVAILABLE NOT_USED NOT_USED NOT_USED NOT_USED
History:	04.07.97 08.03.00  15.05.00 19.01.01  31.01.01  13.02.01  31.03.01 05-Jun-01 25.02.03	DL DG  DG DG  DG  DG  VK MSE LG	Initial values changed: (2)/(3) ARFCN_32 > ARFCN_67 (4)/(5) ARFCN_67 > ARFCN_32 RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added final MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) added final MPH_BSIC_REQ replaced by MPH_SYNC_REQ 'power' added in rr_abort_ind adapted to TAP2 'lac_list' added in rr_abort_ind

### 3.17.13 RR649: Restart by MM for limited service fails, insufficient SYS INFOS

**Description:** PL detects a further BCCH carrier with insufficient SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR637

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
	MUTE (9000)		
	TIMEOUT (1000)		
(11)		MPH_BSIC_REQ	
		*=====>*	

#### Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn	PLMN_ID_EMPTY
		op	OP_MODE_EMPTY
		cksn	CKSN_NOT_PRES
		kcv	KCV_EMPTY
		acc	ACC_CTRL_CLASS_0000
		imsi_struct	MOBILE_ID_NOT_SET
		tmsi_struct	MOBILE_ID_NOT_SET
		thplmn	TIME_HPLMN_EMPTY
		bcch_info	S_BCCH_INFO_EMPTY
		cell_test	CELL_TEST_DISABLE
		gprs_indication	NOT_USED
(2)	MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
(3)	MPH_POWER_CNF	num_of_chan	CHANNELS_3

	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(5) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_BCCH_AVAIL
(6) MPH_BSIC_REQ		
	arfcn	ARFCN_32
(7) MPH_BSIC_CNF		
	arfcn	ARFCN_32
	bsic	BSIC_6
	cs	CS_NO_ERROR
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_2
	}	
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_2
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(10) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1

		rach_ctrl	RACH_CTRL_2
		chan_desc	NOT_USED
		mob_alloc	NOT_USED
		si4_rest_oct	S_SI4_REST_EMPTY
		}	
(11)	MPH_BSIC_REQ		
		arfcn	ARFCN_124
History:	04.07.97	DL	Initial
	08.03.00	DG	values changed: (2)/(3) ARFCN_32 > ARFCN_67 (4)/(5) ARFCN_67 > ARFCN_32 (9) ARFCN_124 > NOT_PRESENT_16BIT
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	15.02.01	DG	sysinfos: ARFCN_67 > ARFCN_32, last
	MPH_BSIC_REQ/NOT_PRESENT_16BIT		
	05-Jun-01	MSE	replaced by MPH_SYNC_REQ
	06.03.03	LG	adapted to TAP2 MUTE/TIMEOUT inserted

### 3.17.14 RR650: Restart by MM for limited service fails, unreadable SYS INFOS

**Description:** PL detects a further BCCH carrier with unreadable SYS INFOS. The detection of the next carrier is started.

**Preamble:** RR637

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_ERROR_IND	
		*<=====*	
(9)		MPH_ERROR_IND	
		*<=====*	
(10)		MPH_ERROR_IND	
		*<=====*	
MUTE (9000)			
TIMEOUT (1000)			
(11)		MPH_BSIC_REQ	
		*=====>*	

#### Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	RR_ACTIVATE_REQ	plmn op cksn kcv acc imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	PLMN_ID_EMPTY OP_MODE_EMPTY CKSN_NOT_PRES KCV_EMPTY ACC_CTRL_CLASS_0000 MOBILE_ID_NOT_SET MOBILE_ID_NOT_SET TIME_HPLMN_EMPTY S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(2)	MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3)	MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20

(4) MPH_BSIC_REQ		arfcn	ARFCN_67
(5) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_BCCH_AVAIL
(6) MPH_BSIC_REQ		arfcn	ARFCN_32
(7) MPH_BSIC_CNF		arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_ERROR
(8) MPH_ERROR_IND		cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(9) MPH_ERROR_IND		cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(10) MPH_ERROR_IND		cs arfcn	CS_BCCH_READ_ERROR ARFCN_32
(11) MPH_BSIC_REQ		arfcn	ARFCN_124
History:	04.07.97 08.03.00	DL DG	Initial values changed: (2)/(3) ARFCN_32 > ARFCN_67 (4)/(5) ARFCN_67 > ARFCN_32 (9) ARFCN_124 > NOT_PRESENT_16BIT
	15.05.00 19.01.01	DG DG	RR_ACTIVATE_REQ: cell_test added RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	14.02.01	DG	final MPH_BSIC_REQ (NOT_PRESENT_16BIT) replaced by MPH_SYNC_REQ
	05-Jun-01 06.03.03	MSE LG	adapted to TAP2 MUTE inserted

### 3.18 Registration (Network Search)

#### 3.18.1 RR657: No Service, Network Search requested by MMI, no PLMNs

**Description:** PL searches for the available PLMNs. It will not detect any PLMN. After time-out of the registration timer a new attempt for full service shall be started by RR.

**Preamble:** RR630

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_BSIC_REQ	
		*=====>*	
(9)		MPH_BSIC_CNF	
		*<=====*	
(10)		MPH_SYNC_REQ	
		*=====>*	
(11)	RR_ABORT_IND		
	*<=====*		
	MUTE (9000)		
	TIMEOUT (1000)		
(12)		MPH_POWER_REQ	
		*=====>*	
(13)		MPH_POWER_CNF	
		*<=====*	
(14)		MPH_BSIC_REQ	
		*=====>*	
(15)		MPH_BSIC_CNF	
		*<=====*	
(16)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(17)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(18)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(19)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(20)		MPH_CLASSMARK_REQ	
		*=====>*	
(21)		MPH_IDLE_REQ	



(10)	MPH_SYNC_REQ		
		cs	
	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE		
(11)	RR_ABORT_IND		
		op	OP_MODE_NET_SRCH_MMI_NO_SRV
		cause	RRCS_ABORT_CEL_SEL_FAIL
		plmn_avail	NO_PLMN_AVAILABLE
		plmn	NOT_USED
		lac_list	NOT_USED
		rxlevel	NOT_USED
		power	NOT_USED
(12)	MPH_POWER_REQ		
		pch_interrupt	PCH_INTERRUPT
		freq_bands	NOT_USED
(13)	MPH_POWER_CNF		
		num_of_chan	CHANNELS_3
		arfcn	ARFCN_67_32_124
		rxlev	RXLEV_22_21_20
(14)	MPH_BSIC_REQ		
		arfcn	ARFCN_67
(15)	MPH_BSIC_CNF		
		arfcn	ARFCN_67
		bsic	BSIC_5
		cs	CS_NO_ERROR
(16)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_1
		ti	TI_0
		cell_chan_desc	CELL_CHAN_DESC_1
		rach_ctrl	RACH_CTRL_1
		}	
(17)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR
		direction	DOWNLINK
		pd	D_SYS_INFO_2
		ti	TI_0
		neigh_cell_desc	NCELL_DESC_1
		ncc_permit	NCC_PERMITTED_1
		rach_ctrl	RACH_CTRL_1
		}	
(18)	MPH_UNITDATA_IND		
		arfcn	ARFCN_67
		fn	NOT_USED
		sdu	

	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(19) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(20) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(21) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(22) MPH_CBCH_REQ		
	cbch	NOT_USED
(23) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(24) RR_ACTIVATE_IND		
	op	OP_MODE_TEST_SIM

		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(25)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	13.03.00	DG	values changed: (6)/(7) ARFCN_124 > ARFCN_32 (8)/(9) ARFCN_32 > ARFCN_124 new: RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	16.02.01	DG	new: MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted

### 3.18.2 RR658: No Service, Network Search requested by MMI, one PLMN

**Description:** PL searches for the available PLMNs. It will detect one PLMN. After time-out of the registration timer a new attempt for full service shall be started by RR.

**Preamble:** RR630

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_BSIC_REQ	
		*=====>*	
(9)		MPH_BSIC_CNF	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(11)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(12)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(13)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(14)		MPH_SYNC_REQ	
		*=====>*	
(15)	RR_ABORT_IND		
	*<=====*		
	MUTE (9000)		
	TIMEOUT(1000)		
(16)		MPH_POWER_REQ	
		*=====>*	
(17)		MPH_POWER_CNF	
		*<=====*	
(18)		MPH_BSIC_REQ	
		*=====>*	
(19)		MPH_BSIC_CNF	
		*<=====*	
(20)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(21)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(22)		MPH_UNITDATA_IND	



(8) MPH_BSIC_REQ	arfcn	ARFCN_124
(9) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_ERROR
(10) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(11) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(12) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(13) MPH_UNITDATA_IND	arfcn fn sdu { component direction	ARFCN_124 NOT_USED  RR DOWNLINK

	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_122_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(14) MPH_SYNC_REQ		
	cs	
	CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(15) RR_ABORT_IND		
	op	OP_MODE_NET_SRCH_MMI_NO_SRV
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	A_LAC_LIST1
	rxlevel	NOT_USED
	power	NOT_USED
(16) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(17) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(18) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(19) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_ERROR
(20) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(21) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2

	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(22) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(23) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(24) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(25) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED

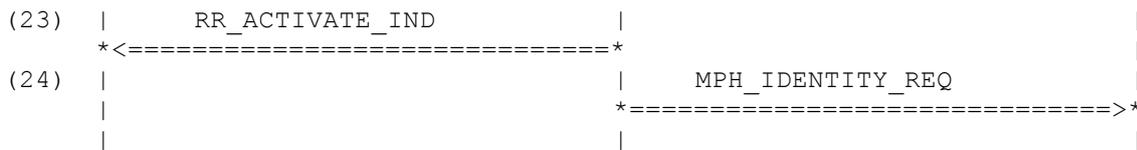
(26)	MPH_CBCH_REQ	cbch	NOT_USED
(27)	MPH_NEIGHBOURCELL_REQ	multi_band arfcn sync_only	NOT_USED A_MPH_NCELL_1C NOT_USED
(28)	RR_ACTIVATE_IND	op mm_info cid plmn lac power gprs_indication	OP_MODE_TEST_SIM MM_INFO_2 CELL_IDENT_3748 PLMN_ID_123 LAC_2147 NOT_USED GPRS_NO
(29)	MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97 13.03.00	DL DG	Initial values changed: (6)/(7) ARFCN_124 > ARFCN_32 (8)/(9) ARFCN_32 > ARFCN_124 (15) ONE_PLMN_AVAILABLE > NO_PLMN_AVAILABLE, PLMN_122_FOUND > NOT_USED RXLEVEL_20 > NOT_USED new: RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00 26.05.00	DG DG	RR_ACTIVATE_REQ: cell_test added values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	16.02.01	DG	MPH_BSIC_REQ/NOT_PRESENT_16BIT replaced by MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted

### 3.18.3 RR661: Limited Service, Network Search requested by MMI, no PLMNs

**Description:** PL searches for the available PLMNs. It will not detect any PLMN. After time-out of the registration timer a new attempt for full service shall be started by RR.

**Preamble:** RR627

	MM	RR	PL/DL
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)		MPH_BSIC_REQ	
		*=====>*	
(5)		MPH_BSIC_CNF	
		*<=====*	
(6)		MPH_SYNC_REQ	
		*=====>*	
(7)	RR_ABORT_IND		
	*<=====*		
	MUTE (9000)		
	TIMEOUT(1000)		
(8)		MPH_POWER_REQ	
		*=====>*	
(9)		MPH_POWER_CNF	
		*<=====*	
(10)		MPH_BSIC_REQ	
		*=====>*	
(11)		MPH_BSIC_CNF	
		*<=====*	
(12)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(13)		MPH_SYNC_REQ	
		*=====>*	
(14)		MPH_IDLE_REQ	
		*=====>*	
(15)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(16)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(17)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(18)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(19)		MPH_CLASSMARK_REQ	
		*=====>*	
(20)		MPH_IDLE_REQ	
		*=====>*	
(21)		MPH_CBCH_REQ	
		*=====>*	
(22)		MPH_NEIGHBOURCELL_REQ	
		*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	NOT_USED
	op	OP_MODE_NET_SRCH_MMI_NO_SRV
	cksn	NOT_USED
	kcv	NOT_USED
	accc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(2) MPH_POWER_REQ	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) MPH_BSIC_REQ	arfcn	ARFCN_67
(5) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_BCCH_AVAIL
(6) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(7) RR_ABORT_IND	op	OP_MODE_NET_SRCH_MMI_LIM_SRV
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	A_LAC_LIST1
	rxlevel	NOT_USED
	power	NOT_USED
(8) MPH_POWER_REQ	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(9) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(10) MPH_BSIC_REQ	arfcn	ARFCN_67

(11) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(12) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(13) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(14) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_RESELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_10 PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_7 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_FF NOT_USED CONST_0 NOT_USED
(15) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(16) MPH_UNITDATA_IND	arfcn fn sdu {	ARFCN_67 NOT_USED

	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(17) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(18) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(19) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(20) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1

		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(21)	MPH_CBCH_REQ		
		cbch	NOT_USED
(22)	MPH_NEIGHBOURCELL_REQ		
		multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(23)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
(24)	MPH_IDENTITY_REQ		
		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	13.03.00	DG	(6)/(7) ARFCN_124 > ARFCN_32 (8)/(9) ARFCN_32 > ARFCN_124 new: RR_SYNC_IND
	17.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	15.02.01:	DG	(8)/(9)MPH_BSIC_REQ/CNF/124 deleted, new:MPH_SYNC_REQ
	19.02.01:	DG	(9)RR_ABORT_IND: NO_PLMN_AVAIL > ONE_PLMN_AVAIL
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted

### 3.18.4 RR662: Limited Service, Network Search requested by MMI, one PLMN

**Description:** PL searches for the available PLMNs. It will detect one PLMN. After time-out of the registration timer a new attempt for full service shall be started by RR.

