



Technical Document – Confidential

GSM PROTOCOL STACK

MULTILAYER TEST SPECIFICATION

CALL CONTROL

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Notes:

1. Initial version
2. New Template
3. Revised and reformatted
4. Improved remaining failed TC
5. LND, Bearer Caps
6. CCBS, added some more testcases
7. Classmark 3 supported bit in classmark 2 always set
8. MCC177 revised
9. CD testcases
10. Word2000, classmark 2 changes, BC changes
11. Add MCC260-266 due to issue #1695; corrected EMERG.SETUP message to include BC IE
12. TCs for TTY/CTM Service
13. Texas Instruments Template
14. CC Capabilities included in CALL CONFIRMED message

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List of References

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

1.1 References

- [1] GSM 2.81, Line Identification Supplementary Services - Stage 1
ETS 300 514, ETSI, September 1994
- [2] GSM 2.82, Call Forwarding Supplementary Services - Stage 1
ETS 300 515, ETSI, September 1994
- [3] GSM 2.83, Call Waiting and Call Hold Supplementary Services - Stage 1
ETS 300 516, ETSI, September 1994
- [4] GSM 2.84, Multi Party Supplementary Services - Stage 1
ETS 300 517, ETSI, September 1994
- [5] GSM 2.85, Closed User Group Supplementary Services - Stage 1
ETS 300 518, ETSI, September 1994
- [6] GSM 2.86, Advice of Charge Supplementary Services - Stage 1
ETS 300 519, ETSI, September 1994
- [7] GSM 2.88, Call Barring Supplementary Services - Stage 1
ETS 300 520, ETSI, September 1994
- [8] GSM 3.14, Support of Dual Tone Multi Frequency Signalling via the GSM System
ETS 300 532, ETSI, April 1994
- [9] GSM 3.40, Technical Realization of the Short Message Service Point-to-Point
ETS 300 536, ETSI, January 1996
- [10] GSM 3.41, Technical Realization of Short Message Service Cell Broadcast
ETS 300 537, ETSI, June 1995
- [11] GSM 3.81, Line Identification Supplementary Services - Stage 2
ETS 300 542, ETSI, February 1995
- [12] GSM 3.82, Call Forwarding Supplementary Services - Stage 2
ETS 300 543, ETSI, February 1995
- [13] GSM 3.83, Call Waiting and Call Hold Supplementary Services - Stage 2
ETS 300 544, ETSI, November 1994
- [14] GSM 3.84, Multi Party Supplementary Services - Stage 2
ETS 300 545, ETSI, November 1994
- [15] GSM 3.85, Closed User Group Supplementary Services - Stage 2
ETS 300 546, ETSI, January 1996
- [16] GSM 3.86, Advice of Charge Supplementary Services - Stage 2
ETS 300 547, ETSI, March 1995
- [17] GSM 3.88, Call Barring Supplementary Services - Stage 2
ETS 300 548, ETSI, November 1994
- [18] GSM 4.01, MS-BSS Interface General Aspects and Principles
ETS 300 550, ETSI, September 1994
- [18a] GSM 4.03, MS-BSS Interface Channel Structures and Access Capabilities
ETS 300 552, ETSI, September 1994
- [19] GSM 4.05, Data Link Layer General Aspects
ETS 300 554, ETSI, September 1994
- [20] GSM 4.06, MS-BSS Interface Data Link Layer Specification
ETS 300 555, ETSI, September 1994
- [21] GSM 4.07, Mobile Radio Interface Signalling Layer 3 General Aspects
ETS 300 556, ETSI, February 1995

- [22] GSM 4.08, Mobile Radio Interface Layer 3 Specification
ETS 300 557, ETSI, January 1996
- [23] GSM 4.10, Mobile Radio Interface Layer 3 Supplementary Services Specification
General Aspects
ETS 300 558, ETSI, February 1995
- [24] GSM 4.11, Point-to-Point Short Message Service Support on Mobile Radio Interface
ETS 300 559, ETSI, October 1995
- [25] GSM 4.12, Short Message Service Cell Broadcast Support on Mobile Radio Interface
ETS 300 560, ETSI, January 1996
- [26] GSM 4.80, Mobile Radio Interface Supplementary Services Specification Formats and Coding
ETS 300 564, ETSI, February 1995
- [27] GSM 4.81, Line Identification Supplementary Services - Stage 3
ETS 300 565, ETSI, February 1995
- [28] GSM 4.82, Call Forwarding Supplementary Services - Stage 3
ETS 300 566, ETSI, February 1995
- [29] GSM 4.83, Call Waiting and Call Hold Supplementary Services - Stage 3
ETS 300 567, ETSI, February 1995
- [30] GSM 4.84, Multi Party Supplementary Services - Stage 3
ETS 300 568, ETSI, February 1995
- [31] GSM 4.85, Closed User Group Supplementary Services - Stage 3
ETS 300 569, ETSI, February 1995
- [32] GSM 4.86, Advice of Charge Supplementary Services - Stage 3
ETS 300 570, ETSI, February 1995
- [33] GSM 4.88, Call Barring Supplementary Services - Stage 3
ETS 300 571, ETSI, February 1995
- [34] GSM 5.01, Physical Layer on the Radio Path General Description
ETS 300 573, ETSI, October 1995
- [35] GSM 5.02, Multiplexing and Multiple Access on the Radio Path
ETS 300 574, ETSI, January 1996
- [36] GSM 5.08, Radio Sub-system Link Control
ETS 300 578, ETSI, January 1996
- [37] GSM 5.10, Radio Sub-system Synchronisation
ETS 300 579, ETSI, October 1995
- [38] Service Access Point MMREG
6147.100.96.100; Condat AG
- [39] Service Access Point MNCC
6147.101.96.100; Condat AG
- [40] Service Access Point MNSS
6147.102.96.100; Condat AG
- [41] Service Access Point MNSMS
6147.103.96.100; Condat AG
- [42] Service Access Point MMCC
6147.104.97.100; Condat AG
- [43] Service Access Point MMSS
6147.105.97.100; Condat AG
- [44] Service Access Point MMSMS
6147.106.97.100; Condat AG

[45]	Service Access Point RR 6147.107.97.100; Condat AG
[46]	Service Access Point SIM 6147.108.97.100; Condat AG
[47]	Service Access Point MPH 6147.109.96.100; Condat AG
[48]	Service Access Point DL 6147.110.96.100; Condat AG
[49]	Service Access Point MDL 6147.111.96.100; Condat AG
[50]	Service Access Point PH 6147.112.97.100; Condat AG
[51]	Service Access Point MMI 6147.113.96.100; Condat AG
[52]	Message Sequence Charts CC 6147.200.97.100; Condat AG
[53]	Message Sequence Charts SS 6147.201.97.100; Condat AG
[54]	Message Sequence Charts SMS 6147.202.97.100; Condat AG
[55]	Message Sequence Charts MM 6147.203.97.100; Condat AG
[56]	Message Sequence Charts RR 6147.204.96.100; Condat AG
[57]	Message Sequence Charts DL 6147.205.96.100; Condat AG
[58]	Users Guide 6147.300.96.100; Condat AG
[59]	Test Specification CC 6147.400.97.100; Condat AG
[60]	Test Specification SS 6147.401.97.100; Condat AG
[61]	Test Specification SMS 6147.402.97.100; Condat AG
[62]	Test Specification MM 6147.403.97.100; Condat AG
[63]	Test Specification RR 6147.404.97.100; Condat AG
[64]	Test Specification DL 6147.405.97.100; Condat AG
[65]	Test Specification CCD 6147.406.97.100; Condat AG
[66]	SDL Specification CC 6147.500.97.100; Condat AG
[67]	SDL Specification SS 6147.501.97.100; Condat AG

[68]	SDL Specification SMS 6147.502.97.100; Condat AG
[69]	SDL Specification MM 6147.503.97.100; Condat AG
[70]	SDL Specification RR 6147.504.97.100; Condat AG
[71]	SDL Specification DL 6147.505.97.100; Condat AG
[72]	Message Specification CC 6147.600.97.100; Condat AG
[73]	Message Specification SS 6147.601.97.100; Condat AG
[74]	Message Specification SMS 6147.602.97.100; Condat AG
[75]	Message Specification MM 6147.603.97.100; Condat AG
[76]	Message Specification RR 6147.604.97.100; Condat AG
[77]	Message Specification DL 6147.605.97.100; Condat AG
[78]	Technical Documentation CC 6147.700.97.100; Condat AG
[79]	Technical Documentation SS 6147.701.97.100; Condat AG
[80]	Technical Documentation SMS 6147.702.97.100; Condat AG
[81]	Technical Documentation MM 6147.703.97.100; Condat AG
[82]	Technical Documentation RR 6147.704.97.100; Condat AG
[83]	Technical Documentation DL 6147.705.97.100; Condat AG
[84]	Technical Documentation CCD 6147.706.97.100; Condat AG

1.2 Abbreviations

AGCH	Access Grant Channel
BCCH	Broadcast Control Channel
BS	Base Station
BSIC	Base Station Identification Code
CBCH	Cell Broadcast Channel
CBQ	Cell Bar Qualify
CC	Call Control
CCCH	Common Control Channel
CCD	Condat Coder Decoder
CKSN	Ciphering Key Sequence Number
C/R	Command / Response

C1	Path Loss Criterion
C2	Reselection Criterion
DCCH	Dedicated Control Channel
DISC	Disconnect Frame
DL	Data Link Layer
DM	Disconnected Mode Frame
EA	Extension Bit Address Field
EL	Extension Bit Length Field
EMMI	Electrical Man Machine Interface
F	Final Bit
FACCH	Fast Associated Control Channel
FHO	Forced Handover
GP	Guard Period
GSM	Global System for Mobile Communication
HPLMN	Home Public Land Mobile Network
I	Information Frame
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity
Kc	Authentication Key
L	Length Indicator
LAI	Location Area Information
LPD	Link Protocol Discriminator
M	More Data Bit
MCC	Mobile Country Code
MM	Mobility Management
MMI	Man Machine Interface
MNC	Mobile Network Code
MS	Mobile Station
NCC	National Colour Code
NECI	New Establishment Causes included
N(R)	Receive Number
N(S)	Send Number
OTD	Observed Time Difference
P	Poll Bit
PCH	Paging Channel
PDU	Protocol Description Unit
P/F	Poll / Final Bit
PL	Physical Layer
PLMN	Public Land Mobile Network
RACH	Random Access Channel
REJ	Reject Frame
RNR	Receive Not Ready Frame
RR	Radio Resource Management
RR	Receive Ready Frame
RTD	Real Time Difference
SABM	Set Asynchronous Balanced Mode
SACCH	Slow Associated Control Channel
SAP	Service Access Point
SAPI	Service Access Point Identifier
SDCCH	Slow Dedicated Control Channel
SIM	Subscriber Identity Module
SMS	Short Message Service
SMSCB	Short Message Service Cell Broadcast
SS	Supplementary Services
TCH	Traffic Channel
TCH/F	Traffic Channel Full Rate
TCH/H	Traffic Channel Half Rate
TDMA	Time Division Multiple Access
TMSI	Temporary Mobile Subscriber Identity

UA	Unnumbered Acknowledgement Frame
UI	Unnumbered Information Frame
VPLMN	Visiting Public Land Mobile Network
V(A)	Acknowledgement State Variable
V(R)	Receive State Variable
V(S)	Send State Variable

1.3 Terms

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

2 Overview

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

The base of the Protocol Stack rests on the physical layer.

The Data Link Layer (DL) is used to handle an acknowledged connection between mobile and base station. The LAPDm protocol is used.

Radio Resource (RR) manages the resources of the air-interface. That means configuration of physical layer, cell selection and cell reselection, data transfer, RR-Connection handling.

Mobility Management (MM) handles registration aspects for the mobile station. It detects changes of location areas and updates a mobile station in the new location area.

Call Control (CC) provides the call functionality. This includes call establishment, call maintenance procedures like Hold, Retrieve or Modify, and call disconnection.

Supplementary Services (SS) handles all call independent supplementary services like call forwarding or call barring.

Short Message Services (SMS) is used for sending and receiving point-to-point short messages. Additionally the reception of cell broadcast short messages is included.

The man machine interface (MMI) is the interface to the user. Normally it is connected with a keypad as input device and a display as output device.

Between the several entities data interfaces are defined. These data interfaces are called Service Access Points (SAPs), indicating that an upper layer uses the services of a lower layer.

The GSM specification do not set out any implementation of the Protocol Stack. The following diagrams show the implementation described in all these documents for the mobile station. All entities except the Man Machine Interface and Physical Layer are implemented as part of the Protocol Stack.

(This figure is missing here as it seems that it causes problems with Word)

Figure 1: Mobile-station protocol architecture

This document describes the tests for the whole protocol stack according to GSM 11.10 chapter 26.8.