**Preamble:** RR627

	MM	RR	PL/DL
(1)		MPH_BSIC_CNF	
		*<=====*	
(2)		MPH_SYNC_REQ	
		*=====>*	
(3)		MPH_BSIC_REQ	
		*=====>*	
(4)		MPH_BSIC_CNF	
		*<=====*	
(5)		MPH_SYNC_REQ	
		*=====>*	
(6)	RR_ABORT_IND		
	*<=====*		
(7)	RR_ACTIVATE_REQ		
	*=====>*		
(8)		MPH_POWER_REQ	
		*=====>*	
(9)		MPH_POWER_CNF	
		*<=====*	
(10)		MPH_BSIC_REQ	
		*=====>*	
(11)		MPH_BSIC_CNF	
		*<=====*	
(12)		MPH_SYNC_REQ	
		*=====>*	
(13)	RR_ABORT_IND		
	*<=====*		
	MUTE (9000)		
	TIMEOUT (1000)		
(14)		MPH_POWER_REQ	
		*=====>*	
(15)		MPH_POWER_CNF	
		*<=====*	
(16)		MPH_BSIC_REQ	
		*=====>*	
(17)		MPH_BSIC_CNF	
		*<=====*	
(18)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(19)		MPH_SYNC_REQ	
		*=====>*	
(20)		MPH_IDLE_REQ	
		*=====>*	
(21)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(22)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(23)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	

```

(24) | | *<=====
| | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 4) |
| | | *<=====
(25) | | | MPH_CLASSMARK_REQ |
| | | *=====
(26) | | | MPH_IDLE_REQ |
| | | *=====
(27) | | | MPH_CBCH_REQ |
| | | *=====
(28) | | | MPH_NEIGHBOURCELL_REQ |
| | | *=====
(29) | | RR_ACTIVATE_IND |
| | *<=====
(30) | | | MPH_IDENTITY_REQ |
| | | *=====
| | |

```

**Parametrization**

Primitive	Parameter	Value
(1) MPH_BSIC_CNF	arfcn	ARFCN_32
	bsic	BSIC_6
	cs	CS_NO_ERROR
(2) MPH_SYNC_REQ	cs	CS_STOP_BCCH_READING
	arfcn	ARFCN_124
(4) MPH_BSIC_CNF	arfcn	ARFCN_124
	bsic	BSIC_6
	cs	CS_NO_BCCH_AVAIL
(5) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
	op	OP_MODE_TEST_SIM_LIM_SERV
(6) RR_ABORT_IND	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	A_LAC_LIST1
	rxlevel	NOT_USED
	power	NOT_USED
	plmn	NOT_USED
(7) RR_ACTIVATE_REQ	op	OP_MODE_NET_SRCH_MMI_NO_SRV
	cksn	NOT_USED
	kcv	NOT_USED
	acc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED

(8) MPH_POWER_REQ	pch_interrupt freq_bands	NO_PCH_INTERRUPT NOT_USED
(9) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(10) MPH_BSIC_REQ	arfcn	ARFCN_67
(11) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_BCCH_AVAIL
(12) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(13) RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_NET_SRCH_MMI_LIM_SRV RRCS_ABORT_CEL_SEL_FAIL ONE_PLMN_AVAILABLE AS_PLMN A_LAC_LIST1 NOT_USED NOT_USED
(14) MPH_POWER_REQ	pch_interrupt freq_bands	NO_PCH_INTERRUPT NOT_USED
(15) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(16) MPH_BSIC_REQ	arfcn	ARFCN_67
(17) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(18) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1

	si3_rest_oct }	NOT_USED
(19) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(20) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_RESELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_10 PG_0 BS_AG_BLK_RES_5 BS_PA_MFRMS_7 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_FF NOT_USED CONST_0 NOT_USED
(21) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TL_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(22) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TL_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(23) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TL_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147

	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	NOT_USED
	}	
(24) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	NOT_USED
	}	
(25) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(26) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(27) MPH_CBCH_REQ		
	cbch	NOT_USED
(28) MPH_NEIGHBOURCELL_REQ		
	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(29) RR_ACTIVATE_IND		
	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_2
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2147
	power	NOT_USED
	gprs_indication	GPRS_NO

## (30) MPH\_IDENTITY\_REQ

		mid	S_MS_ID_IMSI_HPLMN_TMSI
History:	04.07.97	DL	Initial
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	29.05.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5 values changed: (6)/(7): ARFCN_124>ARFCN_32 (8)/(9): ARFCN_32>ARFCN_124 (10)/(13): ARFCN_32>ARFCN_124 new: RR_SYNC_IND
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted

### 3.18.5 RR667: Full Service, Network Search requested by MMI, select PLMN

**Description:** PL searches for the available PLMNs. It will detect two PLMNs. It selects the non-serving cell network.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (RR CONFIG TIMER_SET=<TREG, 400>)		
(1)   RR_ACTIVATE_REQ		
*=====>*		
(2)	MPH_POWER_REQ	
	*=====>*	
(3)	MPH_POWER_CNF	
	*<=====*	
(4)	MPH_BSIC_REQ	
	*=====>*	
(5)	MPH_BSIC_CNF	
	*<=====*	
(6)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 1)	
	*<=====*	
(7)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 2)	
	*<=====*	
(8)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 3)	
	*<=====*	
(9)	MPH_UNITDATA_IND	
	(SYS INFO TYPE 4)	
	*<=====*	
(10)   RR_SYNC_IND		
(BCCH info)		
*<=====*		
(11)	MPH_CLASSMARK_REQ	
	*=====>*	
(12)	MPH_IDLE_REQ	
	*=====>*	
(13)	MPH_CBCH_REQ	
	*=====>*	
(14)	MPH_NEIGHBOURCELL_REQ	
	*=====>*	
(15)   RR_ACTIVATE_CNF		
*<=====*		
(16)	MPH_IDENTITY_REQ	
	*=====>*	
(17)   RR_ACTIVATE_REQ		
*=====>*		
(18)	MPH_POWER_REQ	
	*=====>*	
(19)	MPH_POWER_CNF	
	*<=====*	
(20)	MPH_BSIC_REQ	
	*=====>*	
(21)	MPH_BSIC_CNF	
	*<=====*	
(22)	MPH_SYNC_REQ	
	*=====>*	

```

(23) | | MPH_SYNC_REQ |
| | *=====>*
(24) | RR_ABORT_IND |
*<=====*
(25) | RR_ACTIVATE_REQ |
*=====>*
(26) | | MPH_POWER_REQ |
| | *=====>*
(27) | | MPH_POWER_CNF |
| | *<=====*
(28) | | MPH_BSIC_REQ |
| | *=====>*
(29) | | MPH_BSIC_CNF |
| | *<=====*
(30) | | MPH_BSIC_REQ |
| | *=====>*
(31) | | MPH_BSIC_CNF |
| | *<=====*
(32) | | MPH_UNITDATA_IND |
| | (SYS INFO TYPE 1) |
| | *<=====*
(33) | | MPH_UNITDATA_IND |
| | (SYS INFO TYPE 2) |
| | *<=====*
(34) | | MPH_UNITDATA_IND |
| | (SYS INFO TYPE 3) |
| | *<=====*
(35) | | MPH_UNITDATA_IND |
| | (SYS INFO TYPE 4) |
| | *<=====*
(36) | RR_SYNC_IND |
| | (BCCH info) |
| | *<=====*
(37) | | MPH_CLASSMARK_REQ |
| | *=====>*
(38) | | MPH_IDLE_REQ |
| | *=====>*
(39) | | MPH_CBCH_REQ |
| | *=====>*
(40) | | MPH_NEIGHBOURCELL_REQ |
| | *=====>*
(41) | RR_ACTIVATE_CNF |
| | *<=====*
| |

```

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123_V
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(2) MPH_POWER_REQ		
	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(3) MPH_POWER_CNF		
	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(4) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(5) MPH_BSIC_CNF		
	arfcn bsic cs	ARFCN_67 BSIC_5 CS_NO_ERROR
(6) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2147_V CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1

	<pre> rach_ctrl si3_rest_oct } </pre>	<pre> RACH_CTRL_1 S_SI3_REST_EMPTY </pre>
(9) MPH_UNITDATA_IND	<pre> arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct } </pre>	<pre> ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2147_V CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY </pre>
(10) RR_SYNC_IND	<pre> ciph mm_info bcch_info synccs chm </pre>	<pre> NOT_PRESENT_8BIT NOT_USED S_BCCH_INFO_NCELL_DESC_1 NOT_PRESENT_16BIT NOT_USED </pre>
(11) MPH_CLASSMARK_REQ	<pre> classmark </pre>	<pre> CLASS_MS </pre>
(12) MPH_IDLE_REQ	<pre> mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support </pre>	<pre> MODE_CELL_SELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 DLT_23 PG_0 BS_AG_BLKS_RES_5 BS_PA_MFRMS_2 MS_TXPWR_MAX_CCH_02 NCC_PERMITTED_1 NOT_USED CONST_0 NOT_USED </pre>
(13) MPH_CBCH_REQ	<pre> cbch </pre>	<pre> NOT_USED </pre>
(14) MPH_NEIGHBOURCELL_REQ	<pre> multi_band arfcn sync_only </pre>	<pre> NOT_USED A_MPH_NCELL_1C NOT_USED </pre>
(15) RR_ACTIVATE_CNF	<pre> op mm_info cid plmn lac </pre>	<pre> OP_MODE_TEST_SIM MM_INFO_2 CELL_IDENT_3748 PLMN_ID_123_V LAC_2147 </pre>

	power	NOT_USED
	gprs_indication	GPRS_NO
(16) MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
(17) RR_ACTIVATE_REQ	plmn	NOT_USED
	op	OP_MODE_NET_SRCH_MMI
	cksn	NOT_USED
	kcv	NOT_USED
	acc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(18) MPH_POWER_REQ	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(19) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(20) MPH_BSIC_REQ	arfcn	ARFCN_67
(21) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(22) MPH_SYNC_REQ	cs	CS_STOP_BCCH_READING
(23) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(24) RR_ABORT_IND	op	OP_MODE_NET_SRCH_MMI
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	A_LAC_LIST1
	rxlevel	NOT_USED
	power	NOT_USED
(25) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(26) MPH_POWER_REQ		
	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(27) MPH_POWER_CNF		
	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(28) MPH_BSIC_REQ		
	arfcn	ARFCN_32
(29) MPH_BSIC_CNF		
	arfcn bsic cs	ARFCN_32 BSIC_5 CS_NO_BCCH_AVAIL
(30) MPH_BSIC_REQ		
	arfcn	ARFCN_124
(31) MPH_BSIC_CNF		
	arfcn bsic cs	ARFCN_124 BSIC_5 CS_NO_ERROR
(32) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(33) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_1 NCC_PERMITTED_1 RACH_CTRL_1
(34) MPH_UNITDATA_IND		
	arfcn fn sdu { component direction	ARFCN_124 NOT_USED  RR DOWNLINK

	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(35) MPH_UNITDATA_IND		
	arfcn	ARFCN_124
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(36) RR_SYNC_IND	ciph	NOT_PRESENT_8BIT
	mm_info	NOT_USED
	bcch_info	S_BCCH_INFO_NCELL_DESC_1
	synccs	NOT_PRESENT_16BIT
	chm	NOT_USED
(37) MPH_CLASSMARK_REQ	classmark	CLASS_MS
(38) MPH_IDLE_REQ	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_124
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLK_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(39) MPH_CBCH_REQ	cbch	NOT_USED
(40) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1F
	sync_only	NOT_USED

## (41) RR\_ACTIVATE\_CNF

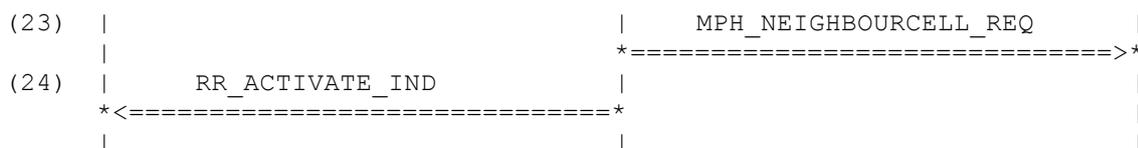
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_2
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2147
		power	NOT_USED
		gprs_indication	GPRS_NO
History:	15-Feb-00	LE	Initial
	14.04.00	DG	value changed: MPH_IDLE_REQ/ext_bcch: EXT_BCCH_NOT_LIST > BSIC_5
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
	17.05.00	DG	new: RR_SYNC_IND value changed: (23)MPH_BSIC_REQ: ARFCN_32>NOT_PRESENT_16BIT
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
added	08.02.01	DG	RR_ACTIVATE_CNF/IND: gprs_indication  si3/4_rest_oct: SI3_REST_DEF> SI3_REST_EMPTY
			note: has to be revised /DG 12.07.00
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.18.6 RR670: Network Search, interrupted by cell reselection

**Description:** PL searches for the available PLMNs. The network search is interrupted by a cell reselection. The reselection is delayed until the end of the network search.

**Preamble:** RR637

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(3)	RR_ACTIVATE_REQ		
	*=====>*		
(4)		MPH_POWER_REQ	
		*=====>*	
(5)		MPH_POWER_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_MEASUREMENT_IND	
		*<=====*	
(10)		MPH_MEASUREMENT_IND	
		*<=====*	
(11)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(12)		MPH_SYNC_REQ	
		*=====>*	
(13)	RR_ABORT_IND		
	*<=====*		
(14)		MPH_MEASUREMENT_IND	
		*<=====*	
(15)		MPH_IDLE_REQ	
		*=====>*	
(16)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(17)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(18)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(19)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(20)		MPH_CLASSMARK_REQ	
		*=====>*	
(21)		MPH_IDLE_REQ	
		*=====>*	
(22)		MPH_CBCH_REQ	
		*=====>*	

**Parametrization**

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_32
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_4
	gprs_sync	NOT_USED
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2148
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
}		
(3) RR_ACTIVATE_REQ	plmn	NOT_USED
	op	OP_MODE_NET_SRCH_MMI
	cksn	NOT_USED
	kcv	NOT_USED
	accc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
	(4) MPH_POWER_REQ	pch_interrupt
freq_bands		NOT_USED
(5) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20

(6) MPH_BSIC_REQ	arfcn	ARFCN_67
(7) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2148 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(9) MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_32 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_NCELLS_4 NOT_USED
(10) MPH_MEASUREMENT_IND	arfcn rx_lev_full rx_lev_sub rx_qual_full rx_qual_sub dtx otd valid fn_offset ncells gprs_sync	ARFCN_32 RX_LEV_20 RX_LEV_20 RX_QUAL_1 RX_QUAL_1 DTX_NOT_USED TIME_ADV_27 TRUE FN_OFFSET_1_SEC S_NCELLS_4 NOT_USED
(11) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2

	ti	TI_0
	neigh_cell_desc	NCELL_DESC_EMPTY
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(12) MPH_SYNC_REQ		
	cs	CS_STOP_PLMN_SEARCH
(13) RR_ABORT_IND		
	op	OP_MODE_NET_SRCH_MMI
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	A_LAC_LIST1
	rxlevel	NOT_USED
	power	NOT_USED
(14) MPH_MEASUREMENT_IND		
	arfcn	ARFCN_32
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_4
	gprs_sync	NOT_USED
(15) MPH_IDLE_REQ		
	mod	MODE_CELL_RESELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	NOT_USED
	pg	NOT_USED
	bs_ag_blocks_res	NOT_USED
	bs_pa_mfrms	NOT_USED
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NOT_USED
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(16) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	

(17) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_3
ti	TI_0
cell_ident	CELL_IDENT_3748
loc_area_ident	LOC_AREA_IDENT_123_2148
ctrl_chan_desc	CTRL_CHAN_DESC_1
cell_opt_bcch	CELL_OPT_BCCH_1
cell_select	CELL_SELECT_1
rach_ctrl	RACH_CTRL_1
si3_rest_oct	S_SI3_REST_EMPTY
}	

(18) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_4
ti	TI_0
loc_area_ident	LOC_AREA_IDENT_123_2148
cell_select	CELL_SELECT_1
rach_ctrl	RACH_CTRL_1
chan_desc	NOT_USED
mob_alloc	NOT_USED
si4_rest_oct	S_SI4_REST_EMPTY
}	

(19) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_1
ti	TI_0
cell_chan_desc	CELL_CHAN_DESC_1
rach_ctrl	RACH_CTRL_1
}	

(20) MPH\_CLASSMARK\_REQ

classmark	CLASS_MS
-----------	----------

(21) MPH\_IDLE\_REQ

mod	MODE_CELL_SELECTION
arfcn	ARFCN_67
ext_bcch	NOT_USED
comb_ccch	CCD_CCCH_1_NOT_COMB
tn	TN_0
dlt	DLT_23
pg	PG_0

		bs_ag_blocks_res	BS_AG_BLKS_RES_5
		bs_pa_mfrms	BS_PA_MFRMS_2
		power	MS_TXPWR_MAX_CCH_02
		ncc_permitted	NCC_PERMITTED_1
		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(22)	MPH_CBCH_REQ		
		cbch	NOT_USED
(23)	MPH_NEIGHBOURCELL_REQ		
		multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(24)	RR_ACTIVATE_IND		
		op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_3
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2148
		power	NOT_USED
		gprs_indication	GPRS_NO
History:	04.07.97	DL	Initial
	13.3.00	DG	new: (26) RR_SYNC_IND
	14.04.00	DG	value changed:
			MPH_IDLE_REQ/ext_bcch:
			EXT_BCCH_NOT_LIST > BSIC_6
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
			value changed:
			RR_ABORT_IND:
			plmn_avail:
			ONE_PLMN_AVAILABLE >
			NO_PLMN_AVAILABLE
			plmn:
			PLMN_123_32_FOUND > NOT_USED
			rxlevel:
			RXLEVEL_22 > NOT_USED
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ:
			class changed into classmark
			(Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added
			MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added
			si3/4_rest_oct: SI3_REST_DEF >
			SI3_REST_EMPTY
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.18.7 RR671: Network Search, interrupted by downlink signalling failure

**Description:** PL searches for the available PLMNs. The network search is interrupted by a downlink signalling failure. The reselection is started. It fails whyever. After ten seconds a cell selection is started and the mobile comes back to idle mode.

**Preamble:** RR637

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(3)	RR_ACTIVATE_REQ		
	*=====>*		
(4)		MPH_POWER_REQ	
		*=====>*	
(5)		MPH_POWER_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_ERROR_IND	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(11)		MPH_SYNC_REQ	
		*=====>*	
(12)	RR_ABORT_IND		
	*<=====*		
(13)		MPH_ERROR_IND	
		*<=====*	
(14)		MPH_IDLE_REQ	
		*=====>*	
	MUTE (9000)		
	TIMEOUT (1000)		
(15)		MPH_POWER_REQ	
		*=====>*	
(16)		MPH_POWER_CNF	
		*<=====*	
(17)		MPH_BSIC_REQ	
		*=====>*	
(18)		MPH_BSIC_CNF	
		*<=====*	
(19)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(20)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(21)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	

```

(22) | | MPH_UNITDATA_IND | |
      | | (SYS INFO TYPE 1) | |
      | | *<===== | |
(23) | | MPH_CLASSMARK_REQ | |
      | | *=====> | |
(24) | | MPH_IDLE_REQ | |
      | | *=====> | |
(25) | | MPH_CBCH_REQ | |
      | | *=====> | |
(26) | | MPH_NEIGHBOURCELL_REQ | |
      | | *=====> | |
(27) | | RR_ACTIVATE_IND | |
      | | *<===== | |
      | | | |
  
```

**Parametrization**

Primitive	Parameter	Value
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_32
	rx_lev_full	RX_LEV_20
	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_4
	gprs_sync	NOT_USED
(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2148
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
}		
(3) RR_ACTIVATE_REQ	plmn	NOT_USED
	op	OP_MODE_NET_SRCH_MMI
	cksn	NOT_USED
	kcv	NOT_USED
	accc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED

	cell_test gprs_indication	CELL_TEST_DISABLE NOT_USED
(4) MPH_POWER_REQ	pch_interrupt freq_bands	NO_PCH_INTERRUPT NOT_USED
(5) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(6) MPH_BSIC_REQ	arfcn	ARFCN_67
(7) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2148 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(9) MPH_ERROR_IND	cs arfcn	CS_DOWN_LINK_FAIL ARFCN_32
(10) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_EMPTY NCC_PERMITTED_1 RACH_CTRL_1
(11) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(12) RR_ABORT_IND	op cause	OP_MODE_NET_SRCH_MMI RRCS_ABORT_CEL_SEL_FAIL

	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	AS_PLMN_123_32_FOUND
	lac_list	A_LAC_LIST1
	rxlevel	A_RXLEVEL_20
	power	NOT_USED
(13) MPH_ERROR_IND		
	cs	CS_DOWN_LINK_FAIL
	arfcn	ARFCN_32
(14) MPH_IDLE_REQ		
	mod	MODE_CELL_RESELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	NOT_USED
	pg	NOT_USED
	bs_ag_blocks_res	NOT_USED
	bs_pa_mfrms	NOT_USED
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NOT_USED
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(15) MPH_POWER_REQ		
	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(16) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(17) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(18) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(19) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(20) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	

	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2148
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(21) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2148
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(22) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(23) MPH_CLASSMARK_REQ		
	classmark	CLASS_MS
(24) MPH_IDLE_REQ		
	mod	MODE_CELL_SELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	DLT_23
	pg	PG_0
	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1

		reorg_only	NOT_USED
		eotd_avail	CONST_0
		gprs_support	NOT_USED
(25)	MPH_CBCH_REQ	cbch	NOT_USED
(26)	MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
		arfcn	A_MPH_NCELL_1C
		sync_only	NOT_USED
(27)	RR_ACTIVATE_IND	op	OP_MODE_TEST_SIM
		mm_info	MM_INFO_3
		cid	CELL_IDENT_3748
		plmn	PLMN_ID_123
		lac	LAC_2148
		power	NOT_USED
		gprs_indication	GPRS_NO
History:	15-Feb-00	LE	Initial
	14.04.00	DG	value changed:
			MPH_IDLE_REQ/ext_bcch:
			EXT_BCCH_NOT_LIST > BSIC_6
	15.05.00	DG	RR_ACTIVATE_REQ: cell_test added
			value changed:
			RR_ABORT_IND/rxlevel:
			RXLEVEL_22 > RXLEVEL_21
	17.05.00	DG	new: RR_SYNC_IND
	26.05.00	DG	values changed:
			si3/4_rest_oct:
			NOT_USED > SI3_REST_DEF
	12.07.00	DG	MPH_CLASSMARK_REQ:
			class changed into classmark
			(Forum G23M / No 0057)
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added
			MPH_BSIC_REQ: cell_type, timing_info
			added
	08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added
			si3/4_rest_oct: SI3_REST_DEF>
			SI3_REST_EMPTY
	19.02.01	DG	
	(11)MPH_BSIC_REQ(NOT_PRESENT_16BIT)		replaced by MPH_SYNC_REQ
			(12)insert: MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted, time changed

### 3.18.8 RR672: Network Search, interrupted by downlink signalling failure (II)

**Description:** PL searches for the available PLMNs. The network search is interrupted by a downlink signalling failure. During reselection a second MMI PLMN search is started. The MMI PLMN search is delayed until the cell reselection has finished.

**Preamble:** RR637

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(3)	RR_ACTIVATE_REQ		
	*=====>*		
(4)		MPH_POWER_REQ	
		*=====>*	
(5)		MPH_POWER_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_BSIC_CNF	
		*<=====*	
(8)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(9)		MPH_ERROR_IND	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(11)		MPH_SYNC_REQ	
		*=====>*	
(12)	RR_ABORT_IND		
	*<=====*		
(13)		MPH_ERROR_IND	
		*<=====*	
(14)		MPH_IDLE_REQ	
		*=====>*	
(15)	RR_ACTIVATE_REQ		
	*=====>*		
(16)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(17)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(18)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(19)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 1)	
		*<=====*	
(20)		MPH_CLASSMARK_REQ	
		*=====>*	
(21)		MPH_IDLE_REQ	
		*=====>*	
(22)		MPH_CBCH_REQ	

```

(23) | | *=====>*
      | | MPH_NEIGHBOURCELL_REQ |
      | | *=====>*
(24) | RR_ACTIVATE_IND | |
      *<=====*
(25) | | MPH_IDENTITY_REQ | |
      | | *=====>*
(26) | | MPH_POWER_REQ | |
      | | *=====>*
(27) | | MPH_POWER_CNF | |
      | | *<=====*
(28) | | MPH_BSIC_REQ | |
      | | *=====>*
(29) | | MPH_BSIC_CNF | |
      | | *<=====*
(30) | | MPH_SYNC_REQ | |
      | | *=====>*
(31) | RR_ABORT_IND | |
      *<=====*
      | |
  
```

**Parametrization**

Primitive	Parameter	Value	
(1) MPH_MEASUREMENT_IND	arfcn	ARFCN_32	
	rx_lev_full	RX_LEV_20	
	rx_lev_sub	RX_LEV_20	
	rx_qual_full	RX_QUAL_1	
	rx_qual_sub	RX_QUAL_1	
	dtx	DTX_NOT_USED	
	otd	TIME_ADV_27	
	valid	TRUE	
	fn_offset	FN_OFFSET_1_SEC	
	ncells	S_NCELLS_4	
	gprs_sync	NOT_USED	
	(2) MPH_UNITDATA_IND	arfcn	ARFCN_67
		fn	NOT_USED
sdu			
{			
component		RR	
direction		DOWNLINK	
pd		D_SYS_INFO_4	
ti		TI_0	
loc_area_ident		LOC_AREA_IDENT_123_2148	
cell_select		CELL_SELECT_1	
rach_ctrl		RACH_CTRL_1	
chan_desc		NOT_USED	
mob_alloc		NOT_USED	
si4_rest_oct	S_SI4_REST_EMPTY		
}			
(3) RR_ACTIVATE_REQ	plmn	NOT_USED	
	op	OP_MODE_NET_SRCH_MMI	
	cksn	NOT_USED	
	kcv	NOT_USED	

	accn	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(4) MPH_POWER_REQ		
	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(5) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(6) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(7) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(8) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2148
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(9) MPH_ERROR_IND		
	cs	CS_DOWN_LINK_FAIL
	arfcn	ARFCN_32
(10) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_EMPTY
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	