3 Parameters

```
#define REST_OCTET 0x2b
#define SAPI_0      0
/*-----*\
| GSM 11.10
| 10 Generic call set up procedure
| 10.1 Generic call setup-up procedure for mobile terminating speech calls
| 10.1.2 Definition of system information messages
\*-----*/
/*-----*\
| Information Elements
\*-----*/
/*-----*\
| BCCH Frequency list:
| Indicates seven surrounding cells on any ARFCN of the supported
| band, excluding ARFCNs in or immediately adjacent to those
| specified in section 6.2 (GSM 11.10).
| From GSM 11.10, section 6.2 the following ARFCN are given :
|      10, 14, 17, 18, 22, 24, 26, 30, 31, 34, 38, 42, 45, 46, 50,
|      52, 54, 58, 59, 62, 66, 70, 73, 74, 78, 80, 82, 86, 87, 90,
|      94, 98, 101, 102, 106, 108, 110, 114
| The following 7 cells are chosen :
|      121,117,      76,      48,      12,7,1
| Thus BA is : 01100000 00000800 00008000 00000841
\*-----*/
IE_BEGIN(bcch_frequency_list)
    BF(32,0x01100000,ACT_CHECK,ANONYMOUS,"bit 128 thru 97")
    BF(32,0x00000800,ACT_CHECK,ANONYMOUS,"bit 96 thru 65")
    BF(32,0x00008000,ACT_CHECK,ANONYMOUS,"bit 64 thru 33")
    BF(32,0x00000841,ACT_CHECK,ANONYMOUS,"bit 32 thru 1")
IE_END(bcch_frequency_list)

IE_BEGIN(cell_channel_description)
    BF(32,0x00000000,ACT_CHECK,ANONYMOUS,"Includes the ")
    BF(32,0x00000000,ACT_CHECK,ANONYMOUS,"hopping sequence ")
    BF(32,0x00000000,ACT_CHECK,ANONYMOUS,"ARFCNs, if hopping ")
    BF(32,0x00000000,ACT_CHECK,ANONYMOUS,"is used. ")
IE_END(cell_channel_description)

IE_BEGIN(cell_identity)
    BF(16,0x0001,ACT_CHECK,ANONYMOUS,"CI VALUE 0001 hex (not relevant)")
IE_END(cell_identity)

IE_BEGIN(cell_identity_B)
    BF(16,0x0002,ACT_CHECK,ANONYMOUS,"CI VALUE 0002 hex (not relevant)")
IE_END(cell_identity_B)

IE_BEGIN(cell_options)
    BF(1,0,ACT_CHECK,ANONYMOUS,"spare ")
    BF(1,0,ACT_CHECK,pwrc,"power control not set")
    BF(2,2,ACT_CHECK,dtx,"MS must not use DTX ")
    BF(4,1,ACT_CHECK,radio_link_time_out,"8 ")
IE_END(cell_options)

IE_BEGIN(cell_selection_parameter)
    BF(3, 0,ACT_CHECK,cell_reselect_hysteresis,"0 dB")
    BF(5, 0,ACT_CHECK,ms_txpwr_max_cch,"Max. output power of MS")
    BF(1, 0,ACT_CHECK,acs,"no additional cell params")
    BF(1, 0,ACT_CHECK,neci,"New est. cause not supp.")
```

```

    BF(6,-90+111,ACT_CHECK,rxlev_access_min    ,"-90 dBm")
IE_END(cell_selection_parameter)

IE_BEGIN(control_channel_description)
    BF(1,0,ACT_CHECK,ANONYMOUS    ,"spare")
    BF(1,0,ACT_CHECK,att           ,"MS shall not apply (not relevant) ")
    BF(3,0,ACT_CHECK,bs_ag_blks_res,"0 blocks reserved (not relevant) ")
    BF(3,1,ACT_CHECK,ccch_conf     ,"Combined CCCH/SDCCH (not relevant)")
    BF(5,0,ACT_CHECK,ANONYMOUS    ,"spare")
    BF(3,3,ACT_CHECK,bs_pa_mfrms   ,"5 multiframes (not relevant) ")
    BF(8,0,ACT_CHECK,t3212         ,"Infinite")
IE_END(control_channel_description)

IE_BEGIN(l2_pseudo_length_12)
    BF(6,12,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_12)

IE_BEGIN(l2_pseudo_length_18)
    BF(6,18,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_18)

IE_BEGIN(l2_pseudo_length_21)
    BF(6,21,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_21)

IE_BEGIN(l2_pseudo_length_22)
    BF(6,22,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 1,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(l2_pseudo_length_22)

#define MCC    0x262    /* 262 decimal (not relevant) */
#define MNC    1        /* 01 decimal (not relevant) */
#define LAC    0x0001   /* 0001 hex (not relevant) */
#define LAC_B  0x0002   /* 0002 hex (not relevant) */

IE_BEGIN(location_area_identification)
    BF( 4,6      ,ACT_CHECK,mcc_dig_2,"digit 2 of mobile country code")
    BF( 4,2      ,ACT_CHECK,mcc_dig_1,"digit 1 of mobile country code")
    BF( 4, 0xF,ACT_CHECK,ANONYMOUS  ,"end of MCC")
    BF( 4,2      ,ACT_CHECK,mcc_dig_3,"digit 3 of mobile country code")
    BF( 4,1      ,ACT_CHECK,mnc_dig_2,"digit 2 of mobile network code")
    BF( 4,0      ,ACT_CHECK,mnc_dig_1,"digit 1 of mobile network code")
    BF(16, LAC,ACT_CHECK,lac        ,"Location area code")
IE_END(location_area_identification)

IE_BEGIN(location_area_identification_B)
    BF( 4,6      ,ACT_CHECK,mcc_dig_2,"digit 2 of mobile country code")
    BF( 4,2      ,ACT_CHECK,mcc_dig_1,"digit 1 of mobile country code")
    BF( 4, 0xF,ACT_CHECK,ANONYMOUS  ,"end of MCC")
    BF( 4,2      ,ACT_CHECK,mcc_dig_3,"digit 3 of mobile country code")
    BF( 4,1      ,ACT_CHECK,mnc_dig_2,"digit 2 of mobile network code")
    BF( 4,0      ,ACT_CHECK,mnc_dig_1,"digit 1 of mobile network code")
    BF(16, LAC_B,ACT_CHECK,lac       ,"Location area code")

```

```

IE_END(location_area_identification_B)

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

IE_BEGIN(tmsi)
    BF( 8, 0x12, ACT_CHECK, ANONYMOUS, SILENT)
    BF( 8, 0x34, ACT_CHECK, ANONYMOUS, SILENT)
    BF( 8, 0x56, ACT_CHECK, ANONYMOUS, SILENT)
    BF( 8, 0x78, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(tmsi)

IE_BEGIN(tmsi_2)
    BF( 8, 0x12, ACT_CHECK, ANONYMOUS, SILENT)
    BF( 8, 0x79, ACT_CHECK, ANONYMOUS, SILENT)
    BF( 8, 0x13, ACT_CHECK, ANONYMOUS, SILENT)
    BF( 8, 0x78, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(tmsi_2)

IE_BEGIN(ncc_permitted)
    BF(8,0xFF,ACT_CHECK,ncc_permit,"e.g. all NCCs permitted")
IE_END(ncc_permitted)

IE_BEGIN(rach_control_parameter)
    BF( 2,0,ACT_CHECK,max_retrans, "Any Value ")
    BF( 4,0,ACT_CHECK,tx_integer, "Any Value ")
    BF( 1,0,ACT_CHECK,cell_bar_access, "Not barred ")
    BF( 1,1,ACT_CHECK,call_re_establishment, "Not Allowed")
    BF( 5,0,ACT_CHECK,access_control_class_15_11, "None Barred")
    BF( 1,0,ACT_CHECK,emergency_call, "Allowed ")
    BF(10,0,ACT_CHECK,access_control_class_09_00, "None Barred")
IE_END(rach_control_parameter)

IE_BEGIN(rach_control_parameter_reest)
    BF( 2,0,ACT_CHECK,max_retrans, "Any Value ")
    BF( 4,0,ACT_CHECK,tx_integer, "Any Value ")
    BF( 1,0,ACT_CHECK,cell_bar_access, "Not barred ")
    BF( 1,0,ACT_CHECK,call_re_establishment, "Allowed")
    BF( 5,0,ACT_CHECK,access_control_class_15_11, "None Barred")
    BF( 1,0,ACT_CHECK,emergency_call, "Allowed ")
    BF(10,0,ACT_CHECK,access_control_class_09_00, "None Barred")
IE_END(rach_control_parameter_reest)

IE_BEGIN(rr_management_protocol_discriminator)
    BF(4, 6,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(rr_management_protocol_discriminator)

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

```



```
IE_BEGIN(si_1_rest_octets)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, "Spare Octets")
IE_END(si_1_rest_octets)

IE_BEGIN(si_3_rest_octets) /* optionally contains cell (re)select params */
    BF(1, 0, ACT_CHECK, p1, "C2 parameters not present")
    BF(7, REST_OCTET & 0x7F, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(si_3_rest_octets)

IE_BEGIN(si_4_rest_octets) /* optionally contains cell (re)select params */
    BF(1, 0, ACT_CHECK, p1, "C2 parameters not present")
    BF(7, REST_OCTET & 0x7F, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
    BF(8, REST_OCTET, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(si_4_rest_octets)

IE_BEGIN(system_information_type_1_message_type)
    BF(8, 0x19, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(system_information_type_1_message_type)

IE_BEGIN(system_information_type_2_message_type)
    BF(8, 0x1A, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(system_information_type_2_message_type)

IE_BEGIN(system_information_type_3_message_type)
    BF(8, 0x1B, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(system_information_type_3_message_type)

IE_BEGIN(system_information_type_4_message_type)
    BF(8, 0x1C, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(system_information_type_4_message_type)

IE_BEGIN(system_information_type_5_message_type)
    BF(8, 0x1D, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(system_information_type_5_message_type)

IE_BEGIN(system_information_type_6_message_type)
    BF(8, 0x1E, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(system_information_type_6_message_type)

IE_BEGIN(paging_request_type_1_message_type)
    BF(8, 0x21, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(paging_request_type_1_message_type)

IE_BEGIN(paging_request_type_2_message_type)
    BF(8, 0x22, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(paging_request_type_2_message_type)

IE_BEGIN(paging_request_type_3_message_type)
```

```
BF(8, 0x24,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(paging_request_type_3_message_type)

IE_BEGIN(immediate_assignment_message_type)
BF(8, 0x3F,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(immediate_assignment_message_type)

IE_BEGIN(paging_response_message_type)
BF(8, 0x27,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(paging_response_message_type)

IE_BEGIN(ciphering_mode_command_message_type)
BF(8, 0x35,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(ciphering_mode_command_message_type)

IE_BEGIN(ciphering_mode_complete_message_type)
BF(8, 0x32,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(ciphering_mode_complete_message_type)

IE_BEGIN(handover_command_message_type)
BF(8, 0x2B,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(handover_command_message_type)

IE_BEGIN(handover_complete_message_type)
BF(8, 0x2C,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(handover_complete_message_type)

IE_BEGIN(handover_failure_message_type)
BF(8, 0x28,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(handover_failure_message_type)

IE_BEGIN(assignment_failure_message_type)
BF(8, 0x2F,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(assignment_failure_message_type)

IE_BEGIN(channel_mode_modify_message_type)
BF(8, 0x10,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(channel_mode_modify_message_type)

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

IE_BEGIN(assignment_command_message_type)
BF(8, 0x2E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(assignment_command_message_type)

IE_BEGIN(assignment_complete_message_type)
BF(8, 0x29,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(assignment_complete_message_type)

IE_BEGIN(cm_service_request_message_type)
BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
BF(6, 0x24,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(cm_service_request_message_type)

IE_BEGIN(cm_service_abort_message_type)
BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
```

```
    BF(6, 0x23,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(cm_service_abort_message_type)
```

```
IE_BEGIN(cm_service_reject_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x22,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(cm_service_reject_message_type)
```

```
IE_BEGIN(cm_service_accept_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x21,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(cm_service_accept_message_type)
```

```
IE_BEGIN(call_proceeding_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x02,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(call_proceeding_message_type)
```

```
IE_BEGIN(modify_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x17,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(modify_message_type)
```

```
IE_BEGIN(modify_reject_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x13,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(modify_reject_message_type)
```

```
IE_BEGIN(hold_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x18,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(hold_message_type)
```

```
IE_BEGIN(hold_acknowledge_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x19,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(hold_acknowledge_message_type)
```

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

```
MSG3_BEGIN(system_information_type_1)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1)
```

```
MSG3_BEGIN(system_information_type_2)
    IE(l2_pseudo_length_22)
```

```
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(bcch_frequency_list)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2)

MSG3_BEGIN(system_information_type_3)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3)

MSG3_BEGIN(system_information_type_4)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4)

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

MSG3_BEGIN(system_information_type_6)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_6_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(cell_options)
    IE(ncc_permitted)
MSG3_END(system_information_type_6)

MSG3_BEGIN(system_information_type_1_1900)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_1900)
```

```
MSG3_BEGIN(system_information_type_2_1900)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(bcch_frequency_list)
    IE(ncc_permitted)
    IE(rach_control_parameter)
MSG3_END(system_information_type_2_1900)

MSG3_BEGIN(system_information_type_3_1900)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_1900)

MSG3_BEGIN(system_information_type_4_1900)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
    IE(rach_control_parameter)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_1900)

MSG3_BEGIN(system_information_type_5_1900)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(bcch_frequency_list)
MSG3_END(system_information_type_5_1900)

MSG3_BEGIN(system_information_type_6_1900)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_6_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(cell_options)
    IE(ncc_permitted)
MSG3_END(system_information_type_6_1900)

/*-----*\
| GSM 11.10
| 10 Generic call set up procedure
| 10.1 Generic call setup-up procedure for mobile terminating speech calls
| 10.1.4 Specific message contents
\*-----*/
/*-----*\
| Information Elements
```

```
\*-----*/
#define ARFCN_BCCH      122
#define ARFCN_BCCH_B    48
#define ARFCN_BCCH_1900  540
#define NCC      0x5
#define BCC      0x6
#define BSIC ((NCC<<3)|(BCC))
#define RFN      0

IE_BEGIN(handover_reference)
    BF(8,0,ACT_CHECK,reference_value,"used for handover")
IE_END(handover_reference)

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

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

/* G23 now always includes at least octet 3a,
 * even with a FR only mobile */
/*
IE_BEGIN(bearer_capability)
    BF(8,1,ACT_CHECK,    length,                SILENT)
    BF(1,1,ACT_CHECK,    ext3,                  SILENT)
    BF(2,1,ACT_CHECK,    radio_channel_requirement,SILENT)
    BF(1,0,ACT_CHECK,    coding_standard,        SILENT)
    BF(1,0,ACT_CHECK,    transfer_mode,          SILENT)
    BF(3,0,ACT_CHECK,    info_transfer_capability, SILENT)
IE_END(bearer_capability)
*/
/*
 * And from end of July 2002, full rate only is sent as
 * AMR full rate, AMR half rate, GSM full rate
 */
/*
IE_BEGIN(bearer_capability)
    BF(8,2,ACT_CHECK,    length,                SILENT)
    BF(1,0,ACT_CHECK,    ext3,                  SILENT)
    BF(2,1,ACT_CHECK,    radio_channel_requirement,SILENT)
    BF(1,0,ACT_CHECK,    coding_standard,        SILENT)
    BF(1,0,ACT_CHECK,    transfer_mode,          SILENT)
    BF(3,0,ACT_CHECK,    info_transfer_capability, SILENT)
    BF(1,1,ACT_CHECK,    ext3a_1,                SILENT)
    BF(1,0,ACT_CHECK,    ext_other_1,            SILENT)
    BF(2,0,ACT_CHECK,    spare3a_1,              SILENT)
    BF(4,0,ACT_CHECK,    speech_version_indication_1,SILENT)
IE_END(bearer_capability)
*/
IE_BEGIN(bearer_capability)
    BF(8, 4, ACT_CHECK, length,                SILENT)
    BF(1, 0, ACT_CHECK, ext3,                  SILENT)
    BF(2, 1, ACT_CHECK, radio_channel_requirement, SILENT)
    BF(1, 0, ACT_CHECK, coding_standard,        SILENT)
    BF(1, 0, ACT_CHECK, transfer_mode,          SILENT)
```

```

    BF(3, 0, ACT_CHECK, info_transfer_capability, SILENT)

    BF(1, 0, ACT_CHECK, ext3a_1, SILENT)
    BF(1, 0, ACT_CHECK, ext_other_1, SILENT)
    BF(2, 0, ACT_CHECK, spare3a_1, SILENT)
    BF(4, 4, ACT_CHECK, speech_version_indication_1, "AMR full rate")

    BF(1, 0, ACT_CHECK, ext3a_2, SILENT)
    BF(1, 0, ACT_CHECK, ext_other_2, SILENT)
    BF(2, 0, ACT_CHECK, spare3a_2, SILENT)
    BF(4, 5, ACT_CHECK, speech_version_indication_2, "AMR half rate")

    BF(1, 1, ACT_CHECK, ext3a_3, SILENT)
    BF(1, 0, ACT_CHECK, ext_other_3, SILENT)
    BF(2, 0, ACT_CHECK, spare3a_3, SILENT)
    BF(4, 0, ACT_CHECK, speech_version_indication_1, "GSM full rate")
IE_END(bearer_capability)

IE_BEGIN(bearer_capability_fr_hr_efr)
    BF(8,4,ACT_CHECK, length, SILENT)
    BF(1,0,ACT_CHECK, ext3, SILENT)
    BF(2,3,ACT_CHECK, radio_channel_requirement, SILENT)
    BF(1,0,ACT_CHECK, coding_standard, SILENT)
    BF(1,0,ACT_CHECK, transfer_mode, SILENT)
    BF(3,0,ACT_CHECK, info_transfer_capability, SILENT)
    BF(1,0,ACT_CHECK, ext3a_1, SILENT)
    BF(1,0,ACT_CHECK, ext_other_1, SILENT)
    BF(2,0,ACT_CHECK, spare3a_1, SILENT)
    BF(4,2,ACT_CHECK, full_rate_speech_version_2, SILENT)
    BF(1,0,ACT_CHECK, ext3a_2, SILENT)
    BF(1,0,ACT_CHECK, ext_other_2, SILENT)
    BF(2,0,ACT_CHECK, spare3a_2, SILENT)
    BF(4,0,ACT_CHECK, full_rate_speech_version_1, SILENT)
    BF(1,1,ACT_CHECK, ext3a_3, SILENT)
    BF(1,0,ACT_CHECK, ext_other_3, SILENT)
    BF(2,0,ACT_CHECK, spare3a_3, SILENT)
    BF(4,1,ACT_CHECK, half_rate_speech_version_1, SILENT)
IE_END(bearer_capability_fr_hr_efr)

IE_BEGIN(bearer_capability_efr)
    BF(8, 3,ACT_CHECK, length, SILENT)
    BF(1, 0,ACT_CHECK, ext3, SILENT)
    BF(2, 1,ACT_CHECK, radio_channel_requirement, SILENT)
    BF(1, 0,ACT_CHECK, coding_standard, SILENT)
    BF(1, 0,ACT_CHECK, transfer_mode, SILENT)
    BF(3, 0,ACT_CHECK, info_transfer_capability, SILENT)
    BF(1, 0,ACT_CHECK, ext3a_1, SILENT)
    BF(1, 0,ACT_CHECK, ext_other_1, SILENT)
    BF(2, 0,ACT_CHECK, spare3a_1, SILENT)
    BF(4, 2,ACT_CHECK, full_rate_speech_version_2, SILENT)
    BF(1, 1,ACT_CHECK, ext3a_2, SILENT)
    BF(1, 0,ACT_CHECK, ext_other_2, SILENT)
    BF(2, 0,ACT_CHECK, spare3a_2, SILENT)
    BF(4, 0,ACT_CHECK, full_rate_speech_version_1, SILENT)
IE_END(bearer_capability_efr)

IE_BEGIN(bearer_capability_fr_hr_efr_ctm)
    BF(8,4,ACT_CHECK, length, SILENT)
    BF(1,0,ACT_CHECK, ext3, SILENT)
    BF(2,3,ACT_CHECK, radio_channel_requirement, SILENT)