(11) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(12) RR_ABORT_IND	op	OP_MODE_NET_SRCH_MMI
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	AS_PLMN_123_32_FOUND
	lac_list	A_LAC_LIST1
	rxlevel	A_RXLEVEL_20
	power	NOT_USED
(13) MPH_ERROR_IND	cs	CS_DOWN_LINK_FAIL
	arfcn	ARFCN_32
(14) MPH_IDLE_REQ	mod	MODE_CELL_RESELECTION
	arfcn	ARFCN_67
	ext_bcch	NOT_USED
	comb_ccch	CCD_CCCH_1_NOT_COMB
	tn	TN_0
	dlt	NOT_USED
	pg	NOT_USED
	bs_ag_blocks_res	NOT_USED
	bs_pa_mfrms	NOT_USED
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NOT_USED
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(15) RR_ACTIVATE_REQ	plmn	NOT_USED
	op	OP_MODE_NET_SRCH_MMI
	cksn	NOT_USED
	kcv	NOT_USED
	acc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(16) MPH_UNITDATA_IND	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_1
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	

## (17) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_3
ti	TI_0
cell_ident	CELL_IDENT_3748
loc_area_ident	LOC_AREA_IDENT_123_2148
ctrl_chan_desc	CTRL_CHAN_DESC_1
cell_opt_bcch	CELL_OPT_BCCH_1
cell_select	CELL_SELECT_1
rach_ctrl	RACH_CTRL_1
si3_rest_oct	S_SI3_REST_EMPTY
}	

## (18) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_4
ti	TI_0
loc_area_ident	LOC_AREA_IDENT_123_2148
cell_select	CELL_SELECT_1
rach_ctrl	RACH_CTRL_1
chan_desc	NOT_USED
mob_alloc	NOT_USED
si4_rest_oct	S_SI4_REST_EMPTY
}	

## (19) MPH\_UNITDATA\_IND

arfcn	ARFCN_67
fn	NOT_USED
sdu	
{	
component	RR
direction	DOWNLINK
pd	D_SYS_INFO_1
ti	TI_0
cell_chan_desc	CELL_CHAN_DESC_1
rach_ctrl	RACH_CTRL_1
}	

## (20) MPH\_CLASSMARK\_REQ

classmark	CLASS_MS
-----------	----------

## (21) MPH\_IDLE\_REQ

mod	MODE_CELL_SELECTION
arfcn	ARFCN_67
ext_bcch	NOT_USED
comb_ccch	CCD_CCCH_1_NOT_COMB
tn	TN_0
dlt	DLT_23
pg	PG_0

	bs_ag_blocks_res	BS_AG_BLKS_RES_5
	bs_pa_mfrms	BS_PA_MFRMS_2
	power	MS_TXPWR_MAX_CCH_02
	ncc_permitted	NCC_PERMITTED_1
	reorg_only	NOT_USED
	eotd_avail	CONST_0
	gprs_support	NOT_USED
(22) MPH_CBCH_REQ	cbch	NOT_USED
(23) MPH_NEIGHBOURCELL_REQ	multi_band	NOT_USED
	arfcn	A_MPH_NCELL_1C
	sync_only	NOT_USED
(24) RR_ACTIVATE_IND	op	OP_MODE_TEST_SIM
	mm_info	MM_INFO_3
	cid	CELL_IDENT_3748
	plmn	PLMN_ID_123
	lac	LAC_2148
	power	NOT_USED
	gprs_indication	GPRS_NO
(25) MPH_IDENTITY_REQ	mid	S_MS_ID_IMSI_HPLMN_TMSI
(26) MPH_POWER_REQ	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(27) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(28) MPH_BSIC_REQ	arfcn	ARFCN_67
(29) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_BCCH_AVAIL
(30) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(31) RR_ABORT_IND	op	OP_MODE_NET_SRCH_MMI
	cause	RRCS_ABORT_CEL_SEL_FAIL
	plmn_avail	ONE_PLMN_AVAILABLE
	plmn	NOT_USED
	lac_list	A_LAC_LIST1A
	rxlevel	NOT_USED
	power	NOT_USED

History:           15-Feb-00           LE           Initial  
                   15-May-00           DG           RR\_ACTIVATE\_REQ: cell\_test added  
   value changed:  
   RR\_ABORT\_IND/rxlevel:

26.05.00	DG	RXLEVEL_22 > RXLEVEL_21 values changed: si3/4_rest_oct:
12.07.00	DG	NOT_USED > SI3_REST_DEF MPH_CLASSMARK_REQ: class changed into classmark (Forum G23M / No 0057)
19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
08.02.01	DG	RR_ACTIVATE_IND: gprs_indication added si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
19.02.01	DG	
(11)MPH_BSIC_REQ(NOT_PRESENT_16BIT)		replaced by MPH_SYNC_REQ
31.03.01	VK	'power' added in rr_abort_ind
05-Jun-01	MSE	adapted to TAP2
25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.18.9 RR673: Network Search, interrupted by downlink signalling failure (III)

**Description:** PL searches for the available PLMNs. The network search is interrupted by a downlink signalling failure. During reselection a second MMI PLMN search is started. The MMI PLMN search is delayed until the cell reselection has finished. The cell reselection fails and is followed by a cell selection.

**Preamble:** RR637

	MM	RR	PL/DL
(1)		MPH_MEASUREMENT_IND	
		*<=====*	
(2)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 4)	
		*<=====*	
(3)	RR_ACTIVATE_REQ		
	*=====>*		
(4)		MPH_POWER_REQ	
		*=====>*	
(5)		MPH_POWER_CNF	
		*<=====*	
(6)		MPH_BSIC_REQ	
		*=====>*	
(7)		MPH_ERROR_IND	
		*<=====*	
(8)		MPH_BSIC_CNF	
		*<=====*	
(9)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(10)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 2)	
		*<=====*	
(11)		MPH_SYNC_REQ	
		*=====>*	
(12)	RR_ABORT_IND		
	*<=====*		
(13)		MPH_ERROR_IND	
		*<=====*	
(14)		MPH_IDLE_REQ	
		*=====>*	
	MUTE (9000)		
	TIMEOUT (1000)		
(15)		MPH_POWER_REQ	
		*=====>*	
(16)		MPH_POWER_CNF	
		*<=====*	
(17)		MPH_BSIC_REQ	
		*=====>*	
(18)		MPH_BSIC_CNF	
		*<=====*	
(19)		MPH_UNITDATA_IND	
		(SYS INFO TYPE 3)	
		*<=====*	
(20)	RR_ACTIVATE_REQ		
	*=====>*		
(21)		MPH_SYNC_REQ	
		*=====>*	
(22)		MPH_POWER_REQ	

```

|
|
(23) | | MPH_POWER_CNF |
| | | | |
| | | | |
| | | | |
(24) | | MPH_BSIC_REQ |
| | | | |
| | | | |
| | | | |
(25) | | MPH_BSIC_CNF |
| | | | |
| | | | |
| | | | |
(26) | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 1) | |
| | | | |
| | | | |
(27) | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 2) | |
| | | | |
| | | | |
(28) | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 3) | |
| | | | |
| | | | |
(29) | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 4) | |
| | | | |
| | | | |
(30) | | MPH_BSIC_REQ |
| | | | |
| | | | |
(31) | | MPH_BSIC_CNF |
| | | | |
| | | | |
(32) | | MPH_BSIC_REQ |
| | | | |
| | | | |
(33) | | MPH_BSIC_CNF |
| | | | |
| | | | |
(34) | | MPH_SYNC_REQ |
| | | | |
| | | | |
(35) | | RR_ABORT_IND |
| | | | |
| | | | |
MUTE (9000)
TIMEOUT (1000)
(36) | | MPH_POWER_REQ |
| | | | |
| | | | |
| | | | |

```

**Parametrization**

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	MPH_MEASUREMENT_IND	arfcn	ARFCN_32
		rx_lev_full	RX_LEV_20
		rx_lev_sub	RX_LEV_20
		rx_qual_full	RX_QUAL_1
		rx_qual_sub	RX_QUAL_1
		dtx	DTX_NOT_USED
		otd	TIME_ADV_27
		valid	TRUE
		fn_offset	FN_OFFSET_1_SEC
		ncells	S_NCELLS_4
		gprs_sync	NOT_USED
(2)	MPH_UNITDATA_IND	arfcn	ARFCN_67
		fn	NOT_USED
		sdu	
		{	
		component	RR

	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_123_2148
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(3) RR_ACTIVATE_REQ		
	plmn	NOT_USED
	op	OP_MODE_NET_SRCH_MMI
	cksn	NOT_USED
	kcv	NOT_USED
	acc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(4) MPH_POWER_REQ		
	pch_interrupt	NO_PCH_INTERRUPT
	freq_bands	NOT_USED
(5) MPH_POWER_CNF		
	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(6) MPH_BSIC_REQ		
	arfcn	ARFCN_67
(7) MPH_ERROR_IND		
	cs	CS_DOWN_LINK_FAIL
	arfcn	ARFCN_32
(8) MPH_BSIC_CNF		
	arfcn	ARFCN_67
	bsic	BSIC_6
	cs	CS_NO_ERROR
(9) MPH_UNITDATA_IND		
	arfcn	ARFCN_67
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_123_2148
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1

	si3_rest_oct }	S_SI3_REST_EMPTY
(10) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_EMPTY NCC_PERMITTED_1 RACH_CTRL_1
(11) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(12) RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_NET_SRCH_MMI RRCS_ABORT_CEL_SEL_FAIL ONE_PLMN_AVAILABLE AS_PLMN_123_32_FOUND A_LAC_LIST1 A_RXLEVEL_20 NOT_USED
(13) MPH_ERROR_IND	cs arfcn	CS_DOWN_LINK_FAIL ARFCN_32
(14) MPH_IDLE_REQ	mod arfcn ext_bcch comb_ccch tn dlt pg bs_ag_blocks_res bs_pa_mfrms power ncc_permitted reorg_only eotd_avail gprs_support	MODE_CELL_RESELECTION ARFCN_67 NOT_USED CCD_CCCH_1_NOT_COMB TN_0 NOT_USED NOT_USED NOT_USED NOT_USED NOT_USED MS_TXPWR_MAX_CCH_02 NOT_USED NOT_USED CONST_0 NOT_USED
(15) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(16) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(17) MPH_BSIC_REQ	arfcn	ARFCN_67

(18) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(19) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2148 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(20) RR_ACTIVATE_REQ	plmn op cksn kcv accn imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	NOT_USED OP_MODE_NET_SRCH_MMI NOT_USED NOT_USED NOT_USED NOT_USED NOT_USED NOT_USED NOT_USED CELL_TEST_DISABLE NOT_USED
(21) MPH_SYNC_REQ	cs	CS_STOP_PLMN_SEARCH
(22) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED
(23) MPH_POWER_CNF	num_of_chan arfcn rx_lev	CHANNELS_3 ARFCN_67_32_124 RXLEV_22_21_20
(24) MPH_BSIC_REQ	arfcn	ARFCN_67
(25) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(26) MPH_UNITDATA_IND	arfcn fn sdu {	ARFCN_67 NOT_USED

	component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_EMPTY NCC_PERMITTED_1 RACH_CTRL_1
(27) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_123_2148 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(28) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_123_2148 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(29) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(30) MPH_BSIC_REQ	arfcn	ARFCN_32

(31) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_6 CS_NO_BCCH_AVAIL
(32) MPH_BSIC_REQ	arfcn	ARFCN_124
(33) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_6 CS_NO_BCCH_AVAIL
(34) MPH_SYNC_REQ	cs	
CS_STOP_PLMN_SEARCH_AND_DEACTIVATE		
(35) RR_ABORT_IND	op cause plmn_avail plmn lac_list rxlevel power	OP_MODE_NET_SRCH_MMI_NO_SRV RRCS_ABORT_CEL_SEL_FAIL ONE_PLMN_AVAILABLE AS_PLMN_123_32_FOUND A_LAC_LIST1A A_RXLEVEL_22 NOT_USED
(36) MPH_POWER_REQ	pch_interrupt freq_bands	PCH_INTERRUPT NOT_USED

History:	15-Feb-00	LE	Initial
	15-May-00	DG	RR_ACTIVATE_REQ: cell_test added value changed: RR_ABORT_IND/rxlevel: RXLEVEL_22 > RXLEVEL_21
	26.05.00	DG	values changed: si3/4_rest_oct: NOT_USED > SI3_REST_DEF
	19.01.01	DG	RR_ACTIVATE_REQ: gprs_indication added MPH_BSIC_REQ: cell_type, timing_info added
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF > SI3_REST_EMPTY
	20.02.01	DG	MPH_BSIC_REQ(NOT_PRESENT_16BIT) replaced by MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind
	06.03.03	LG	MUTE inserted