```

```

    BF(1,0,ACT_CHECK,    coding_standard,          SILENT)
    BF(1,0,ACT_CHECK,    transfer_mode,             SILENT)
    BF(3,0,ACT_CHECK,    info_transfer_capability,  SILENT)
    BF(1,0,ACT_CHECK,    ext3a_1,                   SILENT)
    BF(1,0,ACT_CHECK,    ext_other_1,               SILENT)
    BF(1,1,ACT_CHECK,    ctm,                       SILENT)
    BF(1,0,ACT_CHECK,    spare3a_1,                 SILENT)
    BF(4,2,ACT_CHECK,    full_rate_speech_version_2, SILENT)
    BF(1,0,ACT_CHECK,    ext3a_2,                   SILENT)
    BF(1,0,ACT_CHECK,    ext_other_2,               SILENT)
    BF(2,0,ACT_CHECK,    spare3a_2,                 SILENT)
    BF(4,0,ACT_CHECK,    full_rate_speech_version_1 ,SILENT)
    BF(1,1,ACT_CHECK,    ext3a_3,                   SILENT)
    BF(1,0,ACT_CHECK,    ext_other_3,               SILENT)
    BF(2,0,ACT_CHECK,    spare3a_3,                 SILENT)
    BF(4,1,ACT_CHECK,    half_rate_speech_version_1 ,SILENT)
IE_END(bearer_capability_fr_hrEFR_ctm)

IE_BEGIN(bearer_capability_eFR_ctm)
    BF(8, 3,ACT_CHECK,    length,                   SILENT)
    BF(1, 0,ACT_CHECK,    ext3,                     SILENT)
    BF(2, 1,ACT_CHECK,    radio_channel_requirement,SILENT)
    BF(1, 0,ACT_CHECK,    coding_standard,           SILENT)
    BF(1, 0,ACT_CHECK,    transfer_mode,             SILENT)
    BF(3, 0,ACT_CHECK,    info_transfer_capability,  SILENT)
    BF(1, 0,ACT_CHECK,    ext3a_1,                   SILENT)
    BF(1, 0,ACT_CHECK,    ext_other_1,               SILENT)
    BF(1, 1,ACT_CHECK,    ctm,                       SILENT)
    BF(1, 0,ACT_CHECK,    spare3a_1,                 SILENT)
    BF(4, 2,ACT_CHECK,    full_rate_speech_version_2, SILENT)
    BF(1, 1,ACT_CHECK,    ext3a_2,                   SILENT)
    BF(1, 0,ACT_CHECK,    ext_other_2,               SILENT)
    BF(2, 0,ACT_CHECK,    spare3a_2,                 SILENT)
    BF(4, 0,ACT_CHECK,    full_rate_speech_version_1 ,SILENT)
IE_END(bearer_capability_eFR_ctm)

IE_BEGIN(bearer_capability_3_voc)
    BF(8, 4,ACT_CHECK,    length,                   SILENT)
    BF(1, 0,ACT_CHECK,    ext3,                     SILENT)
    BF(2, 3,ACT_CHECK,    radio_channel_requirement,SILENT)
    BF(1, 0,ACT_CHECK,    coding_standard,           SILENT)
    BF(1, 0,ACT_CHECK,    transfer_mode,             SILENT)
    BF(3, 0,ACT_CHECK,    info_transfer_capability,  SILENT)
    BF(8,0x02,ACT_CHECK,  octet_3a_1,                SILENT)
    BF(8,0x00,ACT_CHECK,  octet_3a_2,                SILENT)
    BF(8,0x81,ACT_CHECK,  octet_3a_3,                SILENT)
IE_END(bearer_capability_3_voc)

IE_BEGIN(bearer_capability_data)
    BF(8,7,ACT_CHECK,    length,                   SILENT)
    BF(1,1,ACT_CHECK,    ext3,                     SILENT)
    BF(2,1,ACT_CHECK,    radio_channel_requirement,SILENT)
    BF(1,0,ACT_CHECK,    coding_standard,           SILENT)
    BF(1,0,ACT_CHECK,    transfer_mode,             SILENT)
    BF(3,2,ACT_CHECK,    info_transfer_capability,  SILENT)
    BF(1,1,ACT_CHECK,    ext4,                     SILENT)
    BF(1,1,ACT_CHECK,    compression,              SILENT)
    BF(2,0,ACT_CHECK,    structure,                 SILENT)
    BF(1,1,ACT_CHECK,    duplex_mode,              SILENT)
    BF(1,0,ACT_CHECK,    configuration,             SILENT)

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BF(1,0,ACT_CHECK, NIRR, SILENT)
BF(1,0,ACT_CHECK, establishment, SILENT)
BF(1,1,ACT_CHECK, ext5, SILENT)
BF(2,1,ACT_CHECK, access_identifier, SILENT)
BF(2,0,ACT_CHECK, rate_adaption, SILENT)
BF(3,1,ACT_CHECK, access_protocol, SILENT)
BF(1,0,ACT_CHECK, ext6, SILENT)
BF(2,1,ACT_CHECK, layer_1, SILENT)
BF(4,0,ACT_CHECK, default_layer_1, SILENT)
BF(1,1,ACT_CHECK, sync_async, SILENT)
BF(1,0,ACT_CHECK, ext6a, SILENT)
BF(1,0,ACT_CHECK, stop_bits, SILENT)
BF(1,0,ACT_CHECK, negotiation, SILENT)
BF(1,1,ACT_CHECK, data_bits, SILENT)
BF(4,3,ACT_CHECK, user_rate, SILENT)
BF(1,0,ACT_CHECK, ext6b, SILENT)
BF(2,3,ACT_CHECK, intermediate_rate, SILENT)
BF(1,0,ACT_CHECK, NIC_TX, SILENT)
BF(1,0,ACT_CHECK, NIC_RX, SILENT)
BF(3,3,ACT_CHECK, parity, SILENT)
BF(1,1,ACT_CHECK, ext6c, SILENT)
BF(2,1,ACT_CHECK, connection_element, SILENT)
BF(5,3,ACT_CHECK, modem_type, SILENT)
IE_END(bearer_capability_data)

IE_BEGIN(bearer_capability_rlp)
BF(8,7,ACT_CHECK, length, SILENT)
BF(1,1,ACT_CHECK, ext3, SILENT)
BF(2,3,ACT_CHECK, radio_channel_requirement, SILENT)
BF(1,0,ACT_CHECK, coding_standard, SILENT)
BF(1,0,ACT_CHECK, transfer_mode, SILENT)
BF(3,1,ACT_CHECK, info_transfer_capability, SILENT)
BF(1,1,ACT_CHECK, ext4, SILENT)
BF(1,0,ACT_CHECK, compression, SILENT)
BF(2,0,ACT_CHECK, structure, SILENT)
BF(1,1,ACT_CHECK, duplex_mode, SILENT)
BF(1,0,ACT_CHECK, configuration, SILENT)
BF(1,0,ACT_CHECK, NIRR, SILENT)
BF(1,0,ACT_CHECK, establishment, SILENT)
BF(1,1,ACT_CHECK, ext5, SILENT)
BF(2,0,ACT_CHECK, access_identifier, SILENT)
BF(2,1,ACT_CHECK, rate_adaption, SILENT)
BF(3,1,ACT_CHECK, access_protocol, SILENT)
BF(1,0,ACT_CHECK, ext6, SILENT)
BF(2,1,ACT_CHECK, layer_1, SILENT)
BF(4,0,ACT_CHECK, default_layer_1, SILENT)
BF(1,1,ACT_CHECK, sync_async, SILENT)
BF(1,0,ACT_CHECK, ext6a, SILENT)
BF(1,0,ACT_CHECK, stop_bits, "1 stop bit")
BF(1,0,ACT_CHECK, negotiation, SILENT)
BF(1,1,ACT_CHECK, data_bits, "8 data bits")
BF(4,5,ACT_CHECK, user_rate, SILENT)
BF(1,0,ACT_CHECK, ext6b, SILENT)
BF(2,3,ACT_CHECK, intermediate_rate, SILENT)
BF(1,0,ACT_CHECK, NIC_TX, SILENT)
BF(1,0,ACT_CHECK, NIC_RX, SILENT)
BF(3,3,ACT_CHECK, parity, "none")
BF(1,1,ACT_CHECK, ext6c, SILENT)
BF(2,1,ACT_CHECK, connection_element, SILENT)
BF(5,0,ACT_CHECK, modem_type, SILENT)

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IE_END(bearer_capability_rlp)

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

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

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

IE_BEGIN(called_party_bcd_number_1nd)
    BF( 8,41,ACT_CHECK,length, "length of IE")
    BF( 1,1,ACT_CHECK,ext, "Extension Bit")
    BF( 3,0,ACT_CHECK,type_of_number, "Unknown")
    BF( 4,1,ACT_CHECK,numbering_plan, "ISDN/telephony")
    BF( 4,2,ACT_CHECK,digit_2, "Digit 2")
    BF( 4,1,ACT_CHECK,digit_1, "Digit 1")
    BF( 4,4,ACT_CHECK,digit_4, "Digit 4")
    BF( 4,3,ACT_CHECK,digit_3, "Digit 3")
    BF( 4,6,ACT_CHECK,digit_6, "Digit 6")
    BF( 4,5,ACT_CHECK,digit_5, "Digit 5")
    BF( 4,8,ACT_CHECK,digit_8, "Digit 8")
    BF( 4,7,ACT_CHECK,digit_7, "Digit 7")
    BF( 4,0,ACT_CHECK,digit_10, "Digit 10")
    BF( 4,9,ACT_CHECK,digit_9, "Digit 9")
    BF( 4,2,ACT_CHECK,digit_12, "Digit 2")
    BF( 4,1,ACT_CHECK,digit_11, "Digit 1")
    BF( 4,4,ACT_CHECK,digit_14, "Digit 4")
    BF( 4,3,ACT_CHECK,digit_13, "Digit 3")
    BF( 4,6,ACT_CHECK,digit_16, "Digit 6")
    BF( 4,5,ACT_CHECK,digit_15, "Digit 5")
    BF( 4,8,ACT_CHECK,digit_18, "Digit 8")
    BF( 4,7,ACT_CHECK,digit_17, "Digit 7")
    BF( 4,0,ACT_CHECK,digit_20, "Digit 10")
    BF( 4,9,ACT_CHECK,digit_19, "Digit 9")
    BF( 4,2,ACT_CHECK,digit_22, "Digit 2")
    BF( 4,1,ACT_CHECK,digit_21, "Digit 1")
    BF( 4,4,ACT_CHECK,digit_24, "Digit 4")
    BF( 4,3,ACT_CHECK,digit_23, "Digit 3")
    BF( 4,6,ACT_CHECK,digit_26, "Digit 6")
    BF( 4,5,ACT_CHECK,digit_25, "Digit 5")

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BF( 4,8,ACT_CHECK,digit_28           ,"Digit 8")
BF( 4,7,ACT_CHECK,digit_27           ,"Digit 7")
BF( 4,0,ACT_CHECK,digit_30           ,"Digit 10")
BF( 4,9,ACT_CHECK,digit_29           ,"Digit 9")
BF( 4,2,ACT_CHECK,digit_32           ,"Digit 2")
BF( 4,1,ACT_CHECK,digit_31           ,"Digit 1")
BF( 4,4,ACT_CHECK,digit_34           ,"Digit 4")
BF( 4,3,ACT_CHECK,digit_33           ,"Digit 3")
BF( 4,6,ACT_CHECK,digit_36           ,"Digit 6")
BF( 4,5,ACT_CHECK,digit_35           ,"Digit 5")
BF( 4,8,ACT_CHECK,digit_38           ,"Digit 8")
BF( 4,7,ACT_CHECK,digit_37           ,"Digit 7")
BF( 4,0,ACT_CHECK,digit_40           ,"Digit 10")
BF( 4,9,ACT_CHECK,digit_39           ,"Digit 9")
BF( 4,2,ACT_CHECK,digit_42           ,"Digit 2")
BF( 4,1,ACT_CHECK,digit_41           ,"Digit 1")
BF( 4,4,ACT_CHECK,digit_44           ,"Digit 4")
BF( 4,3,ACT_CHECK,digit_43           ,"Digit 3")
BF( 4,6,ACT_CHECK,digit_46           ,"Digit 6")
BF( 4,5,ACT_CHECK,digit_45           ,"Digit 5")
BF( 4,8,ACT_CHECK,digit_48           ,"Digit 8")
BF( 4,7,ACT_CHECK,digit_47           ,"Digit 7")
BF( 4,0,ACT_CHECK,digit_50           ,"Digit 10")
BF( 4,9,ACT_CHECK,digit_49           ,"Digit 9")
BF( 4,2,ACT_CHECK,digit_52           ,"Digit 2")
BF( 4,1,ACT_CHECK,digit_51           ,"Digit 1")
BF( 4,4,ACT_CHECK,digit_54           ,"Digit 4")
BF( 4,3,ACT_CHECK,digit_53           ,"Digit 3")
BF( 4,6,ACT_CHECK,digit_56           ,"Digit 6")
BF( 4,5,ACT_CHECK,digit_55           ,"Digit 5")
BF( 4,8,ACT_CHECK,digit_58           ,"Digit 8")
BF( 4,7,ACT_CHECK,digit_57           ,"Digit 7")
BF( 4,0,ACT_CHECK,digit_60           ,"Digit 10")
BF( 4,9,ACT_CHECK,digit_59           ,"Digit 9")
BF( 4,2,ACT_CHECK,digit_62           ,"Digit 2")
BF( 4,1,ACT_CHECK,digit_61           ,"Digit 1")
BF( 4,4,ACT_CHECK,digit_64           ,"Digit 4")
BF( 4,3,ACT_CHECK,digit_63           ,"Digit 3")
BF( 4,6,ACT_CHECK,digit_66           ,"Digit 6")
BF( 4,5,ACT_CHECK,digit_65           ,"Digit 5")
BF( 4,8,ACT_CHECK,digit_68           ,"Digit 8")
BF( 4,7,ACT_CHECK,digit_67           ,"Digit 7")
BF( 4,0,ACT_CHECK,digit_70           ,"Digit 10")
BF( 4,9,ACT_CHECK,digit_69           ,"Digit 9")
BF( 4,2,ACT_CHECK,digit_72           ,"Digit 2")
BF( 4,1,ACT_CHECK,digit_71           ,"Digit 1")
BF( 4,4,ACT_CHECK,digit_74           ,"Digit 4")
BF( 4,3,ACT_CHECK,digit_73           ,"Digit 3")
BF( 4,6,ACT_CHECK,digit_76           ,"Digit 6")
BF( 4,5,ACT_CHECK,digit_75           ,"Digit 5")
BF( 4,8,ACT_CHECK,digit_78           ,"Digit 8")
BF( 4,7,ACT_CHECK,digit_77           ,"Digit 7")
BF( 4,0,ACT_CHECK,digit_80           ,"Digit 10")
BF( 4,9,ACT_CHECK,digit_79           ,"Digit 9")
IE_END(called_party_bcd_number_1nd)

/*
 * The redirecting party party bcd number is the same as the
 * called party BCD number if and only if the
 * presentation and screening indicators not included.