### 3.18.10 RR674: Network Search requested by MMI, five PLMNs

**Description:** PL searches for available PLMNs. Five PLMNs are found and reported to MM.

**Preamble:** RR000

	MM		RR		PL/DL
(1)		RR_ACTIVATE_REQ			

```

(2) | *=====|
    | | MPH_POWER_REQ |
    | | *=====|
(3) | | MPH_POWER_CNF |
    | | *<=====|
(4) | | MPH_BSIC_REQ |
    | | *=====|
(5) | | MPH_BSIC_CNF |
    | | *<=====|
(6) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 1) |
    | | *<=====|
(7) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 2) |
    | | *<=====|
(8) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 3) |
    | | *<=====|
(9) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 4) |
    | | *<=====|
(10) | | MPH_BSIC_REQ |
    | | *=====|
(11) | | MPH_BSIC_CNF |
    | | *<=====|
(12) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 1) |
    | | *<=====|
(13) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 2) |
    | | *<=====|
(14) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 3) |
    | | *<=====|
(15) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 4) |
    | | *<=====|
(16) | | MPH_BSIC_REQ |
    | | *=====|
(17) | | MPH_BSIC_CNF |
    | | *<=====|
(18) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 1) |
    | | *<=====|
(19) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 2) |
    | | *<=====|
(20) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 3) |
    | | *<=====|
(21) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 4) |
    | | *<=====|
(22) | | MPH_BSIC_REQ |
    | | *=====|
(23) | | MPH_BSIC_CNF |
    | | *<=====|
(24) | | MPH_UNITDATA_IND |
    | | (SYS INFO TYPE 1) |
  
```

```

(25) | | *<=====
| | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 2) |
| | | *<=====
(26) | | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 3) |
| | | *<=====
(27) | | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 4) |
| | | *<=====
(28) | | | MPH_BSIC_REQ |
| | | *=====> *
(29) | | | MPH_BSIC_CNF |
| | | *<=====
(30) | | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 1) |
| | | *<=====
(31) | | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 2) |
| | | *<=====
(32) | | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 3) |
| | | *<=====
(33) | | | MPH_UNITDATA_IND |
| | | (SYS INFO TYPE 4) |
| | | *<=====
(34) | | | MPH_SYNC_REQ |
| | | *=====> *
(35) | | RR_ABORT_IND |
| | *<=====
| | |

```

**Parametrization**

Primitive	Parameter	Value
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_TEST
	op	OP_MODE_NET_SRCH_MMI
	cksn	NOT_USED
	kcv	NOT_USED
	accc	NOT_USED
	imsi_struct	NOT_USED
	tmsi_struct	NOT_USED
	thplmn	NOT_USED
	bcch_info	NOT_USED
	cell_test	CELL_TEST_DISABLE
	gprs_indication	NOT_USED
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_5
	arfcn	ARFCN_67_64_32_26_124
	rx_lev	RXLEV_24_23_22_13_10
(4) MPH_BSIC_REQ	arfcn	ARFCN_67

(5) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_67 BSIC_6 CS_NO_ERROR
(6) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(7) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_EMPTY NCC_PERMITTED_1 RACH_CTRL_1
(8) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_34_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(9) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti	ARFCN_67 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0

	loc_area_ident	LOC_AREA_IDENT_122_34_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(10) MPH_BSIC_REQ	arfcn	ARFCN_64
(11) MPH_BSIC_CNF	arfcn	ARFCN_64
	bsic	BSIC_6
	cs	CS_NO_ERROR
(12) MPH_UNITDATA_IND	arfcn	ARFCN_64
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(13) MPH_UNITDATA_IND	arfcn	ARFCN_64
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_EMPTY
	ncc_permit	NCC_PERMITTED_1
	rach_ctrl	RACH_CTRL_1
	}	
(14) MPH_UNITDATA_IND	arfcn	ARFCN_64
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_3
	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_122_2147_V
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	

(15) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_64 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_2147_V CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(16) MPH_BSIC_REQ	arfcn	ARFCN_32
(17) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_32 BSIC_0 CS_NO_ERROR
(18) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1
(19) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_EMPTY NCC_PERMITTED_1 RACH_CTRL_1
(20) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd           }	ARFCN_32 NOT_USED  RR DOWNLINK D_SYS_INFO_3

	ti	TI_0
	cell_ident	CELL_IDENT_3748
	loc_area_ident	LOC_AREA_IDENT_122_35_2147
	ctrl_chan_desc	CTRL_CHAN_DESC_1
	cell_opt_bcch	CELL_OPT_BCCH_1
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	si3_rest_oct	S_SI3_REST_EMPTY
	}	
(21) MPH_UNITDATA_IND		
	arfcn	ARFCN_32
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_4
	ti	TI_0
	loc_area_ident	LOC_AREA_IDENT_122_35_2147
	cell_select	CELL_SELECT_1
	rach_ctrl	RACH_CTRL_1
	chan_desc	NOT_USED
	mob_alloc	NOT_USED
	si4_rest_oct	S_SI4_REST_EMPTY
	}	
(22) MPH_BSIC_REQ		
	arfcn	ARFCN_26
(23) MPH_BSIC_CNF		
	arfcn	ARFCN_26
	bsic	BSIC_0
	cs	CS_NO_ERROR
(24) MPH_UNITDATA_IND		
	arfcn	ARFCN_26
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_1
	ti	TI_0
	cell_chan_desc	CELL_CHAN_DESC_1
	rach_ctrl	RACH_CTRL_1
	}	
(25) MPH_UNITDATA_IND		
	arfcn	ARFCN_26
	fn	NOT_USED
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_SYS_INFO_2
	ti	TI_0
	neigh_cell_desc	NCELL_DESC_EMPTY
	ncc_permit	NCC_PERMITTED_1

	rach_ctrl }	RACH_CTRL_1
(26) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_26 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(27) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_26 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(28) MPH_BSIC_REQ	arfcn	ARFCN_124
(29) MPH_BSIC_CNF	arfcn bsic cs	ARFCN_124 BSIC_0 CS_NO_ERROR
(30) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_chan_desc rach_ctrl }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_1 TI_0 CELL_CHAN_DESC_1 RACH_CTRL_1

(31) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti neigh_cell_desc ncc_permit rach_ctrl }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_2 TI_0 NCELL_DESC_EMPTY NCC_PERMITTED_1 RACH_CTRL_1
(32) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti cell_ident loc_area_ident ctrl_chan_desc cell_opt_bcch cell_select rach_ctrl si3_rest_oct }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_3 TI_0 CELL_IDENT_3748 LOC_AREA_IDENT_122_36_2147 CTRL_CHAN_DESC_1 CELL_OPT_BCCH_1 CELL_SELECT_1 RACH_CTRL_1 S_SI3_REST_EMPTY
(33) MPH_UNITDATA_IND	arfcn fn sdu { component direction pd ti loc_area_ident cell_select rach_ctrl chan_desc mob_alloc si4_rest_oct }	ARFCN_124 NOT_USED  RR DOWNLINK D_SYS_INFO_4 TI_0 LOC_AREA_IDENT_122_36_2147 CELL_SELECT_1 RACH_CTRL_1 NOT_USED NOT_USED S_SI4_REST_EMPTY
(34) MPH_SYNC_REQ	cs CS_STOP_PLMN_SEARCH_AND_DEACTIVATE	
(35) RR_ABORT_IND	op cause plmn_avail plmn lac_list	OP_MODE_NET_SRCH_MMI_NO_SRV RRCS_ABORT_CEL_SEL_FAIL FIVE_PLMN_AVAILABLE NOT_USED A_LAC_LIST5

		rxlevel	NOT_USED
		power	NOT_USED
History:	22.01.01	DG	Initial
	08.02.01	DG	si3/4_rest_oct: SI3_REST_DEF> SI3_REST_EMPTY
	09.02.01	DG	MPH_BSIC_REQ (NOT_PRESENT_16BIT_MIN1) replaced by MPH_SYNC_REQ
	31.03.01	VK	'power' added in rr_abort_ind
	05-Jun-01	MSE	adapted to TAP2
	25.02.03	LG	'lac_list' added in rr_abort_ind

### 3.19 Miscellaneous

#### 3.19.1 RR680: Overload primitive store / Start cell selection without BCCH information (std 6)

**Description:** Seven cell selections without BCCH information are started. Just to test overload of primitive store.

**Preamble:** RR000

	MM	RR	PL/DL
COMMAND	(PL CONFIG STD=6)		
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)	RR_ACTIVATE_REQ		
	*=====>*		
(3)	RR_ACTIVATE_REQ		
	*=====>*		
(4)	RR_ACTIVATE_REQ		
	*=====>*		
(5)	RR_ACTIVATE_REQ		
	*=====>*		
(6)	RR_ACTIVATE_REQ		
	*=====>*		
(7)	RR_ACTIVATE_REQ		
	*=====>*		

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(2) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(3) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(4) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(5) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_NORMAL
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678

		accc imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	ACC_CTRL_CLASS_0008 MOBILE_ID_IMSI_HPLMN MOBILE_ID_TMSI TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(6) RR_ACTIVATE_REQ		plmn op cksn kcv accc imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	PLMN_ID_123 OP_MODE_NORMAL CKSN_NOT_PRES KCV_12345678 ACC_CTRL_CLASS_0008 MOBILE_ID_IMSI_HPLMN MOBILE_ID_TMSI TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
(7) RR_ACTIVATE_REQ		plmn op cksn kcv accc imsi_struct tmsi_struct thplmn bcch_info cell_test gprs_indication	PLMN_ID_123 OP_MODE_NORMAL CKSN_NOT_PRES KCV_12345678 ACC_CTRL_CLASS_0008 MOBILE_ID_IMSI_HPLMN MOBILE_ID_TMSI TIME_HPLMN_VALID S_BCCH_INFO_EMPTY CELL_TEST_DISABLE NOT_USED
History:	31-07-00 05-Jun-01	DG MSE	Initial adapted to TAP2

### 3.19.2 RR681: Overload primitive store / RR-Connection Establishment by the MS

**Description:** MM starts 7 connection establishments. Just to test overload of primitive store.

**Preamble:** RR000

MM	RR	PL/DL
COMMAND (PL CONFIG STD=1)		
(1)   RR_ESTABLISH_REQ		
*=====>*		
(2)   RR_ESTABLISH_REQ		
*=====>*		
(3)   RR_ESTABLISH_REQ		
*=====>*		
(4)   RR_ESTABLISH_REQ		
*=====>*		
(5)   RR_ESTABLISH_REQ		
*=====>*		
(6)   RR_ESTABLISH_REQ		
*=====>*		
(7)   RR_ESTABLISH_REQ		
*=====>*		

#### Parametrization

Primitive	Parameter	Value
(1) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(2) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(3) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(4) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(5) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(6) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
(7) RR_ESTABLISH_REQ	estcs sdu	ESTCS_SERV_REQ_BY_MM MM_MESSAGE
History:	01.08.00	DG Initial

### 3.19.3 RR682: Overload primitive store / Cell Selection

**Description:** A cell selection is started. Just to test overload of primitive store.

**Preamble:** RR000

	MM	RR	PL/DL
COMMAND	(PL CONFIG STD=5)		
(1)	RR_ACTIVATE_REQ		
	*=====>*		
(2)		MPH_POWER_REQ	
		*=====>*	
(3)		MPH_POWER_CNF	
		*<=====*	
(4)	RR_SYNC_REQ		
	*=====>*		
(5)	RR_SYNC_REQ		
	*=====>*		
(6)	RR_SYNC_REQ		
	*=====>*		
(7)	RR_SYNC_REQ		
	*=====>*		
(8)	RR_SYNC_REQ		
	*=====>*		
(9)	RR_SYNC_REQ		
	*=====>*		
(10)	RR_SYNC_REQ		
	*=====>*		

**Parametrization**

<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1) RR_ACTIVATE_REQ	plmn	PLMN_ID_123
	op	OP_MODE_TEST_SIM
	cksn	CKSN_NOT_PRES
	kcv	KCV_12345678
	acc	ACC_CTRL_CLASS_0008
	imsi_struct	MOBILE_ID_IMSI_HPLMN
	tmsi_struct	MOBILE_ID_TMSI
	thplmn	TIME_HPLMN_VALID
	bcch_info	S_BCCH_INFO_EMPTY
	cell_test	CELL_TEST_DISABLE
gprs_indication	NOT_USED	
(2) MPH_POWER_REQ	pch_interrupt	PCH_INTERRUPT
	freq_bands	NOT_USED
(3) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(4) RR_SYNC_REQ	op	NOT_USED
	cksn	CKSN_6
	kcv	KCV_00112233
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	acc	ACC_CTRL_CLASS_0000
	thplmn	TIME_HPLMN_EMPTY
(5) RR_SYNC_REQ	op	NOT_USED
	cksn	CKSN_6
	kcv	KCV_00112233
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	acc	ACC_CTRL_CLASS_0000
	thplmn	TIME_HPLMN_EMPTY
(6) RR_SYNC_REQ	op	NOT_USED
	cksn	CKSN_6
	kcv	KCV_00112233
	tmsi_struct	NOT_USED
	plmn	NOT_USED
	lac	NOT_USED
	synccs	SYNCCS_TMSI_CKSN_KC_INVAL
	acc	ACC_CTRL_CLASS_0000
	thplmn	TIME_HPLMN_EMPTY
(7) RR_SYNC_REQ	op	NOT_USED
	cksn	CKSN_6

		kcv	KCV_00112233
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVALID
		acc	ACC_CTRL_CLASS_0000
		thplmn	TIME_HPLMN_EMPTY
(8)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	CKSN_6
		kcv	KCV_00112233
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVALID
		acc	ACC_CTRL_CLASS_0000
		thplmn	TIME_HPLMN_EMPTY
(9)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	CKSN_6
		kcv	KCV_00112233
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVALID
		acc	ACC_CTRL_CLASS_0000
		thplmn	TIME_HPLMN_EMPTY
(10)	RR_SYNC_REQ		
		op	NOT_USED
		cksn	CKSN_6
		kcv	KCV_00112233
		tmsi_struct	NOT_USED
		plmn	NOT_USED
		lac	NOT_USED
		synccs	SYNCCS_TMSI_CKSN_KC_INVALID
		acc	ACC_CTRL_CLASS_0000
		thplmn	TIME_HPLMN_EMPTY
History:	01.08.00	DG	Initial
	05-Jun-01	MSE	adapted to TAP2