```

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

IE_BEGIN (llc_rlp)
    BF( 8,6,ACT_CHECK,length,"length of IE")
    BF( 1,1,ACT_CHECK,ext_bit_3,"extension bit 3")
    BF( 2,0,ACT_CHECK,coding_standard,"coding standard")
    BF( 5,8,ACT_CHECK,info_transfer_cap,"info transfer cap = UDI")
    BF( 1,1,ACT_CHECK,ext_bit_4,"extension bit 4")
    BF( 2,0,ACT_CHECK,transfer_mode,"transfer mode = circuit")
    BF( 5,16,ACT_CHECK,info_trans_rate,"trans rate = 64kbit/s")
    BF( 1,0,ACT_CHECK,ext_bit_5,"extension bit 5")
    BF( 2,1,ACT_CHECK,l1_identifier,"layer 1 identifier")
    BF( 5,1,ACT_CHECK,user_info_l1_prot,"usr inf l1 prot V.110")
    BF( 1,0,ACT_CHECK,ext_bit_5a,"extension bit 5a")
    BF( 1,1,ACT_CHECK,asynchronous_flag,"asynchronous flag")
    BF( 1,0,ACT_CHECK,negotiation,"negotiation = 0")
    BF( 5,8,ACT_CHECK,user_rate,"user rate")
    BF( 1,0,ACT_CHECK,ext_bit_5b,"extension bit 5b")
    BF( 2,2,ACT_CHECK,intermediate_rate,"16 kbit/s")
    BF( 1,0,ACT_CHECK,nic_tx,"NIC/TX = 0")
    BF( 1,0,ACT_CHECK,nic_rx,"NIC/RX = 0")
    BF( 1,0,ACT_CHECK,tx_flow_control,"RX flow control = 0")
    BF( 1,0,ACT_CHECK,rx_flow_control,"TX flow control = 0")
    BF( 1,0,ACT_CHECK,spare_5b,"Spare")
    BF( 1,1,ACT_CHECK,exit_bit_5c,"extension bit 5c")
    BF( 2,1,ACT_CHECK,stop_bits,"1 stop bit")
    BF( 2,3,ACT_CHECK,data_bits,"8 data bits")
    BF( 3,3,ACT_CHECK,parity,"None")
IE_END (llc_rlp)

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

IE_BEGIN(cc_capabilities)
    BF(8,1,ACT_CHECK, length, SILENT)
    BF(6,0,ACT_CHECK, spare, SILENT)
    BF(1,1,ACT_CHECK, pcp, SILENT)
    BF(1,1,ACT_CHECK, dtmf_support, SILENT)
IE_END(cc_capabilities)
IE_BEGIN(channel_description)

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

IE_BEGIN(channel_description_tch)
    BF( 5,M5(0,0,0,0,1),ACT_CHECK, channel_type,"TCH Full Rate")
    BF( 3,                0,ACT_CHECK, time_slot_number,"zero ")
    BF( 3,                BCC,ACT_CHECK, tsc,"same as BCCH ")
    BF( 1,                0,ACT_CHECK, hopping,"No ")
    BF( 2,                0,ACT_CHECK, spare,SILENT )
    BF(10, ARFCN_BCCH,ACT_CHECK, arfcn,"ARFCN of the BCCH ")
IE_END(channel_description_tch)

IE_BEGIN(channel_description_1900)
    BF( 5,M5(0,0,1,0,1),ACT_CHECK, channel_type,"SDCCH/SACCH 4(1) ")
    BF( 3,                0,ACT_CHECK, time_slot_number,"zero")
    BF( 3,                BCC,ACT_CHECK, training_sequence_code,"same as BCCH")
    BF( 1,                0,ACT_CHECK, hopping,"No")
    BF( 2,                0,ACT_CHECK, spare,SILENT)
    BF(10,ARFCN_BCCH_1900,ACT_CHECK, arfcn,"ARFCN of the BCCH")
IE_END(channel_description_1900)

IE_BEGIN(channel_mode_speech)
    BF( 8,                1,ACT_CHECK, mode,"Speech full rate")
IE_END(channel_mode_speech)

IE_BEGIN(cm_service_type_ss)
    BF(4,M4(1,0,0,0),ACT_CHECK,service_type,"supplementary services")
IE_END(cm_service_type_ss)

IE_BEGIN(cm_service_type_moc)
    BF(4,M4(0,0,0,1),ACT_CHECK,service_type,"mobile originated call")
IE_END(cm_service_type_moc)

IE_BEGIN(cm_service_type_ec)
    BF(4,M4(0,0,1,0),ACT_CHECK,service_type,"emergency call establishment")
IE_END(cm_service_type_ec)

IE_BEGIN(ciphering_key_sequence_number)
    BF(1,                0,ACT_CHECK, spare,SILENT)
    BF(3,M3(0,1,1),ACT_CHECK,key_sequence,"from SIM card (3)")
IE_END(ciphering_key_sequence_number)
IE_BEGIN(ciphering_key_sequence_number_2)
    BF(1,                0,ACT_CHECK, spare,SILENT)
    BF(3,M3(0,1,0),ACT_CHECK,key_sequence,"sent BS->MS")
IE_END(ciphering_key_sequence_number_2)
IE_BEGIN(ciphering_mode_setting)
    BF(3,M3(0,0,0),ACT_CHECK,algorithm_identifier,"A5/1 ")
    BF(1,                1,ACT_CHECK, start_ciphering,"Start ciphering")
IE_END(ciphering_mode_setting)
IE_BEGIN(cipher_response)
    BF(3,0,ACT_CHECK, spare,SILENT )
    BF(1,0,ACT_CHECK,cipher_response,"IMEISV shall not be included")
IE_END(cipher_response)
IE_BEGIN(description_of_the_first_channel_after_time)
    BF( 5,M5(0,0,0,0,1),ACT_CHECK, channel_type,"TCH ")

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

IE_BEGIN(description_of_the_first_channel_after_time_1900)
    BF( 5,M5(0,0,0,0,1),ACT_CHECK,    channel_type,"TCH ")
    BF( 3,          3,ACT_CHECK,      time_slot_number,"three")
    BF( 3,          BCC,ACT_CHECK,training_sequence_code,"same as BCCH")
    BF( 1,          0,ACT_CHECK,      hopping,"No")
    BF( 2,          0,ACT_CHECK,      spare,SILENT)
    BF(10, ARFCN_BCCH_1900,ACT_CHECK,  arfcn,"ARFCN of the BCCH")
IE_END(description_of_the_first_channel_after_time_1900)

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

IE_BEGIN(description_of_the_first_channel_after_time_TS8950)
    BF( 5,M5(0,0,0,0,1),ACT_CHECK,    channel_type,"TCH ")
    BF( 3,          2,ACT_CHECK,      time_slot_number,"two")
    BF( 3,          0,ACT_CHECK,training_sequence_code,"zero")
    BF( 1,          0,ACT_CHECK,      hopping,"No")
    BF( 2,          0,ACT_CHECK,      spare,SILENT)
    BF(10,          62,ACT_CHECK,      arfcn,"ARFCN = 62")
IE_END(description_of_the_first_channel_after_time_TS8950)

IE_BEGIN(frequency_list_TS8950)
    BF( 8,          16, ACT_CHECK,      length,"length=16")
    BF( 2,          0, ACT_CHECK,      format_type,"Bit Map 0 format")
    BF( 2,          0,ACT_CHECK,      spare,SILENT)
    BF( 4,          0,ACT_CHECK,ANONYMOUS,"bit 124 thru 121")
    BF(32, 0x00000000,ACT_CHECK,ANONYMOUS,"bit 120 thru 89")
    BF(32, 0x00000000,ACT_CHECK,ANONYMOUS,"bit 88 thru 57")
    BF(32, 0x00000000,ACT_CHECK,ANONYMOUS,"bit 56 thru 25")
    BF(24, 0x000000,ACT_CHECK,ANONYMOUS,"bit 24 thru 1")
IE_END(frequency_list_TS8950)

IE_BEGIN(cell_description)
    BF( 2,ARFCN_BCCH>>8,ACT_CHECK,arfcn_hi,"BCCH ARFCN (high part)")
    BF( 3,          1,ACT_CHECK,ncc,      "network colour code")
    BF( 3,          5,ACT_CHECK,bcc,      "base station colour code")
    BF( 8,ARFCN_BCCH,ACT_CHECK,arfcn_lo,"BCCH ARFCN (low part)")
IE_END(cell_description)

IE_BEGIN(sync_ind_synch)
    BF( 1, 0,ACT_CHECK,nci,"ignore out of range timing advance")
    BF( 1, 0,ACT_CHECK,rot,"shall not be included")
    BF( 2, 1,ACT_CHECK,si,"synchronized handover")
IE_END(sync_ind_synch)

IE_BEGIN(ia_rest_octets) /* maximum length (11), no hop, no start time */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 0 */

```

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

IE_BEGIN(iei_05)
BF(8,0x05,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_05)

IE_BEGIN(iei_08)
BF(8,0x08,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_08)

IE_BEGIN(iei_D)
BF(4,0x0D,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_D)

IE_BEGIN(iei_1C)
BF(8,0x1C,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_1C)

IE_BEGIN(iei_7B)
BF(8,0x7B,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7B)

IE_BEGIN(iei_7E)
BF(8,0x7E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7E)

IE_BEGIN(iei_7F)
BF(8,0x7F,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7F)

IE_BEGIN(iei_1E)
BF(8,0x1E,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_1E)

IE_BEGIN(iei_63)
BF(8,0x63,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_63)

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

IE_BEGIN(iei_7C)
BF(8,0x7C,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_7C)

IE_BEGIN(iei_15)
BF(8,0x15,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_15)
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```
IE_BEGIN(iei_04)
    BF(8,0x04,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_04)

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

IE_BEGIN(iei_74)
    BF(8,0x74,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_74)

IE_BEGIN(iei_2C)
    BF(8,0x2C,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_2C)

IE_BEGIN(iei_13)
    BF(8,0x13,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(iei_13)

IE_BEGIN(length_10)
    BF(8,0x10,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(length_10)

IE_BEGIN(keypad_facility_0)
    BF(8, 0x30,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_0)

IE_BEGIN(keypad_facility_1)
    BF(8, 0x31,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_1)

IE_BEGIN(keypad_facility_2)
    BF(8, 0x32,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_2)

IE_BEGIN(keypad_facility_3)
    BF(8, 0x33,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_3)

IE_BEGIN(keypad_facility_4)
    BF(8, 0x34,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_4)

IE_BEGIN(keypad_facility_5)
    BF(8, 0x35,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_5)

IE_BEGIN(keypad_facility_6)
    BF(8, 0x36,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_6)

IE_BEGIN(keypad_facility_7)
    BF(8, 0x37,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_7)

IE_BEGIN(keypad_facility_8)
    BF(8, 0x38,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_8)
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IE_BEGIN(keypad_facility_9)
    BF(8, 0x39,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_9)

IE_BEGIN(keypad_facility_A)
    BF(8, 0x41,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_A)

IE_BEGIN(keypad_facility_B)
    BF(8, 0x42,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_B)

IE_BEGIN(keypad_facility_C)
    BF(8, 0x43,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_C)

IE_BEGIN(keypad_facility_D)
    BF(8, 0x44,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_D)

IE_BEGIN(keypad_facility_star)
    BF(8, 0x2A,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_star)

IE_BEGIN(keypad_facility_hash)
    BF(8, 0x23,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(keypad_facility_hash)

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

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

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

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

IE_BEGIN(identity_type)
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    BF(4,1,ACT_CHECK, type_of_identity,"IMSI")
IE_END(identity_type)

IE_BEGIN(mode_of_the_first_channel)
    BF(8,1,ACT_CHECK,mode,"Speech full rate")
IE_END(mode_of_the_first_channel)

IE_BEGIN(mode_of_the_first_channelEFR)
    BF(8,0x21,ACT_CHECK,mode,"Enhanced full rate")
IE_END(mode_of_the_first_channelEFR)

IE_BEGIN(mode_of_the_first_channel_data_12k)
    BF(8,3,ACT_CHECK,mode,"data 12.0 k")
IE_END(mode_of_the_first_channel_data_12k)

IE_BEGIN(ms_classmark)
    BF(8,      3,ACT_CHECK, length,SILENT)
    BF(1,      0,ACT_CHECK, spare,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
    BF(1,      1,ACT_CHECK, es_ind,"with 'Contr. Early Classmark Send.'")
    BF(1,      0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
    BF(3,M3(0,1,1),ACT_CHECK, rf_power_capability,"class 4")
    BF(1,      0,ACT_CHECK, spare2,SILENT)
    BF(1,      0,ACT_CHECK, ps_capability,"no pseudo-synch capability")
    BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,"phase 2")
    BF(1,      1,ACT_CHECK, sm_capability,"point to point SMS")
    BF(1,      0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
    BF(1,      0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
    BF(1,      0,ACT_CHECK, frequency_capability,"no extension band G1")
    BF(1,      1,ACT_CHECK, classmark_3,"add. MS cap. information")
    BF(1,      0,ACT_CHECK, spare3, SILENT)
    BF(1,      0,ACT_CHECK, lcsva, "LCS not supported")
    BF(1,      1,ACT_CHECK, ucs2, SILENT)
    BF(1,      0,ACT_CHECK, solsa, "The ME does not support SoLSA")
    BF(1,      1,ACT_CHECK, cmsp, "CM Service Prompt")
    BF(1,      0,ACT_CHECK, a5_3,"A5/3 not available")
    BF(1,      1,ACT_CHECK, a5_2,"A5/2 available")
IE_END(ms_classmark)

IE_BEGIN(ms_classmark_1900)
    BF(8,      3,ACT_CHECK, length,SILENT)
    BF(1,      0,ACT_CHECK, spare,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
    BF(1,      1,ACT_CHECK, es_ind,"with 'Contr. Early Classmark Send.'")
    BF(1,      0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
    BF(3,M3(0,0,0),ACT_CHECK, rf_power_capability,"class 2")
    BF(1,      0,ACT_CHECK, spare2,SILENT)
    BF(1,      0,ACT_CHECK, ps_capability,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,SILENT)
    BF(1,      1,ACT_CHECK, sm_capability,"point to point SMS")
    BF(1,      0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
    BF(1,      0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
    BF(1,      0,ACT_CHECK, frequency_capability,"no extension band G1")
    BF(1,      1,ACT_CHECK, classmark_3,"add. MS cap. information")
    BF(1,      0,ACT_CHECK, spare3, SILENT)
    BF(1,      0,ACT_CHECK, lcsva, "LCS not supported")
    BF(1,      1,ACT_CHECK, ucs2, SILENT)
    BF(1,      0,ACT_CHECK, solsa, "The ME does not support SoLSA")
    BF(1,      1,ACT_CHECK, cmsp, "CM Service Prompt")
    BF(1,      0,ACT_CHECK, a5_3,"A5/3 not available")

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    BF(1,          1,ACT_CHECK, a5_2,"A5/2 available")
IE_END(ms_classmark_1900)

IE_BEGIN(ms_classmark_dual_ext)
    BF(8,          3,ACT_CHECK, length,SILENT)
    BF(1,          0,ACT_CHECK, spare,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, revision_level,"phase 2 MS")
    BF(1,          1,ACT_CHECK, es_ind,"with 'Contr. Early Classmark Send.'")
    BF(1,          0,ACT_CHECK, a5_1,"encryption algorithm A5/1 available")
    BF(3,M3(0,1,1),ACT_CHECK, rf_power_capability,"class 4")
    BF(1,          0,ACT_CHECK, spare2,SILENT)
    BF(1,          0,ACT_CHECK, ps_capability,SILENT)
    BF(2,  M2(0,1),ACT_CHECK, ss_screening_indicator,SILENT)
    BF(1,          1,ACT_CHECK, sm_capability,"point to point SMS")
    BF(1,          0,ACT_CHECK, vbs,"no VBS cap. or no notific. wanted")
    BF(1,          0,ACT_CHECK, vgcs,"no VGCS cap. or no notific. wanted")
    BF(1,          1,ACT_CHECK, frequency_capability,"extention band G1")
    BF(1,          1,ACT_CHECK, classmark_3,"add. MS cap. information")
    BF(1,          0,ACT_CHECK, spare3, SILENT)
    BF(1,          0,ACT_CHECK, lcsva, "LCS supported")
    BF(1,          1,ACT_CHECK, ucs2, SILENT)
    BF(1,          0,ACT_CHECK, solsa, "The ME does not support SoLSA")
    BF(1,          1,ACT_CHECK, cmstp, "CM Service Prompt")
    BF(1,          0,ACT_CHECK, a5_3,"A5/3 not available")
    BF(1,          1,ACT_CHECK, a5_2,"A5/2 available")
IE_END(ms_classmark_dual_ext)

IE_BEGIN(p1_rest_octets)
/* pag. req. type1 : 22 - 11 (L2 pseud. len) = 11 bytes */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 3 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 4 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 5 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 6 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 7 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 8 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 9 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p1_rest_octets)

IE_BEGIN(p2_rest_octets)
/* pag. req. type1 : 22 - 11 (L2 pseud. len) = 11 bytes */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 1 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 2 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 3 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 4 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 5 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 6 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 7 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 8 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 9 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 10 */
IE_END(p2_rest_octets)

IE_BEGIN(p3_rest_octets)
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 0 */
    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 1 */

```

```

    BF(8,REST_OCTET,ACT_CHECK,ANONYMOUS,SILENT) /* 2 */
IE_END(p3_rest_octets)

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

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

IE_BEGIN(rach_111)
    BF(3,M3(1,1,1),ACT_CHECK,establishment_cause,"SS")
    BF(5,M5(1,1,1,1,1),ACT_NOP,random_reference,"ignore Random Ref.")
IE_END(rach_111)

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

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

IE_BEGIN(rach_ec)
    BF(3,M3(1,0,1),ACT_CHECK,establishment_cause,"Emergency call")
    BF(5,M5(1,1,1,1,1),ACT_NOP,random_reference,"ignore Random Ref.")
IE_END(rach_ec)

IE_BEGIN(rach_reest_neci_0)
    BF(3,M3(1,1,0),ACT_CHECK,establishment_cause,"Reest, NECI=0, TCH/F")
    BF(5,M5(1,1,1,1,1),ACT_NOP,random_reference,"ignore Random Ref.")
IE_END(rach_reest_neci_0)

IE_BEGIN(request_reference)
    BF(3,M3(1,0,0),ACT_NOP,random_access_info,"As in CHAN REQ")
    BF(5,M5(1,1,1,1,1),ACT_NOP,random_reference,SILENT)
    BF(5,0,ACT_NOP,t1,SILENT)
    BF(6,0,ACT_NOP,t3,SILENT)
    BF(5,0,ACT_NOP,t2,SILENT)
IE_END(request_reference)

IE_BEGIN(pd_and_sapi_cc)
    BF(8,0x03,ACT_CHECK,pd_and_sapi,SILENT)
IE_END(pd_and_sapi_cc)

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

IE_BEGIN(rr_cause_1)
    BF(8,1,ACT_CHECK,rr_cause,"abnormal event, unspecified")
IE_END(rr_cause_1)

IE_BEGIN(rr_cause_6F)
    BF(8,0x6F,ACT_CHECK,rr_cause,"protocol error unspecified")
IE_END(rr_cause_6F)

IE_BEGIN(rr_cause_freq_not_implemented)
    BF(8,0x0A,ACT_CHECK,rr_cause,"Frequency not implemented")

```

```
IE_END(rr_cause_freq_not_implemented)

IE_BEGIN(reject_cause)
    BF(8,0x20,ACT_CHECK,reject_cause,"service not available")
IE_END(reject_cause)

IE_BEGIN(progress_indicator_3)
    BF(8, 2,ACT_CHECK, length,"two octets")
    BF(1, 1,ACT_CHECK, ext_1,SILENT)
    BF(2, 3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1, 0,ACT_SHOW, spare,SILENT)
    BF(4, 10,ACT_CHECK, location,"Network beyond interworking point")
    BF(1, 1,ACT_CHECK, ext_2,SILENT)
    BF(7, 3,ACT_CHECK, progress_description,"Orig. addr. non-PLM/ISDN")
IE_END(progress_indicator_3)

IE_BEGIN(progress_indicator_32)
    BF(8, 2,ACT_CHECK, length,"two octets")
    BF(1, 1,ACT_CHECK, ext_1,SILENT)
    BF(2, 3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1, 0,ACT_SHOW, spare,SILENT)
    BF(4, 0,ACT_CHECK, location,"User")
    BF(1, 1,ACT_CHECK, ext_2,SILENT)
    BF(7, 32,ACT_CHECK, progress_description,"call is end-to-end PLMN/ISDN")
IE_END(progress_indicator_32)

IE_BEGIN(progress_indicator_8)
    BF(8, 2,ACT_CHECK, length,"two octets")
    BF(1, 1,ACT_CHECK, ext_1,SILENT)
    BF(2, 3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1, 0,ACT_SHOW, spare,SILENT)
    BF(4, 0,ACT_CHECK, location,"User")
    BF(1, 1,ACT_CHECK, ext_2,SILENT)
    BF(7, 8,ACT_CHECK, progress_description,"in band tones available")
IE_END(progress_indicator_8)

IE_BEGIN(allowed_actions_ccbs)
    BF(8, 1,ACT_CHECK, length, "allowed_actions_length")
    BF(1, 1,ACT_CHECK, ccbs_act, "CCBS activation offered")
    BF(7, 0,ACT_CHECK, spare1, "spare")
IE_END(allowed_actions_ccbs)

IE_BEGIN(ss_version)
    BF(8, 1,ACT_CHECK,length,SILENT)
    BF(8, 0,ACT_SHOW, version,SILENT)
IE_END(ss_version)

IE_BEGIN(ss_version_3)
    BF(8, 1,ACT_CHECK,length,SILENT)
    BF(8, 1,ACT_SHOW, version,SILENT)
IE_END(ss_version_3)

IE_BEGIN(cause_03)
    BF(8, 2,ACT_CHECK, length,"two octets")
    BF(1, 1,ACT_CHECK, ext_1,SILENT)
    BF(2, 3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1, 0,ACT_SHOW, spare,SILENT)
    BF(4, 0,ACT_CHECK, location,"User")
    BF(1, 1,ACT_CHECK, ext_2,SILENT)
    BF(7, 3,ACT_CHECK, cause,"no route to destination")
```

IE_END(cause_03)

IE_BEGIN(cause_17)

```
BF(8,      2,ACT_CHECK, length,"two octets")
BF(1,      1,ACT_CHECK, ext_1,SILENT)
BF(2,      3,ACT_CHECK, coding_standard, "GSM Standard")
BF(1,      0,ACT_SHOW, spare,SILENT)
BF(4,      0,ACT_CHECK, location,"User")
BF(1,      1,ACT_CHECK, ext_2,SILENT)
BF(7,      17,ACT_CHECK, cause,"user busy")
```

IE_END(cause_17)

IE_BEGIN(cause_21)

```
BF(8,      2,ACT_CHECK, length,"two octets")
BF(1,      1,ACT_CHECK, ext_1,SILENT)
BF(2,      3,ACT_CHECK, coding_standard, "GSM Standard")
BF(1,      0,ACT_SHOW, spare,SILENT)
BF(4,      0,ACT_CHECK, location,"User")
BF(1,      1,ACT_CHECK, ext_2,SILENT)
BF(7,      21,ACT_CHECK, cause,"call rejected")
```

IE_END(cause_21)

IE_BEGIN(cause_31)

```
BF(8,      2,ACT_CHECK, length,"two octets")
BF(1,      1,ACT_CHECK, ext_1,SILENT)
BF(2,      3,ACT_CHECK, coding_standard, "GSM Standard")
BF(1,      0,ACT_SHOW, spare,SILENT)
BF(4,      0,ACT_CHECK, location,"User")
BF(1,      1,ACT_CHECK, ext_2,SILENT)
BF(7,      31,ACT_CHECK, cause,"normal, unspecified")
```

IE_END(cause_31)

IE_BEGIN(cause_57)

```
BF(8,      2,ACT_CHECK, length,"two octets")
BF(1,      1,ACT_CHECK, ext_1,SILENT)
BF(2,      3,ACT_CHECK, coding_standard, "GSM Standard")
BF(1,      0,ACT_SHOW, spare,SILENT)
BF(4,      0,ACT_CHECK, location,"User")
BF(1,      1,ACT_CHECK, ext_2,SILENT)
BF(7,      57,ACT_CHECK, cause,"bearer cap not authorized")
```

IE_END(cause_57)

IE_BEGIN(cause_81)

```
BF(8,      2,ACT_CHECK, length,"two octets")
BF(1,      1,ACT_CHECK, ext_1,SILENT)
BF(2,      3,ACT_CHECK, coding_standard, "GSM Standard")
BF(1,      0,ACT_SHOW, spare,SILENT)
BF(4,      0,ACT_CHECK, location,"User")
BF(1,      1,ACT_CHECK, ext_2,SILENT)
BF(7,      81,ACT_CHECK, cause,"invalid transaction identifier")
```

IE_END(cause_81)

IE_BEGIN(cause_88)

```
BF(8,      2,ACT_CHECK, length,"two octets")
BF(1,      1,ACT_CHECK, ext_1,SILENT)
BF(2,      3,ACT_CHECK, coding_standard, "GSM Standard")
BF(1,      0,ACT_SHOW, spare,SILENT)
BF(4,      0,ACT_CHECK, location,"User")
BF(1,      1,ACT_CHECK, ext_2,SILENT)
```

```

    BF(7,          88,ACT_CHECK, cause,"incompatible destination")
IE_END(cause_88)

IE_BEGIN(cause_102_303)
    BF(8,          5,ACT_CHECK, length,"five octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)
    BF(7,         102,ACT_CHECK, cause,"recovery on timer expiry")
    BF(8,         0x33,ACT_CHECK, diag_0,"3")
    BF(8,         0x30,ACT_CHECK, diag_1,"0")
    BF(8,         0x33,ACT_CHECK, diag_2,"3")
IE_END(cause_102_303)

IE_BEGIN(cause_102_310)
    BF(8,          5,ACT_CHECK, length,"five octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)
    BF(7,         102,ACT_CHECK, cause,"recovery on timer expiry")
    BF(8,         0x33,ACT_CHECK, diag_0,"3")
    BF(8,         0x31,ACT_CHECK, diag_1,"1")
    BF(8,         0x30,ACT_CHECK, diag_2,"0")
IE_END(cause_102_310)

IE_BEGIN(cause_102_313)
    BF(8,          5,ACT_CHECK, length,"five octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)
    BF(7,         102,ACT_CHECK, cause,"recovery on timer expiry")
    BF(8,         0x33,ACT_CHECK, diag_0,"3")
    BF(8,         0x31,ACT_CHECK, diag_1,"1")
    BF(8,         0x33,ACT_CHECK, diag_2,"3")
IE_END(cause_102_313)

IE_BEGIN(cause_97_20)
    BF(8,          3,ACT_CHECK, length,"three octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)
    BF(7,          97,ACT_CHECK, cause,"message not implemented")
    BF(8,         0x20,ACT_CHECK, diag_0,"message type 0x20")
IE_END(cause_97_20)

IE_BEGIN(cause_16)
    BF(8,          2,ACT_CHECK, length,"two octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)