### 3.19.4 RR683: Overload primitive store / Listen to SYS INFOs (with SIM)

**Description:** Listening to a BCCH carrier. BCCH ok. Just to test overload of primitive store.

**Preamble:** RR001B

MM	RR	PL/DL
(1)	MPH_POWER_CNF	
(2)	MPH_BSIC_REQ	
(3)	MPH_BSIC_CNF	
(4)	MPH_PAGING_IND	
(5)	MPH_PAGING_IND	
(6)	MPH_PAGING_IND	
(7)	MPH_PAGING_IND	
(8)	MPH_PAGING_IND	
(9)	MPH_PAGING_IND	
(10)	MPH_PAGING_IND	

#### Parametrization

Primitive	Parameter	Value
(1) MPH_POWER_CNF	num_of_chan	CHANNELS_3
	arfcn	ARFCN_67_32_124
	rx_lev	RXLEV_22_21_20
(2) MPH_BSIC_REQ	arfcn	ARFCN_67
(3) MPH_BSIC_CNF	arfcn	ARFCN_67
	bsic	BSIC_5
	cs	CS_NO_ERROR
(4) MPH_PAGING_IND	identity_type	ID_IMSI
	channel_needed	CN_ANY
(5) MPH_PAGING_IND	identity_type	ID_IMSI
	channel_needed	CN_ANY
(6) MPH_PAGING_IND	identity_type	ID_IMSI
	channel_needed	CN_ANY
(7) MPH_PAGING_IND	identity_type	ID_IMSI
	channel_needed	CN_ANY

(8) MPH_PAGING_IND		identity_type	ID_IMSI
		channel_needed	CN_ANY
(9) MPH_PAGING_IND		identity_type	ID_IMSI
		channel_needed	CN_ANY
(10) MPH_PAGING_IND		identity_type	ID_IMSI
		channel_needed	CN_ANY
History:	01.08.00	DG	Initial
	19.01.01	DG	MPH_BSIC_REQ: cell_type, timing_info added

### 3.19.5 RR684: Engineering Mode – Assignment Command received & complete (Event number 19 + 22)

**Description:** The base station initiates an intracell handover. RR releases the old connection locally and configures the new channel configuration. There is no change of channel mode.

**Preamble:** RR154B

	MM	RR	PL/DL
(1)	EM_RR_EVENT_REQ		
	*=====>*		
(2)		MPH_MEASUREMENT_IND	
		*<=====*	
(3)		DL_UNITDATA_REQ	
		(MEASUREMENT REPORT)	
		*=====>*	
(4)		DL_DATA_IND	
		(ASSIGNMENT COMMAND)	
		*<=====*	
(5)	EM_DATA_IND		
	*<=====*		
(6)		DL_SUSPEND_REQ	
		*=====>*	
(7)		MPH_DEDICATED_REQ	
		*=====>*	
(8)		MPH_DEDICATED_CNF	
		*<=====*	
(9)		DL_RESUME_REQ	
		(ASSIGNMENT COMPLETE)	
		*=====>*	

#### Parametrization

	Primitive	Parameter	Value
(1)	EM_RR_EVENT_REQ	bitmask_rr_h	<b>Bitm_H</b>
		bitmask_rr_l	<b>Bitm_L</b>
(2)	MPH_MEASUREMENT_IND	arfcn	ARFCN_67
		rx_lev_full	RX_LEV_20

	rx_lev_sub	RX_LEV_20
	rx_qual_full	RX_QUAL_1
	rx_qual_sub	RX_QUAL_1
	dtx	DTX_NOT_USED
	otd	TIME_ADV_27
	valid	TRUE
	fn_offset	FN_OFFSET_1_SEC
	ncells	S_NCELLS_0
	gprs_sync	NOT_USED
(3)	DL_UNITDATA_REQ	
	ch_type	CH_TYPE_SACCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	UPLINK
	pd	U_MEAS_REP
	ti	TI_0
	meas_result	MEAS_RESULT_NCELL_0
	}	
(4)	DL_DATA_IND	
	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_ASSIGN_CMD
	ti	TI_0
	chan_desc	CHANNEL_DESC_SDCCH2
	pow_cmd	POWER_COMMAND_05
	freq_list_after	NOT_USED
	cell_chan_desc	NOT_USED
	multislot_alloc	NOT_USED
	chan_mode	NOT_USED
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	mob_alloc_after	NOT_USED
	start_time	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	NOT_USED
	chan_desc_before_2	NOT_USED
	freq_chan_seq	NOT_USED
	mob_alloc_before	NOT_USED
	ciph_mode_set	NOT_USED
	vgcs_tmi	NOT_USED
	multirate_conf	S_MULTIRATE_CONF_1
	}	

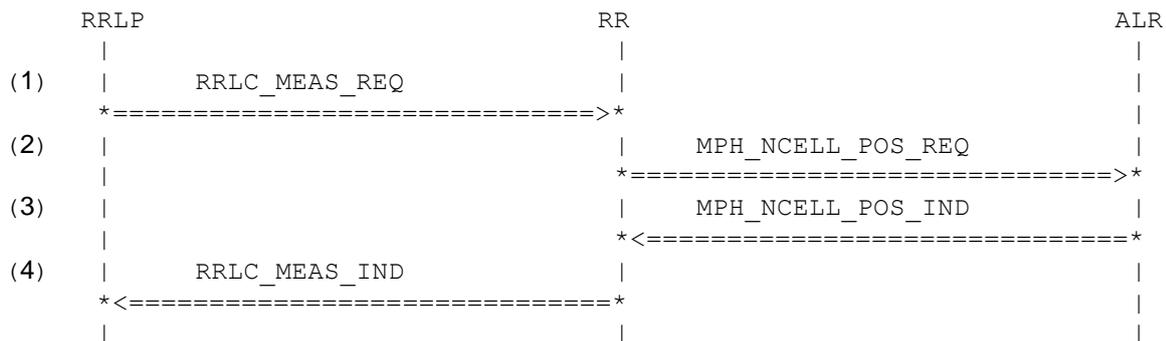
(5)	EM_DATA_IND	entity	<b>EM_ENTITY</b>
(6)	DL_SUSPEND_REQ	ch_type sapi	CH_TYPE_SDCCH SAPI_0
(7)	MPH_DEDICATED_REQ	mod start ch_type ch_type2 arfcn bsic ho_param tr_para ciph amr_conf	MODE_CHAN_ASSIGN NO_STARTING_TIME PRR_CHANNEL_TYPE_3 NOT_USED ARFCN_67 NOT_USED NOT_USED PRR_TR_PARA_3 NO_CIPHERING NOT_USED
(8)	MPH_DEDICATED_CNF	dedi_res	DEDI_RES_OK
(9)	DL_RESUME_REQ	ch_type sapi sdu { component direction pd ti rr_cause } }	CH_TYPE_SDCCH SAPI_0  RR UPLINK U_ASSIGN_COMP TI_0 RR_CAUSE_0
History:	04.07.97 18.11.97 06.05.98 25.01.01  12.02.01 05-Jun-01 23-Oct-01	DL LE VK DG  DG MSE OT	Initial adapted to layer 1 DL_RELEASE_CNF removed DL_DATA_REQ added, DL_DATA_IND: multislots_alloc, chan_mode2...8 added DL_DATA_REQ deleted adapted to TAP2 Initial version for EM.

## 3.20 E-OTD

### 3.20.1 RR800: Successful E-OTD

**Description:** RRLC initiates a position measurement request and forwards a list of the neighbour cells in the RRLC-MEAS request primitive. RR in turn forwards this request to ALR (MPH-NCELL-POS request primitive). Successful completion of the position measurement procedure is indicated by receipt of a MPH-NCELL-POS indication primitive containing the results of the cells measured. This result is forwarded to RRLP (RRLC-MEAS indication primitive).

**Preamble:** RR154C



#### Parametrization

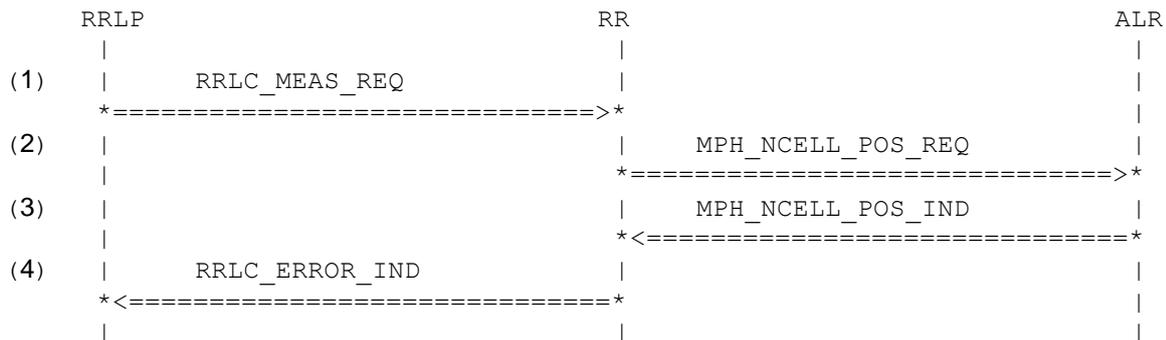
Primitive	Parameter	Value
(1) RRLC_MEAS_REQ	req_id	REQ_ID_0
	arfcn	ARFCN_67
	bsic	BSIC_5
	assist_data	NCELL_EOTD_6
(2) MPH_NCELL_POS_REQ	req_id	REQ_ID_0
	ncell_eotd	NCELL_EOTD_6
(3) MPH_NCELL_POS_IND	req_id	REQ_ID_0
	eotd_res	EOTD_SUCC
	ta	TAV_EOTD
	fn	FN_OFFSET_1_SEC
	eotd_sc_res	EOTD_SC_RES_OK
	eotd_sc_res1	EOTD_SC_RES1_OK
	eotd_nc_res	EOTD_RESULT_6
(4) RRLC_MEAS_IND	mcc	MCC_123
	mnc	MNC_32
	lac	LAC_2147
	cell_id	CELL_IDENT_3748
	eotd_mode	EOTD_DEDIC
	req_id	REQ_ID_0
	tav	TAV_EOTD
	fn	FN_OFFSET_1_SEC
	eotd_sc_res	EOTD_SC_RES_OK
	eotd_sc_res1	EOTD_SC_RES1_OK
eotd_nc_res	EOTD_RESULT_6	

History: 26 September 2002 DL Initial

### 3.20.2 RR802: E-OTD Request rejected by ALR

**Description:** RRLC initiates a position measurement request and forwards a list of the neighbour cells in the RRLC-MEAS request primitive. RR in turn forwards this request to ALR (MPH-NCELL-POS request primitive). Unsuccessful position measurement is indicated by receipt of a MPH-NCELL-POS indication primitive with the IE eotd\_res set to EOTD\_REF, indicating an incorrect reference BTS. The unsuccessful operatoin is signalled to RRLP (RRLC-ERROR indication primitive).

**Preamble:** RR154C



#### Parametrization

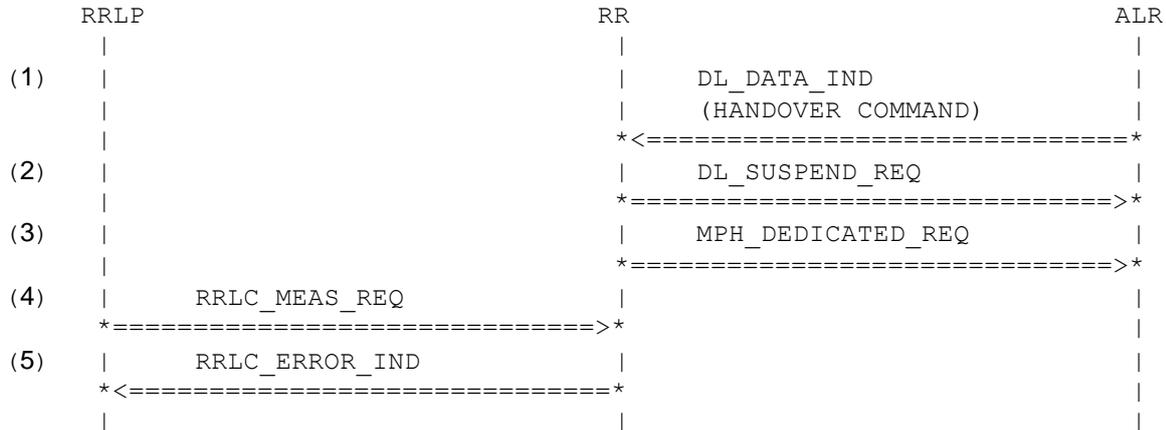
Primitive	Parameter	Value
(1) RRLC_MEAS_REQ	req_id	REQ_ID_0
	arfcn	ARFCN_67
	bsic	BSIC_5
	assist_data	NCELL_EOTD_6
(2) MPH_NCELL_POS_REQ	req_id	REQ_ID_0
	ncell_eotd	NCELL_EOTD_6
(3) MPH_NCELL_POS_IND	req_id	REQ_ID_0
	eotd_res	EOTD_REF
	ta	NOT_USED
	fn	NOT_USED
	eotd_sc_res	NOT_USED
	eotd_sc_res1	NOT_USED
	eotd_nc_res	NOT_USED
(4) RRLC_ERROR_IND	cause	LCS_WRONG_BTS

History: 26 September 2002 DL Initial

**3.20.3 RR804: E-OTD Request rejected by RR – Handover in progress**

**Description:** Following commencement of handover (receipt of HANDOVER COMMAND message), RRLC initiates a position measurement request and forwards a list of the neighbour cells in the RRLC-MEAS request primitive. RR rejects the request by sending an RRLC-ERROR indication primitive to RRLP.