```

```
        BF(7,          16,ACT_CHECK, cause,"normal clearing")
IE_END(cause_16)

IE_BEGIN(cause_30)
    BF(8,          2,ACT_CHECK, length,"two octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)
    BF(7,          30,ACT_CHECK, cause,"response to enquiry")
IE_END(cause_30)

IE_BEGIN(cause_not_checked)
    BF(8,          2,ACT_CHECK, length,"two octets")
    BF(1,          1,ACT_CHECK, ext_1,SILENT)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(1,          0,ACT_SHOW, spare,SILENT)
    BF(4,          0,ACT_CHECK, location,"User")
    BF(1,          1,ACT_CHECK, ext_2,SILENT)
    BF(7,          0,ACT_SHOW, cause,"any cause")
IE_END(cause_not_checked)

IE_BEGIN(call_state_1)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          1,ACT_CHECK, call_state_value,"U1 Call Initiated")
IE_END(call_state_1)

IE_BEGIN(call_state_3)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          3,ACT_CHECK, call_state_value,"U3 Call Proceeding")
IE_END(call_state_3)

IE_BEGIN(call_state_4)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          4,ACT_CHECK, call_state_value,"U4 Call Delivered")
IE_END(call_state_4)

IE_BEGIN(call_state_7)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          7,ACT_CHECK, call_state_value,"U7 Call Receiving")
IE_END(call_state_7)

IE_BEGIN(call_state_8)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          8,ACT_CHECK, call_state_value,"U8 Connect Request")
IE_END(call_state_8)

IE_BEGIN(call_state_9)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          9,ACT_CHECK, call_state_value,"U9 Call Confirmed")
IE_END(call_state_9)

IE_BEGIN(call_state_10)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
    BF(6,          10,ACT_CHECK, call_state_value,"U10 Call Active")
IE_END(call_state_10)

IE_BEGIN(call_state_11)
    BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
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        BF(6,          11,ACT_CHECK, call_state_value,"U11 Disconnect Request")
    IE_END(call_state_11)

    IE_BEGIN(call_state_12)
        BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
        BF(6,          12,ACT_CHECK, call_state_value,"U12 Disconnect Ind")
    IE_END(call_state_12)

    IE_BEGIN(call_state_19)
        BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
        BF(6,          19,ACT_CHECK, call_state_value,"U19 Release Request")
    IE_END(call_state_19)

    IE_BEGIN(call_state_35)
        BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
        BF(6,          35,ACT_CHECK, call_state_value,"U0.3 Wait for NW info")
    IE_END(call_state_35)

    IE_BEGIN(call_state_37)
        BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
        BF(6,          37,ACT_CHECK, call_state_value,"U0.5 CC-Est. confirmed")
    IE_END(call_state_37)

    IE_BEGIN(call_state_38)
        BF(2,          3,ACT_CHECK, coding_standard, "GSM Standard")
        BF(6,          38,ACT_CHECK, call_state_value,"U0.6 Recall present")
    IE_END(call_state_38)

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

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

    IE_BEGIN(facility_unstructured_data)
        BF(8, 0x24,ACT_CHECK,length_of_fac_ie_content,SILENT)
        BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
        BF(8, 0x22,ACT_CHECK,component_length, SILENT)
        BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
        BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
        BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
        BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
        BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
        BF(8, 0x3b,ACT_CHECK,operation_code, "Process unstructured SS data")
        BF(8, 0x30,ACT_CHECK,Process_SS_Arg, SILENT)
        BF(8, 0x1a,ACT_CHECK,Process_SS_Arg_length, SILENT)
        BF(8, 0x04,ACT_CHECK,tag_dcs, SILENT)
        BF(8, 0x01,ACT_CHECK,length_dcs, SILENT)
        BF(8, 0x0F,ACT_CHECK,dcs, SILENT)
        BF(8, 0x04,ACT_CHECK,tag_data, SILENT)
        BF(8, 0x15,ACT_CHECK,length_data, SILENT)
        /* note that an USSD string is coded according to SMS-SCB default
           alphabet and 7 bit packed according to USSD packing */
        BF(8, 0x2A,ACT_CHECK,dig_1, "000123456789012345678# 7 bit packed")
        BF(8, 0x18,ACT_CHECK,dig_2, SILENT)
        BF(8, 0x4c,ACT_CHECK,dig_3, SILENT)
        BF(8, 0x05,ACT_CHECK,dig_4, SILENT)
        BF(8, 0x8b,ACT_CHECK,dig_5, SILENT)
    
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BF(8, 0xc9,ACT_CHECK,dig_6, SILENT)
BF(8, 0x66,ACT_CHECK,dig_7, SILENT)
BF(8, 0xb4,ACT_CHECK,dig_8, SILENT)
BF(8, 0x9a,ACT_CHECK,dig_9, SILENT)
BF(8, 0xed,ACT_CHECK,dig_10,SILENT)
BF(8, 0x86,ACT_CHECK,dig_11,SILENT)
BF(8, 0xcb,ACT_CHECK,dig_12,SILENT)
BF(8, 0xc1,ACT_CHECK,dig_13,SILENT)
BF(8, 0x62,ACT_CHECK,dig_14,SILENT)
BF(8, 0xb2,ACT_CHECK,dig_15,SILENT)
BF(8, 0x19,ACT_CHECK,dig_16,SILENT)
BF(8, 0xad,ACT_CHECK,dig_17,SILENT)
BF(8, 0x66,ACT_CHECK,dig_18,SILENT)
BF(8, 0xbb,ACT_CHECK,dig_19,SILENT)
BF(8, 0xe1,ACT_CHECK,dig_20,SILENT)
BF(8, 0x46,ACT_CHECK,dig_21,"end of 7 bit packed")
IE_END(facility_unstructured_data)

IE_BEGIN(facility_invoke_aoc)
BF(8, 45 ,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x80,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x05,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x7D,ACT_CHECK,operation_code, "advice of charge")
BF(8, 0x30,ACT_CHECK,ForwardChargeAdviceArg, SILENT)
BF(8, 0x21,ACT_CHECK,ForwardChargeAdviceLength, SILENT)
BF(8, 0x80,ACT_CHECK,ss_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,ss_code_length, SILENT)
BF(8, 0x72,ACT_CHECK,ss_code, "AoC-Charging")
BF(8, 0xA1,ACT_CHECK,charging_information, SILENT)
BF(8, 0x1C,ACT_CHECK,charging_information_length, SILENT)
BF(8, 0x81,ACT_CHECK,e1_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e1_length, SILENT)
BF(16, 0x00,ACT_CHECK,e1, SILENT)
BF(8, 0x82,ACT_CHECK,e2_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e2_length, SILENT)
BF(16, 0x00,ACT_CHECK,e2, SILENT)
BF(8, 0x83,ACT_CHECK,e3_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e3_length, SILENT)
BF(16, 0x00,ACT_CHECK,e3, SILENT)
BF(8, 0x84,ACT_CHECK,e4_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e4_length, SILENT)
BF(16, 0x00,ACT_CHECK,e4, SILENT)
BF(8, 0x85,ACT_CHECK,e5_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e5_length, SILENT)
BF(16, 0x00,ACT_CHECK,e5, SILENT)
BF(8, 0x86,ACT_CHECK,e6_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e6_length, SILENT)
BF(16, 0x00,ACT_CHECK,e6, SILENT)
BF(8, 0x87,ACT_CHECK,e7_tag, SILENT)
BF(8, 0x02,ACT_CHECK,e7_length, SILENT)
BF(16, 0x00,ACT_CHECK,e7, SILENT)
BF(8, 0x00,ACT_CHECK,end_of_content_tag, SILENT)
BF(8, 0x00,ACT_CHECK,length_indicator, SILENT)
IE_END(facility_invoke_aoc)

```

```
IE_BEGIN(facility_return_result_aoc)
    BF(8, 5, ACT_CHECK, length_of_fac_ie_content, SILENT)
    BF(8, 0xA2, ACT_CHECK, component_type_tag, "RETURN RESULT")
    BF(8, 0x03, ACT_CHECK, component_length, SILENT)
    BF(8, 0x02, ACT_CHECK, invoke_id_tag, SILENT)
    BF(8, 0x01, ACT_CHECK, invoke_id_length, SILENT)
    BF(8, 0x05, ACT_CHECK, invoke_id, SILENT)
IE_END(facility_return_result_aoc)

IE_BEGIN(facility_invoke_ccbs)
    BF(8, 0x0A, ACT_CHECK, length_of_fac_ie_content, SILENT)
    BF(8, 0xA1, ACT_CHECK, component_type_tag, "INVOKE")
    BF(8, 0x08, ACT_CHECK, component_length, SILENT)
    BF(8, 0x02, ACT_CHECK, invoke_id_tag, SILENT)
    BF(8, 0x01, ACT_CHECK, invoke_id_length, SILENT)
    BF(8, 0x00, ACT_CHECK, invoke_id, SILENT)
    BF(8, 0x02, ACT_CHECK, operation_code_tag, SILENT)
    BF(8, 0x01, ACT_CHECK, operation_code_length, SILENT)
    BF(8, 0x77, ACT_CHECK, operation_code, SILENT)
    BF(8, 0x30, ACT_CHECK, parameters_1, SILENT)
    BF(8, 0x00, ACT_CHECK, parameters_2, SILENT)
IE_END(facility_invoke_ccbs)

IE_BEGIN(facility_recall)
    BF(8, 0x20, ACT_CHECK, length_of_fac_ie_content, SILENT)
    BF(8, 0xA1, ACT_CHECK, component_type_tag, "INVOKE")
    BF(8, 0x1E, ACT_CHECK, component_length, SILENT)
    BF(8, 0x02, ACT_CHECK, invoke_id_tag, SILENT)
    BF(8, 0x01, ACT_CHECK, invoke_id_length, SILENT)
    BF(8, 0x00, ACT_CHECK, invoke_id, SILENT)
    BF(8, 0x02, ACT_CHECK, operation_code_tag, SILENT)
    BF(8, 0x01, ACT_CHECK, operation_code_length, SILENT)
    BF(8, 0x10, ACT_CHECK, operation_code, "NotifySS")
    BF(8, 0x30, ACT_CHECK, mystery_1, SILENT)
    BF(8, 0x16, ACT_CHECK, mystery_2, SILENT)
    BF(8, 0xB5, ACT_CHECK, mystery_3, SILENT)
    BF(8, 0x11, ACT_CHECK, mystery_4, SILENT)
    BF(8, 0x80, ACT_CHECK, mystery_5, SILENT)
    BF(8, 0x01, ACT_CHECK, mystery_6, SILENT)
    BF(8, 0x01, ACT_CHECK, mystery_7, SILENT)
    BF(8, 0x81, ACT_CHECK, mystery_8, SILENT)
    BF(8, 0x07, ACT_CHECK, mystery_9, SILENT)
    BF(8, 0x91, ACT_CHECK, mystery_10, SILENT)
    BF(8, 0x94, ACT_CHECK, mystery_11, SILENT)
    BF(8, 0x03, ACT_CHECK, mystery_12, SILENT)
    BF(8, 0x93, ACT_CHECK, mystery_13, SILENT)
    BF(8, 0x90, ACT_CHECK, mystery_14, SILENT)
    BF(8, 0x44, ACT_CHECK, mystery_15, SILENT)
    BF(8, 0x44, ACT_CHECK, mystery_16, SILENT)
    BF(8, 0x83, ACT_CHECK, mystery_17, SILENT)
    BF(8, 0x03, ACT_CHECK, mystery_18, SILENT)
    BF(8, 0x83, ACT_CHECK, mystery_19, SILENT)
    BF(8, 0x01, ACT_CHECK, mystery_20, SILENT)
    BF(8, 0x10, ACT_CHECK, mystery_21, SILENT)
    BF(8, 0x96, ACT_CHECK, mystery_22, SILENT)
    BF(8, 0x01, ACT_CHECK, mystery_23, SILENT)
    BF(8, 0x03, ACT_CHECK, mystery_24, SILENT)
IE_END(facility_recall)

IE_BEGIN(facility_invoke_cd)
```

```

BF(8, 0x13,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x11,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x75,ACT_CHECK,operation_code, SILENT)
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x09,ACT_CHECK,parameters_length, "Sequence length")
BF(8, 0x80,ACT_CHECK,parameters_3, SILENT)
BF(8, 0x07,ACT_CHECK,number_length, SILENT)
BF(8, 0x81,ACT_CHECK,ton_npi, SILENT)
BF(8, 0x30,ACT_CHECK,digit_2_1, SILENT)
BF(8, 0x30,ACT_CHECK,digit_4_3, SILENT)
BF(8, 0x09,ACT_CHECK,digit_6_5, SILENT)
BF(8, 0x49,ACT_CHECK,digit_8_7, SILENT)
BF(8, 0x11,ACT_CHECK,digit_10_9, SILENT)
BF(8, 0xF7,ACT_CHECK,digit_12_11, SILENT)
IE_END(facility_invoke_cd)

IE_BEGIN(facility_notify_cd_c)
BF(8, 0x10,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0E,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x10,ACT_CHECK,operation_code, "NotifySS")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x06,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x81,ACT_CHECK,sequence_1, "SS-Code tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "SS-Code length")
BF(8, 0x24,ACT_CHECK,sequence_3, "SS-Code CallDeflection")
BF(8, 0x85,ACT_CHECK,sequence_4, "SS-Notification tag")
BF(8, 0x01,ACT_CHECK,sequence_5, "SS-Notification length")
BF(8, 0x01,ACT_CHECK,sequence_6, "C subscriber")
IE_END(facility_notify_cd_c)

IE_BEGIN(facility_notify_cd_a)
BF(8, 0x10,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0E,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x10,ACT_CHECK,operation_code, "NotifySS")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x06,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x81,ACT_CHECK,sequence_1, "SS-Code tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "SS-Code length")
BF(8, 0x24,ACT_CHECK,sequence_3, "SS-Code CallDeflection")
BF(8, 0x85,ACT_CHECK,sequence_4, "SS-Notification tag")
BF(8, 0x01,ACT_CHECK,sequence_5, "SS-Notification length")
BF(8, 0x04,ACT_CHECK,sequence_6, "A subscriber")

```

IE_END(facility_notify_cd_a)

IE_BEGIN(facility_notify_cug_9)

```
BF(8, 0x0D,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0B,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x10,ACT_CHECK,operation_code, "NotifySS")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x03,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x91,ACT_CHECK,sequence_1, "CUG-Index tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "CUG-Index length")
BF(8, 0x09,ACT_CHECK,sequence_3, "CUG-Index value")
```

IE_END(facility_notify_cug_9)

IE_BEGIN(facility_notify_cug_773)

```
BF(8, 0x0E,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0C,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x10,ACT_CHECK,operation_code, "NotifySS")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x04,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x91,ACT_CHECK,sequence_1, "CUG-Index tag")
BF(8, 0x02,ACT_CHECK,sequence_2, "CUG-Index length")
BF(8, 0x03,ACT_CHECK,sequence_3, "CUG-Index value (773), high octet")
BF(8, 0x05,ACT_CHECK,sequence_4, "CUG-Index value (773), low octet")
```

IE_END(facility_notify_cug_773)

IE_BEGIN(facility_invoke_cug)

```
BF(8, 0x0F,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0D,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x78,ACT_CHECK,operation_code, "Forward CUG Info")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x05,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x80,ACT_CHECK,sequence_1, "CUG-Index tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "CUG-Index length")
BF(8, 0x07,ACT_CHECK,sequence_3, "CUG-Index value (7)")
BF(8, 0x81,ACT_CHECK,sequence_4, "suppressPrefCUG tag")
BF(8, 0x00,ACT_CHECK,sequence_5, "suppressPrefCUG NULL")
```

IE_END(facility_invoke_cug)

IE_BEGIN(facility_invoke_cug_supp_OA_supp_pref)

```
BF(8, 0x11,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0F,ACT_CHECK,component_length, SILENT)
```

```

BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x78,ACT_CHECK,operation_code, "Forward CUG Info")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x07,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x80,ACT_CHECK,sequence_1, "CUG-Index tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "CUG-Index length")
BF(8, 0x07,ACT_CHECK,sequence_3, "CUG-Index value (7)")
BF(8, 0x81,ACT_CHECK,sequence_4, "suppressPrefCUG tag")
BF(8, 0x00,ACT_CHECK,sequence_5, "suppressPrefCUG NULL")
BF(8, 0x82,ACT_CHECK,sequence_6, "suppressOA tag")
BF(8, 0x00,ACT_CHECK,sequence_7, "suppressOA NULL")
IE_END(facility_invoke_cug_supp_OA_supp_pref)

IE_BEGIN(facility_invoke_cug_supp_OA)
BF(8, 0x0F,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0D,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x78,ACT_CHECK,operation_code, "Forward CUG Info")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x05,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x80,ACT_CHECK,sequence_1, "CUG-Index tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "CUG-Index length")
BF(8, 0x07,ACT_CHECK,sequence_3, "CUG-Index value (7)")
BF(8, 0x82,ACT_CHECK,sequence_6, "suppressOA tag")
BF(8, 0x00,ACT_CHECK,sequence_7, "suppressOA NULL")
IE_END(facility_invoke_cug_supp_OA)

IE_BEGIN(facility_invoke_cug_no_info)
BF(8, 0x0D,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA1,ACT_CHECK,component_type_tag,"INVOKE")
BF(8, 0x0B,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
BF(8, 0x02,ACT_CHECK,operation_code_tag, SILENT)
BF(8, 0x01,ACT_CHECK,operation_code_length, SILENT)
BF(8, 0x78,ACT_CHECK,operation_code, "Forward CUG Info")
BF(8, 0x30,ACT_CHECK,parameters_1, "Sequence tag")
BF(8, 0x03,ACT_CHECK,parameters_2, "Sequence length")
BF(8, 0x80,ACT_CHECK,sequence_1, "CUG-Index tag")
BF(8, 0x01,ACT_CHECK,sequence_2, "CUG-Index length")
BF(8, 0x07,ACT_CHECK,sequence_3, "CUG-Index value (7)")
IE_END(facility_invoke_cug_no_info)

IE_BEGIN(facility_return_result)
BF(8, 0x05,ACT_CHECK,length_of_fac_ie_content,SILENT)
BF(8, 0xA2,ACT_CHECK,component_type_tag,"RETURN RESULT")
BF(8, 0x03,ACT_CHECK,component_length, SILENT)
BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)

```

```
    BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
IE_END(facility_return_result)

IE_BEGIN(facility_return_error)
    BF(8, 0x08,ACT_CHECK,length_of_fac_ie_content,SILENT)
    BF(8, 0xA3,ACT_CHECK,component_type_tag,"RETURN RESULT")
    BF(8, 0x06,ACT_CHECK,component_length, SILENT)
    BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
    BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
    BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
    BF(8, 0x02,ACT_CHECK,error_code_tag, SILENT)
    BF(8, 0x01,ACT_CHECK,error_code_length, SILENT)
    BF(8, 0x10,ACT_CHECK,error_code, "illegalSS-Operation")
IE_END(facility_return_error)

IE_BEGIN(facility_return_reject)
    BF(8, 0x08,ACT_CHECK,length_of_fac_ie_content,SILENT)
    BF(8, 0xA4,ACT_CHECK,component_type_tag,"REJECT")
    BF(8, 0x06,ACT_CHECK,component_length, SILENT)
    BF(8, 0x02,ACT_CHECK,invoke_id_tag, SILENT)
    BF(8, 0x01,ACT_CHECK,invoke_id_length, SILENT)
    BF(8, 0x00,ACT_CHECK,invoke_id, SILENT)
    BF(8, 0x81,ACT_CHECK,problem_code_tag, "Invoke problem tag")
    BF(8, 0x81,ACT_CHECK,problem_code_length, SILENT)
    BF(8, 0x01,ACT_CHECK,problem_code, "illegalSS-Operation")
IE_END(facility_return_reject)

IE_BEGIN(recall_type)
    BF(5, 0x00,ACT_CHECK,spare, SILENT)
    BF(3, 0x00,ACT_CHECK,recall_type_ccbs, SILENT)
IE_END(recall_type)

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

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

IE_BEGIN(transaction_identifier_source_1)
    BF(4,M4(0,0,0,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source_1)

IE_BEGIN(transaction_identifier_source_2)
    BF(4,M4(0,0,1,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source_2)

IE_BEGIN(transaction_identifier_source_3)
    BF(4,M4(0,0,1,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source_3)

IE_BEGIN(transaction_identifier_source_4)
    BF(4,M4(0,1,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source_4)

IE_BEGIN(transaction_identifier_source_5)
    BF(4,M4(0,1,0,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source_5)
```

```
IE_BEGIN(transaction_identifier_source_6)
    BF(4,M4(0,1,1,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_source_6)

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

IE_BEGIN(transaction_identifier_dest_1)
    BF(4,M4(1,0,0,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest_1)

IE_BEGIN(transaction_identifier_dest_2)
    BF(4,M4(1,0,1,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest_2)

IE_BEGIN(transaction_identifier_dest_3)
    BF(4,M4(1,0,1,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest_3)

IE_BEGIN(transaction_identifier_dest_4)
    BF(4,M4(1,1,0,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest_4)

IE_BEGIN(transaction_identifier_dest_5)
    BF(4,M4(1,1,0,1),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest_5)

IE_BEGIN(transaction_identifier_dest_6)
    BF(4,M4(1,1,1,0),ACT_CHECK,ANONYMOUS,SILENT)
IE_END(transaction_identifier_dest_6)

IE_BEGIN(authentication_request_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x12,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(authentication_request_message_type)

IE_BEGIN(identity_request_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x18,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(identity_request_message_type)

IE_BEGIN(identity_response_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x19,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(identity_response_message_type)

IE_BEGIN(tmsi_reallocation_command_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x1A,ACT_CHECK,ANONYMOUS,SILENT)
IE_END(tmsi_reallocation_command_message_type)

IE_BEGIN(tmsi_reallocation_complete_message_type)
    BF(1, 0,ACT_CHECK,ANONYMOUS,SILENT)
    BF(1, 0,ACT_SHOW, ANONYMOUS,SILENT)
    BF(6, 0x1B,ACT_CHECK,ANONYMOUS,SILENT)
```



```
IE_END(tmsi_reallocation_complete_message_type)

IE_BEGIN(cm_reestablish_request_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x28, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(cm_reestablish_request_message_type)

IE_BEGIN(cm_service_prompt_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x25, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(cm_service_prompt_message_type)

IE_BEGIN(start_cc_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x09, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(start_cc_message_type)

IE_BEGIN(cc_establishment_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x04, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(cc_establishment_message_type)

IE_BEGIN(cc_establishment_confirmed_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x06, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(cc_establishment_confirmed_message_type)

IE_BEGIN(recall_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x0B, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(recall_message_type)

IE_BEGIN(authentication_response_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x14, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(authentication_response_message_type)

IE_BEGIN(ss_register_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x3B, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(ss_register_message_type)

IE_BEGIN(setup_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x05, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(setup_message_type)

IE_BEGIN(emergency_setup_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x0E, ACT_CHECK, ANONYMOUS, SILENT)
```

```
IE_END(emergency_setup_message_type)

IE_BEGIN(call_confirmed_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x08, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(call_confirmed_message_type)

IE_BEGIN(connect_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x07, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(connect_message_type)

IE_BEGIN(connect_acknowledge_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x0F, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(connect_acknowledge_message_type)

IE_BEGIN(alerting_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x01, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(alerting_message_type)

IE_BEGIN(facility_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x3A, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(facility_message_type)

IE_BEGIN(progress_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x03, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(progress_message_type)

IE_BEGIN(status_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x3D, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(status_message_type)

IE_BEGIN(status_enquiry_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x34, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(status_enquiry_message_type)

IE_BEGIN(notify_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x3E, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(notify_message_type)

IE_BEGIN(unknown_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x20, ACT_CHECK, ANONYMOUS, SILENT)
```

```
IE_END(unknown_message_type)

IE_BEGIN(disconnect_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x25, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(disconnect_message_type)

IE_BEGIN(release_complete_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x2A, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(release_complete_message_type)

IE_BEGIN(release_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x2D, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(release_message_type)

IE_BEGIN(channel_release_message_type)
    BF(8, 0x0D, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(channel_release_message_type)

IE_BEGIN(start_dtmf_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x35, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(start_dtmf_message_type)

IE_BEGIN(start_dtmf_acknowledge_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x36, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(start_dtmf_acknowledge_message_type)

IE_BEGIN(stop_dtmf_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x31, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(stop_dtmf_message_type)

IE_BEGIN(stop_dtmf_acknowledge_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x32, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(stop_dtmf_acknowledge_message_type)

IE_BEGIN(start_dtmf_reject_message_type)
    BF(1, 0, ACT_CHECK, ANONYMOUS, SILENT)
    BF(1, 0, ACT_SHOW, ANONYMOUS, SILENT)
    BF(6, 0x37, ACT_CHECK, ANONYMOUS, SILENT)
IE_END(start_dtmf_reject_message_type)

IE_BEGIN(user_user_disconnect)
    BF(8, 5, ACT_CHECK, length, SILENT)
    BF(8, 1, ACT_CHECK, pd, SILENT)
    BF(8, 0x30, ACT_CHECK, octet1, SILENT)
    BF(8, 0x34, ACT_CHECK, octet2, SILENT)
    BF(8, 0x35, ACT_CHECK, octet3, SILENT)
```

```
    BF(8, 0x36,ACT_CHECK,octet4,SILENT)
IE_END(user_user_disconnect)

IE_BEGIN(user_user_setup)
    BF(8, 5,ACT_CHECK,length,SILENT)
    BF(8, 1,ACT_CHECK,pd, SILENT)
    BF(8, 0x30,ACT_CHECK,octet1,SILENT)
    BF(8, 0x31,ACT_CHECK,octet2,SILENT)
    BF(8, 0x32,ACT_CHECK,octet3,SILENT)
    BF(8, 0x33,ACT_CHECK,octet4,SILENT)
IE_END(user_user_setup)

IE_BEGIN(notify_user_resumed)
    BF(8, 1,ACT_CHECK,notific,SILENT)
IE_END(notify_user_resumed)

MSG3_BEGIN(paging_request_type_1)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_request_type_1_message_type)
    IE(channels_needed_for_mobiles_1_and_2)
    IE(page_mode)
    IE(mobile_identity)
    IE(p1_rest_octets)
MSG3_END(paging_request_type_1)

MSG3_BEGIN(paging_request_type_1_tmsi)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_request_type_1_message_type)
    IE(channels_needed_for_mobiles_1_and_2)
    IE(page_mode)
    IE(mobile_identity_tmsi)
    IE(p1_rest_octets)
MSG3_END(paging_request_type_1_tmsi)

MSG3_BEGIN(paging_request_type_2_tmsi)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_request_type_2_message_type)
    IE(channels_needed_for_mobiles_1_and_2)
    IE(page_mode)
    IE(tmsi)
    IE(tmsi_2)
    IE(p2_rest_octets)
MSG3_END(paging_request_type_2_tmsi)

MSG3_BEGIN(paging_request_type_3_tmsi)
    IE(l2_pseudo_length_11)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_request_type_3_message_type)
    IE(channels_needed_for_mobiles_1_and_2)
    IE(page_mode)
    IE(tmsi)
    IE(tmsi_2)
    IE(tmsi_2)
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    IE(tmsi_2)
    IE(p3_rest_octets)
MSG3_END(paging_request_type_3_tmsi)

MSG3_BEGIN(channel_request)
    IE(rach)
MSG3_END(channel_request)
MSG3_BEGIN(channel_request_ss)
    IE(rach_111)
MSG3_END(channel_request_ss)

MSG3_BEGIN(channel_request_moc)
    IE(rach_moc)
MSG3_END(channel_request_moc)

MSG3_BEGIN(channel_request_ec)
    IE(rach_ec)
MSG3_END(channel_request_ec)

MSG3_BEGIN(channel_request_reest_neci_0)
    IE(rach_reest_neci_0)
MSG3_END(channel_request_reest_neci_0)

MSG3_BEGIN(immediate_assignment)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment)

MSG3_BEGIN(immediate_assignment_tch)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_tch)
    IE(request_reference)
    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_tch)

MSG3_BEGIN(immediate_assignment_1900)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(immediate_assignment_message_type)
    IE(spare_half_octet)
    IE(page_mode)
    IE(channel_description_1900)
    IE(request_reference)
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    IE(timing_advance)
    IE(mobile_allocation)
    IE(ia_rest_octets)
MSG3_END(immediate_assignment_1900)

MSG3_BEGIN(paging_response)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(ms_classmark)
    IE(mobile_identity)
MSG3_END(paging_response)

MSG3_BEGIN(paging_response_2)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number_2)
    IE(ms_classmark_dual_ext)
    IE(mobile_identity)
MSG3_END(paging_response_2)

MSG3_BEGIN(paging_response_1900)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(ms_classmark_1900)
    IE(mobile_identity)
MSG3_END(paging_response_1900)

MSG3_BEGIN(paging_response_tmsi)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number)
    IE(ms_classmark)
    IE(mobile_identity_tmsi)
MSG3_END(paging_response_tmsi)

MSG3_BEGIN(paging_response_cksn_2)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(paging_response_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number_2)
    IE(ms_classmark)
    IE(mobile_identity)
MSG3_END(paging_response_cksn_2)

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

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    IE(ciphering_key_sequence_number_2)
    IE(authentication_parameter_rand)
MSG3_END(authentication_request)
MSG3_BEGIN(authentication_response)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(authentication_response_message_type)
    IE(authentication_parameter_sres)
MSG3_END(authentication_response)

MSG3_BEGIN(identity_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(identity_request_message_type)
    IE(spare_half_octet)
    IE(identity_type)
MSG3_END(identity_request)
```

```
MSG3_BEGIN(identity_response)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(identity_response_message_type)
    IE(mobile_identity)
MSG3_END(identity_response)

MSG3_BEGIN(cm_service_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_request_message_type)
    IE(ciphering_key_sequence_number)
    IE(cm_service_type_moc)
    IE(ms_classmark)
    IE(mobile_identity)
MSG3_END(cm_service_request)

MSG3_BEGIN(cm_service_request_ec)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_request_message_type)
    IE(ciphering_key_sequence_number)
    IE(cm_service_type_ec)
    IE(ms_classmark)
    IE(mobile_identity)
MSG3_END(cm_service_request_ec)

MSG3_BEGIN(cm_service_request_1900)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_request_message_type)
    IE(ciphering_key_sequence_number)
    IE(cm_service_type_moc)
    IE(ms_classmark_1900)
    IE(mobile_identity)
MSG3_END(cm_service_request_1900)

MSG3_BEGIN(cm_service_request_dual_ext)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_request_message_type)
    IE(ciphering_key_sequence_number)
    IE(cm_service_type_moc)
    IE(ms_classmark_dual_ext)
    IE(mobile_identity)
MSG3_END(cm_service_request_dual_ext)

MSG3_BEGIN(cm_service_request_ss)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_request_message_type)
    IE(ciphering_key_sequence_number)
    IE(cm_service_type_ss)
    IE(ms_classmark)
    IE(mobile_identity)
MSG3_END(cm_service_request_ss)

MSG3_BEGIN(cm_reestablish_request)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
```



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    IE(cm_reestablish_request_message_type)
    IE(spare_half_octet)
    IE(ciphering_key_sequence_number_2)
    IE(ms_classmark)
    IE(mobile_identity_tmsi)
    IE(iei_13)
    IE(location_area_identification)
MSG3_END(cm_reestablish_request)

MSG3_BEGIN(cm_service_prompt)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_prompt_message_type)
    IE(pd_and_sapi_cc)
MSG3_END(cm_service_prompt)

MSG3_BEGIN(start_cc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_cc_message_type)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(start_cc)

MSG3_BEGIN(cc_establishment_confirmed)
    IE(skip_indicator)
    IE(call_control_protocol_discriminator)
    IE(cc_establishment_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability)
MSG3_END(cc_establishment_confirmed)

MSG3_BEGIN(cc_establishment_confirmed_busy)
    IE(skip_indicator)
    IE(call_control_protocol_discriminator)
    IE(cc_establishment_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_08)
    IE(cause_17)
MSG3_END(cc_establishment_confirmed_busy)

MSG3_BEGIN(cm_service_abort)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_abort_message_type)
MSG3_END(cm_service_abort)

MSG3_BEGIN(cm_service_reject)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_reject_message_type)
    IE(reject_cause)
MSG3_END(cm_service_reject)

MSG3_BEGIN(cm_service_accept)
    IE(skip_indicator)
    IE(mobility_management_protocol_discriminator)
    IE(cm_service_accept_message_type)
MSG3_END(cm_service_accept)
```

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

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

MSG3_BEGIN(channel_mode_modify)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_mode_modify_message_type)
    IE(channel_description_tch)
    IE(channel_mode_speech)
MSG3_END(channel_mode_modify)

MSG3_BEGIN(channel_mode_modify_acknowledge)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_mode_modify_acknowledge_message_type)
    IE(channel_description_tch)
    IE(channel_mode_speech)
MSG3_END(channel_mode_modify_acknowledge)

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

MSG3_BEGIN(setup_deflected)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_1C)
    IE(facility_notify_cd_c)
MSG3_END(setup_deflected)

MSG3_BEGIN(setup_deflected_redir)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_1C)
    IE(facility_notify_cd_c)
    IE(iei_74)
    IE(redir_party_bcd_number)
MSG3_END(setup_deflected_redir)

MSG3_BEGIN(setup_cug)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
```

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    IE(setup_message_type)
    IE(iei_1C)
    IE(facility_notify_cug_9)
MSG3_END(setup_cug)

MSG3_BEGIN(setup_cug_773)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_1C)
    IE(facility_notify_cug_773)
MSG3_END(setup_cug_773)

MSG3_BEGIN(emergency_setup)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(emergency_setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
MSG3_END(emergency_setup)

MSG3_BEGIN(setup_user_to_user)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_34)
    IE(signal_call_waiting)
    IE(iei_7E)
    IE(user_user_setup)
MSG3_END(setup_user_to_user)

MSG3_BEGIN(setup_no_signal)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
MSG3_END(setup_no_signal)

MSG3_BEGIN(setup_progress_no_signal)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_1E)
    IE(progress_indicator_3)
MSG3_END(setup_progress_no_signal)

MSG3_BEGIN(setup_no_signal_aoc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_1C)
    IE(facility_invoke_aoc)
MSG3_END(setup_no_signal_aoc)