**Preamble:** RR185



**Parametrization**

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
	chan_desc_after	CHANNEL_DESC_FACCH3
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
	synch_ind	SYNCH_IND_2
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_1
	chan_mode	CHANNEL_MODE_SPEECH
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
	chan_mode8	NOT_USED
	chan_desc_after_2	NOT_USED
	chan_mode_2	NOT_USED
	freq_chan_seq_after	NOT_USED
	mob_alloc_after	MOBILE_ALLOCATION_2
	start_time	START_TIME_1
	time_diff	NOT_USED
	time_advance	NOT_USED

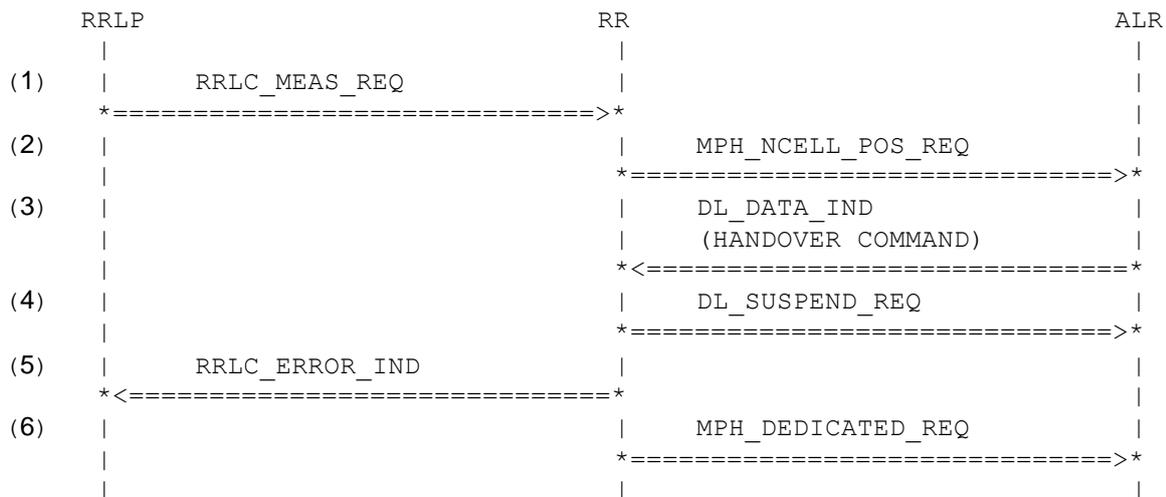
	freq_short_list_before	NOT_USED
	freq_list_before	NOT_USED
	chan_desc_before	CHANNEL_DESC_FACCH4
	chan_desc_before_2	NOT_USED
	freq_chan_seq_before	NOT_USED
	mob_alloc_before	MOBILE_ALLOCATION_3
	ciph_mode_set	NOT_USED
	}	
(2) DL_SUSPEND_REQ	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
(3) MPH_DEDICATED_REQ	mod	MODE_PRE_SYNC_HANDOVER
	start	STARTING_TIME_1
	ch_type	PRR_CHANNEL_TYPE_6
	ch_type2	PRR_CHANNEL_TYPE_7
	arfcn	ARFCN_32
	bsic	NOT_USED
	ho_param	HO_PARAM_1
	tr_para	PRR_TR_PARA_HO
	ciph	NO_CIPHERING
	amr_conf	NOT_USED
(4) RRLC_MEAS_REQ	req_id	REQ_ID_0
	arfcn	ARFCN_67
	bsic	BSIC_5
	assist_data	NCELL_EOTD_6
(5) RRLC_ERROR_IND	cause	LCS_HANDOVER

History: 26 September 2002 DL Initial

### 3.20.4 RR806: E-OTD Operation interrupted due to start of Handover

**Description:** Following commencement of handover (receipt of HANDOVER COMMAND message), RRLC initiates a position measurement request and forwards a list of the neighbour cells in the RRLC-MEAS request primitive. RR rejects the request by sending an RRLC-ERROR indication primitive to RRLP.

**Preamble:** RR154C

**Parametrization**

Primitive	Parameter	Value
(1) RRLC_MEAS_REQ	req_id	REQ_ID_0
	arfcn	ARFCN_67
	bsic	BSIC_5
	assist_data	NCELL_EOTD_6
(2) MPH_NCELL_POS_REQ	req_id	REQ_ID_0
	ncell_eotd	NCELL_EOTD_6
(3) DL_DATA_IND	ch_type	CH_TYPE_SDCCH
	sapi	SAPI_0
	sdu	
	{	
	component	RR
	direction	DOWNLINK
	pd	D_HANDOV_CMD
	ti	TI_0
	cell_desc	CELL_DESC_1
	chan_desc_after	CHANNEL_DESC_FACCH3
	handov_ref	HANDOV_REF_1
	pow_cmd_access	POW_05_HO
	synch_ind	SYNCH_IND_2
	freq_short_list_after	NOT_USED
	freq_list_after	NOT_USED
	cell_chan_desc	CELL_CHAN_DESC_1
	chan_mode	CHANNEL_MODE_SPEECH
	chan_mode2	NOT_USED
	chan_mode3	NOT_USED
	chan_mode4	NOT_USED
	chan_mode5	NOT_USED
	chan_mode6	NOT_USED
	chan_mode7	NOT_USED
chan_mode8	NOT_USED	
chan_desc_after_2	NOT_USED	
chan_mode_2	NOT_USED	
freq_chan_seq_after	NOT_USED	
mob_alloc_after	MOBILE_ALLOCATION_2	

```

start_time          START_TIME_1
time_diff           NOT_USED
time_advance        NOT_USED
freq_short_list_before NOT_USED
freq_list_before    NOT_USED
chan_desc_before    CHANNEL_DESC_FACCH4
chan_desc_before_2  NOT_USED
freq_chan_seq_before NOT_USED
mob_alloc_before    MOBILE_ALLOCATION_3
ciph_mode_set       NOT_USED
}
    
```

(4) DL\_SUSPEND\_REQ

```

ch_type             CH_TYPE_FACCH
sapi                SAPI_0
    
```

(5) RRLC\_ERROR\_IND

```

cause              LCS_HANOVER
    
```

(6) MPH\_DEDICATED\_REQ

```

mod                MODE_PRE_SYNC_HANOVER
start              STARTING_TIME_1
ch_type            PRR_CHANNEL_TYPE_6
ch_type2           PRR_CHANNEL_TYPE_7
arfcn              ARFCN_32
bsic               NOT_USED
ho_param           HO_PARAM_1
tr_para            PRR_TR_PARA_HO
ciph               NO_CIPHERING
amr_conf           NOT_USED
    
```

History: 26 September 2002 DL Initial

### 3.20.5 RR820: sending APDU, no segmentation

Description:

Requirement:

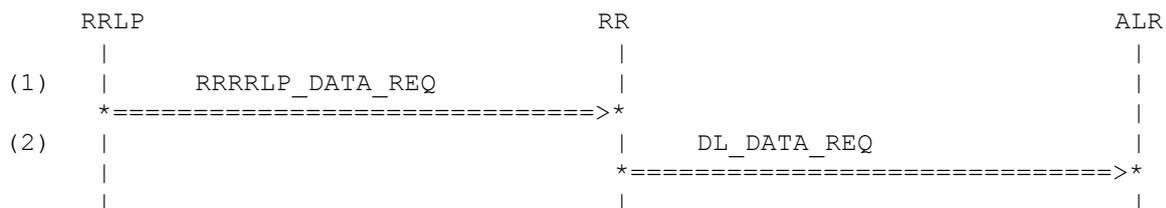
Segmentation shall not be used when an APDU fits into a single APPLICATION INFORMATION message of maximum or smaller size.

On receiving an APPLICATION INFORMATION message, the receiving layer 3 entity shall deliver the message contents to the identified local application.

Scenario:

An APDU of maximum length (251 octets) shall be sent in a RRLC\_DATA\_REQ primitive. No segmentation should be observed, the APDU is forwarded in exactly one DL\_DATA\_REQ primitive.

Preamble: RR154C



Parametrization

Primitive	Parameter	Value
-----------	-----------	-------

(1) RRRRLP_DATA_REQ	cr	CONST_1
	sdu	APDU_MSG_RRRLP_820
(2) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_820
History:	15 October 2002	VK Initial

### 3.20.6 RR821: sending APDU, with segmentation

#### Description:

##### Requirement:

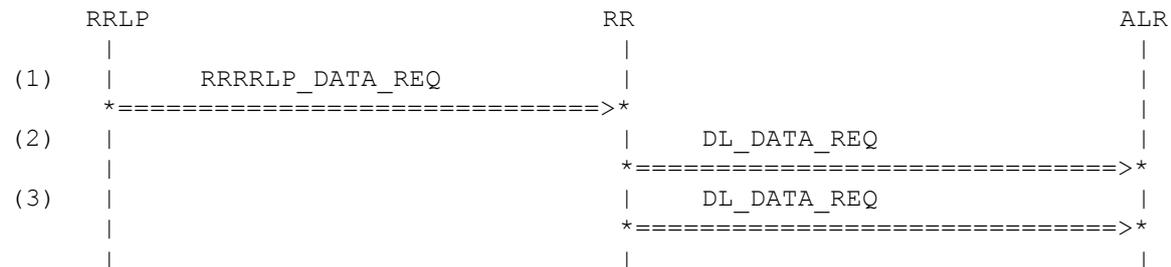
The sending layer 3 entity shall segment an APDU by dividing it into one or more segments exactly fitting into maximum sized APPLICATION INFORMATION messages plus a final segment fitting into an APPLICATION INFORMATION message of maximum size or smaller.

##### Scenario:

An APDU of maximum length + 1 octet (252 octets) shall be sent in a RRLC\_DATA\_REQ primitive.

Segmentation should be observed.

#### Preamble: RR154C



#### Parametrization

Primitive	Parameter	Value
(1) RRRRLP_DATA_REQ	cr	CONST_1
	sdu	APDU_MSG_RRRLP_821
(2) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_821a
(3) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_821b

History: 15 October 2002 VK Initial

**3.20.7 RR822: sending APDU, three segments**

Description:

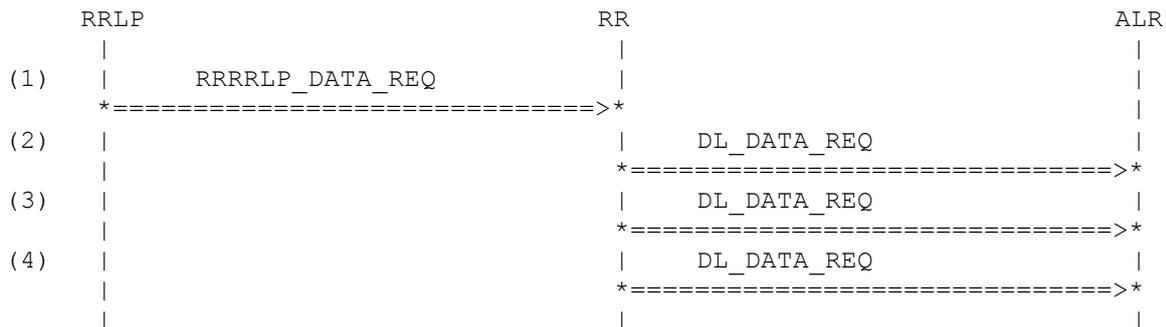
Requirement:

Once segmented, the resulting APPLICATION INFORMATION messages shall be transferred in sequence to the data link layer for transmission, without being intersperced by other level 3 messages. The first APPLICATION INFORMATION message in the sequence shall indicate "First Segment" and "Not Last Segment". Subsequent APPLICATION INFORMATION messages except for the last shall indicate "Not First Segment" and "Not Last Segment". The last APPLICATION INFORMATION message shall indicate "Not First Segment" and "Last Segment" and shall include a C/R flag as provided by the sending application.

Scenario:

An APDU of 3\* maximum length \*(3\*251=753 octets) shall be sent in a RRLC\_DATA\_REQ primitive, immediately followed by another DATP message. Segmentation should be observed, three full APDU segments should be generated containing the correct APDU flags. The DTAP message is forwarded after the APDU.

Preamble: RR154C



Parametrization

Primitive	Parameter	Value
(1) RRRRLP_DATA_REQ	cr	CONST_1
	sdu	APDU_MSG_RRRLP_822
(2) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_822a
(3) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_822b
(4) DL_DATA_REQ	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_822c

History: 15 October 2002 VK Initial

### 3.20.8 RR823: receiving APDU, no segmentation

#### Description:

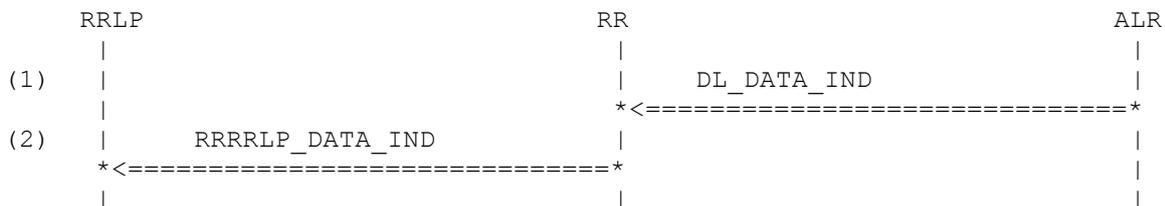
##### Requirement:

On receiving an APPLICATION INFORMATION message, the receiving layer 3 entity shall deliver the message contents to the identified local application.

##### Scenario:

An APDU of maximum length (251 octets) shall be received in a DL\_DATA\_IND primitive and forwarded in a RRLC\_DATA\_IND primitive. No segmentation should be observed. The C/R flag shall take on '1'.

Preamble: RR154C



#### Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_820
(2) RRRRLP_DATA_IND	cr	CONST_1
	sdu	APDU_MSG_RRRLP_820

History: 15 October 2002 VK Initial

### 3.20.9 RR824: receiving APDU, three segments

#### Description:

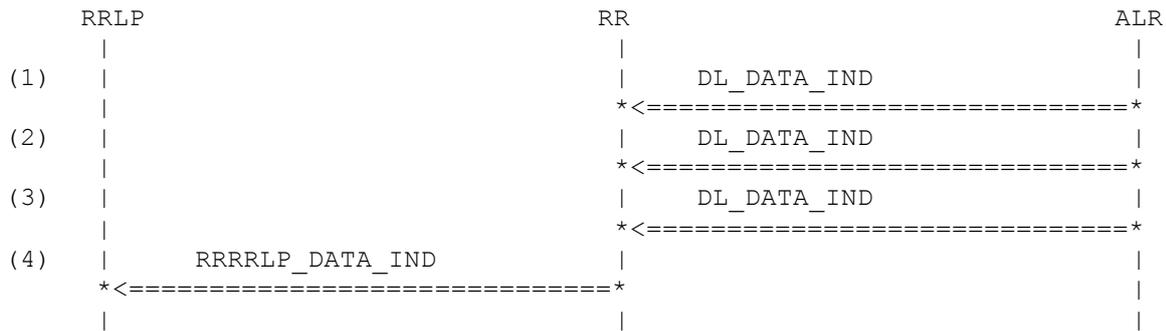
##### Requirement:

The receiving layer 3 entity shall reassemble any segmented APDU before transfer to the local application.

##### Scenario:

All three segments of an APDU of length 3\*251 octets = 753 octets shall be received in DL\_DATA\_IND primitives and forwarded in one RRLC\_DATA\_IND primitive. The C/R flag shall take on '1'.

Preamble: RR154C



Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_822a
(2) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_822b
(3) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_822c
(4) RRRRLP_DATA_IND	cr	CONST_1
	sdu	APDU_MSG_RRRLP_822

History: 15 October 2002 VK Initial

**3.20.10 RR825: receiving APDU, three segments, timeout**

Description:

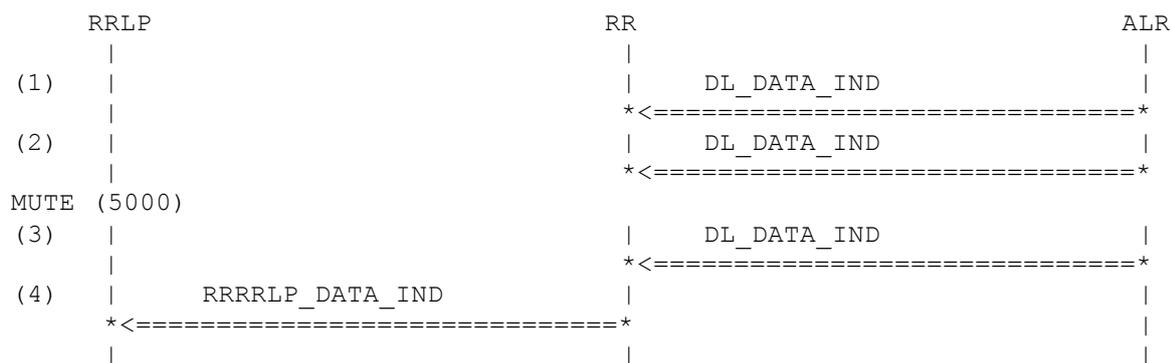
Requirement:

The receiver may employ a timer to detect possible loss of APDU segments. If employed, the timer shall be started when the first APDU segment is received and cancelled after the last segment is received.

Scenario:

The first two segments of an APDU shall be received in a DL\_DATA\_IND primitive. Subsequent segments of the APDU are not received within 5 seconds. No RRLC\_DATA\_IND primitive is sent. The two segments are discarded. Another APDU (no segmentation) is received in a DL\_DATA\_IND primitive and forwarded in a RRLC\_DATA\_IND primitive.

Preamble: RR154C



Parametrization		Parameter	Value
Primitive			
(1) DL_DATA_IND		ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_822a
(2) DL_DATA_IND		ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_822b
(3) DL_DATA_IND		ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_820
(4) RRRRLP_DATA_IND		cr	CONST_1
		sdu	APDU_MSG_RRRRLP_820
History:	15 October 2002	VK	Initial
	06.03.03	LG	TIMEOUT replaced by MUTE

**3.20.11 RR826: receiving APDU, abnormal, other layer 3 message**

Description:

Requirement:

An APPLICATION INFORMATION transfer error shall be detected due to any of the following:

- b) While performing APDU reassembly
  - receipt of any other layer 3 message defined to use SAPI 0 on the main DCCH;

Scenario:

The first segment of an segmented APDU is received in a DL\_DATA\_IND followed by the reception of a DTAP layer 3 message. The received APDU segments are discarded. Then the remaining segments of the APDU are received. No RRLC\_DATA\_IND is generated. Another APDU (no segmentation) is received in a DL\_DATA\_IND primitive and forwarded in a RRLC\_DATA\_IND primitive.

Preamble: RR154C

RRLP	RR	ALR
(1)	DL_DATA_IND	
	*<=====*	
(2)	DL_DATA_IND	
	*<=====*	
(3)	DL_DATA_IND	
	(LAYER 3 MESSAGE)	
	*<=====*	
(4)   RR_DATA_IND		
(LAYER 3 MESSAGE)		
*<=====*		
(5)	DL_DATA_IND	
	*<=====*	
MUTE (500)		
(6)	DL_DATA_IND	
	*<=====*	
(7)   RRRRLP_DATA_IND		
*<=====*		

Parametrization

Primitive	Parameter	Value	
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	APDU_MSG_DL_822a	
(2) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	APDU_MSG_DL_822b	
(3) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	MM_MESSAGE	
(4) RR_DATA_IND	d1	NOT_USED	
	d2	NOT_USED	
	sdu	MM_MESSAGE	
(5) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	APDU_MSG_DL_822c	
(6) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	APDU_MSG_DL_820	
(7) RRRRLP_DATA_IND	cr	CONST_1	
	sdu	APDU_MSG_RRRRLP_820	
History:	15 October 2002 06.03.03	VK LG	Initial MUTE inserted

**3.20.12 RR827: receiving APDU, abnormal, "First or Only Segment"**

Description:

Requirement:

An APPLICATION INFORMATION transfer error shall be detected due to any of the following:

- b) While performing APDU reassembly
  - receipt of an APDU or APDU segment indicating "First or Only Segment";

Scenario:

The first segment of an segmented APDU is received in a DL\_DATA\_IND followed by the reception of the first segment of a another segmented APDU. Then remaining APDU-segments are received. A RRLC\_DATA\_IND is generated containing the re-segmented APDU containing the first segment which was received at the second position.

Preamble: RR154C

	RRLP		RR		ALR
(1)				DL_DATA_IND	
				*<-----*	
MUTE (200)				DL_DATA_IND	
(2)				*<-----*	
(3)				DL_DATA_IND	
				*<-----*	
(4)				DL_DATA_IND	
				*<-----*	
(5)		RRRRLP_DATA_IND			
		*<-----*			

Parametrization

	<u>Primitive</u>	<u>Parameter</u>	<u>Value</u>
(1)	DL_DATA_IND	ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_827
(2)	DL_DATA_IND	ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_822a
(3)	DL_DATA_IND	ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_822b
(4)	DL_DATA_IND	ch_type	CH_TYPE_FACCH
		sapi	SAPI_0
		sdu	APDU_MSG_DL_822c
(5)	RRRRLP_DATA_IND	cr	CONST_1
		sdu	APDU_MSG_RRRLP_822

History:                    15 October 2002                    VK                    Initial  
                                  06.03.03                            LG                    MUTE inserted

**3.20.13 RR828: receiving APDU, abnormal, "First or Only Segment"**

Description:

Requirement:  
 An APPLICATION INFORMATION transfer error shall be detected due to any of the following:  
 c) While not performing APDU reassembly, receipt of an APDU segment indicating "not First or only segment";

Scenario:  
 A APDU segment containing the flags "not First or only segment" and "Last or only segment" is received.  
 Then another APDU (no segmentation) is received in a DL\_DATA\_IND primitive and forwarded in a RRLC\_DATA\_IND primitive.  
 A APDU segment containing the flags "not First or only segment" and "not Last or only segment" is received.  
 Then another APDU (no segmentation) is received in a DL\_DATA\_IND primitive and forwarded in a RRLC\_DATA\_IND primitive.

Preamble: RR154C

	RRLP		RR		ALR
(1)				DL_DATA_IND	
				*<=====*	
MUTE (200)				DL_DATA_IND	
(2)				*<=====*	
(3)		RRRRLP_DATA_IND			
		*<=====*			
(4)				DL_DATA_IND	
				*<=====*	
MUTE (200)				DL_DATA_IND	
(5)				*<=====*	
(6)		RRRRLP_DATA_IND			
		*<=====*			

Parametrization

Primitive	Parameter	Value
(1) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_828a
(2) DL_DATA_IND	ch_type	CH_TYPE_FACCH
	sapi	SAPI_0
	sdu	APDU_MSG_DL_820

(3) RRRRLP_DATA_IND	cr	CONST_1	
	sdu	APDU_MSG_RRRLP_820	
(4) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	APDU_MSG_DL_828b	
(5) DL_DATA_IND	ch_type	CH_TYPE_FACCH	
	sapi	SAPI_0	
	sdu	APDU_MSG_DL_820	
(6) RRRRLP_DATA_IND	cr	CONST_1	
	sdu	APDU_MSG_RRRLP_820	
History:	15 October 2002	VK	Initial
	06.03.03	LG	MUTE inserted

## 4 Suites

INT\_Cell\_Channel\_Desc\_INIT: RR000;  
INT\_Cell\_Channel\_Desc\_CS: RR004;  
INT\_Cell\_Channel\_Desc\_CON\_EST: RR153;  
INT\_Cell\_Channel\_Desc\_DEDI: RR154G;  
INT\_Cell\_Channel\_Desc\_DEDI\_1900: RR154H;  
INT\_Cell\_Channel\_Desc\_ASS\_CMD: RR211F;  
INT\_Cell\_Channel\_Desc\_ASS\_CMD\_FAIL: RR213;  
INT\_Measurement\_Report\_1900: RR193;  
SUI\_Cell\_Channel\_Desc:  
    INT\_Cell\_Channel\_Desc\_INIT,  
    INT\_Cell\_Channel\_Desc\_CS,  
    INT\_Cell\_Channel\_Desc\_CON\_EST,  
    INT\_Cell\_Channel\_Desc\_DEDI,  
    INT\_Cell\_Channel\_Desc\_ASS\_CMD;  
SUI\_Cell\_Channel\_Desc\_Fail:  
    INT\_Cell\_Channel\_Desc\_INIT,  
    INT\_Cell\_Channel\_Desc\_CS,  
    INT\_Cell\_Channel\_Desc\_CON\_EST,  
    INT\_Cell\_Channel\_Desc\_DEDI,  
    INT\_Cell\_Channel\_Desc\_ASS\_CMD\_FAIL;  
SUI\_Measurement\_Report\_1900:  
    INT\_Cell\_Channel\_Desc\_INIT,  
    INT\_Cell\_Channel\_Desc\_CS,  
    INT\_Cell\_Channel\_Desc\_CON\_EST,  
    INT\_Cell\_Channel\_Desc\_DEDI\_1900,  
    INT\_Measurement\_Report\_1900;

/\*

History: 15.07.02      MPA      Initial  
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