MSG3_BEGIN(setup_moc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
```

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    IE(bearer_capability)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc)

MSG3_BEGIN(setup_moc_cug)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_1C)
    IE(facility_invoke_cug)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc_cug)

MSG3_BEGIN(setup_moc_cug_supp_OA_supp_pref)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_1C)
    IE(facility_invoke_cug_supp_OA_supp_pref)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc_cug_supp_OA_supp_pref)

MSG3_BEGIN(setup_moc_cug_supp_OA)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_1C)
    IE(facility_invoke_cug_supp_OA)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc_cug_supp_OA)

MSG3_BEGIN(setup_moc_cug_no_info)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_1C)
    IE(facility_invoke_cug_no_info)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
```

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    IE(cc_capabilities)
MSG3_END(setup_moc_cug_no_info)

MSG3_BEGIN(cc_establishment)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(cc_establishment_message_type)
    IE(length_10)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(cc_establishment)

MSG3_BEGIN(recall)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(recall_message_type)
    IE(recall_type)
    IE(facility_recall)
MSG3_END(recall)

MSG3_BEGIN(setup_moc_lnd)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_5E)
    IE(called_party_bcd_number_lnd)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc_lnd)

MSG3_BEGIN(setup_rlp)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability_rlp)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_7C)
    IE(llc_rlp)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_rlp)

MSG3_BEGIN(setup_mocEFR)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capabilityEFR)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
```

```
MSG3_END(setup_moc_efr)

MSG3_BEGIN(setup_moc_efr_ctm)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability_efr_ctm)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc_efr_ctm)

MSG3_BEGIN(setup_moc_1900)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability_3_voc)
    IE(iei_5E)
    IE(called_party_bcd_number)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(setup_moc_1900)

MSG3_BEGIN(setup_data)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(setup_message_type)
    IE(iei_04)
    IE(bearer_capability_data)
    IE(iei_5E)
    IE(called_party_bcd_number)
MSG3_END(setup_data)

MSG3_BEGIN(call_confirmed) /* contains bearer capability */
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed)

MSG3_BEGIN(call_confirmed_fr_hr_efr) /* contains bearer capability */
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability_fr_hr_efr)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed_fr_hr_efr)

MSG3_BEGIN(call_confirmed_efr_ctm) /* contains bearer capability */
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
```

```
    IE(iei_04)
    IE(bearer_capability_efr_ctm)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed_efr_ctm)

MSG3_BEGIN(call_confirmed_fr_hr_efr_ctm) /* contains bearer capability */
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability_fr_hr_efr_ctm)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed_fr_hr_efr_ctm)

MSG3_BEGIN(call_confirmed_1900)          /* contains bearer capability */
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability_3_voc)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed_1900)

MSG3_BEGIN(call_confirmed_user_busy) /* contains cause user busy */
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
    IE(iei_04)
    IE(bearer_capability)
    IE(iei_08)
    IE(cause_17)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed_user_busy)

MSG3_BEGIN(call_confirmed_no_neg)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_confirmed_message_type)
    IE(iei_15)
    IE(cc_capabilities)
MSG3_END(call_confirmed_no_neg)

MSG3_BEGIN(call_proceeding)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_proceeding_message_type)
MSG3_END(call_proceeding)

MSG3_BEGIN(call_proceeding_rlp)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_proceeding_message_type)
    IE(iei_04)
    IE(bearer_capability_rlp)
MSG3_END(call_proceeding_rlp)
```

```
MSG3_BEGIN(call_proceeding_aoc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(call_proceeding_message_type)
    IE(iei_1C)
    IE(facility_invoke_aoc)
MSG3_END(call_proceeding_aoc)

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

MSG3_BEGIN(connect_aoc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(connect_message_type)
    IE(iei_1C)
    IE(facility_invoke_aoc)
MSG3_END(connect_aoc)

MSG3_BEGIN(unknown_message)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(unknown_message_type)
MSG3_END(unknown_message)

MSG3_BEGIN(unknown_message_mtc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(unknown_message_type)
MSG3_END(unknown_message_mtc)

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

MSG3_BEGIN(alerting_aoc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(alerting_message_type)
    IE(iei_1C)
    IE(facility_invoke_aoc)
MSG3_END(alerting_aoc)

MSG3_BEGIN(progress)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(progress_message_type)
    IE(progress_indicator_32)
MSG3_END(progress)

MSG3_BEGIN(progress_1)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(progress_message_type)
    IE(progress_indicator_8)
```


MSG3_END(progress_1)

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

```
MSG3_BEGIN(assignment_command_1900)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time_1900)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel)
MSG3_END(assignment_command_1900)
```

```
MSG3_BEGIN(assignment_command_efr)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel_efr)
MSG3_END(assignment_command_efr)
```

```
MSG3_BEGIN(assignment_command_data_12k)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time)
    IE(power_command)
    IE(iei_63)
    IE(mode_of_the_first_channel_data_12k)
MSG3_END(assignment_command_data_12k)
```

```
MSG3_BEGIN(assignment_command_TS8950)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_command_message_type)
    IE(description_of_the_first_channel_after_time_TS8950)
    IE(power_command)
    IE(iei_05)
    IE(frequency_list_TS8950)
    IE(iei_63)
    IE(mode_of_the_first_channel)
MSG3_END(assignment_command_TS8950)
```

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

```
MSG3_BEGIN(assignment_failure_freq_not_implemented)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_complete_message_type)
    IE(rr_cause_freq_not_implemented)
MSG3_END(assignment_failure_freq_not_implemented)

MSG3_BEGIN(handover_complete)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_complete_message_type)
    IE(rr_cause)
MSG3_END(handover_complete)

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

MSG3_BEGIN(status_enquiry_0)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_0)

MSG3_BEGIN(status_enquiry_1)
    IE(transaction_identifier_dest_1)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_1)

MSG3_BEGIN(status_enquiry_2)
    IE(transaction_identifier_dest_2)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_2)

MSG3_BEGIN(status_enquiry_3)
    IE(transaction_identifier_dest_3)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_3)

MSG3_BEGIN(status_enquiry_4)
    IE(transaction_identifier_dest_4)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_4)

MSG3_BEGIN(status_enquiry_5)
    IE(transaction_identifier_dest_5)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_5)

MSG3_BEGIN(status_enquiry_6)
    IE(transaction_identifier_dest_6)
    IE(call_control_protocol_discriminator)
```

```
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_6)

MSG3_BEGIN(status_enquiry_0_mtc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_0_mtc)

MSG3_BEGIN(status_enquiry_1_mtc)
    IE(transaction_identifier_source_1)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_1_mtc)

MSG3_BEGIN(status_enquiry_2_mtc)
    IE(transaction_identifier_source_2)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_2_mtc)

MSG3_BEGIN(status_enquiry_3_mtc)
    IE(transaction_identifier_source_3)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_3_mtc)

MSG3_BEGIN(status_enquiry_4_mtc)
    IE(transaction_identifier_source_4)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_4_mtc)

MSG3_BEGIN(status_enquiry_5_mtc)
    IE(transaction_identifier_source_5)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_5_mtc)

MSG3_BEGIN(status_enquiry_6_mtc)
    IE(transaction_identifier_source_6)
    IE(call_control_protocol_discriminator)
    IE(status_enquiry_message_type)
MSG3_END(status_enquiry_6_mtc)

MSG3_BEGIN(notify)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(notify_message_type)
    IE(notify_user_resumed)
MSG3_END(notify)

MSG3_BEGIN(disconnect_t303)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_102_303)
MSG3_END(disconnect_t303)
```

```
MSG3_BEGIN(disconnect_t310)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_102_310)
MSG3_END(disconnect_t310)

MSG3_BEGIN(disconnect_t313)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_102_313)
MSG3_END(disconnect_t313)

MSG3_BEGIN(disconnect_8)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
    IE(iei_1E)
    IE(progress_indicator_8)
MSG3_END(disconnect_8)

MSG3_BEGIN(disconnect_8_mtc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
    IE(iei_1E)
    IE(progress_indicator_8)
MSG3_END(disconnect_8_mtc)

MSG3_BEGIN(disconnect_ms)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
MSG3_END(disconnect_ms)

MSG3_BEGIN(disconnect_user_to_user)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
    IE(iei_7E)
    IE(user_user_disconnect)
MSG3_END(disconnect_user_to_user)

MSG3_BEGIN(disconnect)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
MSG3_END(disconnect)

MSG3_BEGIN(disconnect_no_cause)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_not_checked)
```

```
MSG3_END(disconnect_no_cause)

MSG3_BEGIN(disconnect_aoc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
    IE(iei_1C)
    IE(facility_invoke_aoc)
MSG3_END(disconnect_aoc)

MSG3_BEGIN(disconnect_ccbs_offered)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_17)
    IE(iei_7B)
    IE(allowed_actions_ccbs)
MSG3_END(disconnect_ccbs_offered)

MSG3_BEGIN(disconnect_8_ccbs_offered)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_17)
    IE(iei_1E)
    IE(progress_indicator_8)
    IE(iei_7B)
    IE(allowed_actions_ccbs)
MSG3_END(disconnect_8_ccbs_offered)

MSG3_BEGIN(disconnect_cd)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(disconnect_message_type)
    IE(cause_16)
    IE(iei_1C)
    IE(facility_invoke_cd)
    IE(iei_7F)
    IE(ss_version)
MSG3_END(disconnect_cd)

MSG3_BEGIN(release_complete)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_03)
MSG3_END(release_complete)

MSG3_BEGIN(release_complete_cause_21)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_21)
MSG3_END(release_complete_cause_21)

MSG3_BEGIN(release_complete_empty)
    IE(transaction_identifier_dest)
```

```
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
MSG3_END(release_complete_empty)

MSG3_BEGIN(release)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
MSG3_END(release)

MSG3_BEGIN(release_ccbs)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_08)
    IE(cause_16)
    IE(iei_1C)
    IE(facility_invoke_ccbs)
    IE(iei_7F)
    IE(ss_version_3)
MSG3_END(release_ccbs)

MSG3_BEGIN(release_facility_result)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_1C)
    IE(facility_return_result)
MSG3_END(release_facility_result)

MSG3_BEGIN(release_facility_error)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_1C)
    IE(facility_return_error)
MSG3_END(release_facility_error)

MSG3_BEGIN(release_facility_reject)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_1C)
    IE(facility_return_reject)
MSG3_END(release_facility_reject)

MSG3_BEGIN(release_mtc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
MSG3_END(release_mtc)

MSG3_BEGIN(release_t305)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_08)
    IE(cause_16)
MSG3_END(release_t305)
```

```
MSG3_BEGIN(release_mtc_normal)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_08)
    IE(cause_16)
MSG3_END(release_mtc_normal)

MSG3_BEGIN(release_bs)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(release_message_type)
    IE(iei_08)
    IE(cause_31)
MSG3_END(release_bs)

MSG3_BEGIN(release_complete_88)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_88)
MSG3_END(release_complete_88)

MSG3_BEGIN(release_complete_bs)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
MSG3_END(release_complete_bs)

MSG3_BEGIN(release_complete_0)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_0)

MSG3_BEGIN(release_complete_1)
    IE(transaction_identifier_source_1)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_1)

MSG3_BEGIN(release_complete_2)
    IE(transaction_identifier_source_2)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_2)

MSG3_BEGIN(release_complete_3)
    IE(transaction_identifier_source_3)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
```

```
MSG3_END(release_complete_3)

MSG3_BEGIN(release_complete_4)
    IE(transaction_identifier_source_4)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_4)

MSG3_BEGIN(release_complete_5)
    IE(transaction_identifier_source_5)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_5)

MSG3_BEGIN(release_complete_6)
    IE(transaction_identifier_source_6)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_6)

MSG3_BEGIN(release_complete_0_mtc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_0_mtc)

MSG3_BEGIN(release_complete_1_mtc)
    IE(transaction_identifier_dest_1)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_1_mtc)

MSG3_BEGIN(release_complete_2_mtc)
    IE(transaction_identifier_dest_2)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_2_mtc)

MSG3_BEGIN(release_complete_3_mtc)
    IE(transaction_identifier_dest_3)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_3_mtc)

MSG3_BEGIN(release_complete_4_mtc)
    IE(transaction_identifier_dest_4)
```



```
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_4_mtc)

MSG3_BEGIN(release_complete_5_mtc)
    IE(transaction_identifier_dest_5)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_5_mtc)

MSG3_BEGIN(release_complete_6_mtc)
    IE(transaction_identifier_dest_6)
    IE(call_control_protocol_discriminator)
    IE(release_complete_message_type)
    IE(iei_08)
    IE(cause_81)
MSG3_END(release_complete_6_mtc)

MSG3_BEGIN(channel_release)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(channel_release_message_type)
    IE(rr_cause)
MSG3_END(channel_release)

MSG3_BEGIN(status_30_1)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_1)
MSG3_END(status_30_1)

MSG3_BEGIN(status_30_3)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_3)
MSG3_END(status_30_3)

MSG3_BEGIN(status_30_4)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_4)
MSG3_END(status_30_4)

MSG3_BEGIN(status_30_7)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_7)
```

```
MSG3_END(status_30_7)

MSG3_BEGIN(status_30_8)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_8)
MSG3_END(status_30_8)

MSG3_BEGIN(status_30_9)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_9)
MSG3_END(status_30_9)

MSG3_BEGIN(status_30_10)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_10)
MSG3_END(status_30_10)

MSG3_BEGIN(status_30_35)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_35)
MSG3_END(status_30_35)

MSG3_BEGIN(status_30_37)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_37)
MSG3_END(status_30_37)

MSG3_BEGIN(status_30_38)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_38)
MSG3_END(status_30_38)

MSG3_BEGIN(status_30_10_mtc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_10)
MSG3_END(status_30_10_mtc)

MSG3_BEGIN(status_30_11)
    IE(transaction_identifier_source)
```

```
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_11)
MSG3_END(status_30_11)

MSG3_BEGIN(status_30_11_mtc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_11)
MSG3_END(status_30_11_mtc)

MSG3_BEGIN(status_30_12)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_12)
MSG3_END(status_30_12)

MSG3_BEGIN(status_30_12_mtc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_12)
MSG3_END(status_30_12_mtc)

MSG3_BEGIN(status_30_19)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_19)
MSG3_END(status_30_19)

MSG3_BEGIN(status_30_19_mtc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_30)
    IE(call_state_19)
MSG3_END(status_30_19_mtc)

MSG3_BEGIN(status_97_1)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_1)
MSG3_END(status_97_1)

MSG3_BEGIN(status_97_3)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_3)
```

```
MSG3_END(status_97_3)

MSG3_BEGIN(status_97_4)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_4)
MSG3_END(status_97_4)

MSG3_BEGIN(status_97_7)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_7)
MSG3_END(status_97_7)

MSG3_BEGIN(status_97_8)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_8)
MSG3_END(status_97_8)

MSG3_BEGIN(status_97_9)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_9)
MSG3_END(status_97_9)

MSG3_BEGIN(status_97_11)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_11)
MSG3_END(status_97_11)

MSG3_BEGIN(status_97_12)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(status_message_type)
    IE(cause_97_20)
    IE(call_state_12)
MSG3_END(status_97_12)

MSG3_BEGIN(stop_dtmf)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(stop_dtmf_message_type)
MSG3_END(stop_dtmf)

MSG3_BEGIN(stop_dtmf_acknowledge)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(stop_dtmf_acknowledge_message_type)
```

```
MSG3_END(stop_dtmf_acknowledge)

MSG3_BEGIN(start_dtmf_reject)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_reject_message_type)
    IE(cause_03)
MSG3_END(start_dtmf_reject)

MSG3_BEGIN(start_dtmf_0)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_0)
MSG3_END(start_dtmf_0)

MSG3_BEGIN(start_dtmf_1)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_1)
MSG3_END(start_dtmf_1)

MSG3_BEGIN(start_dtmf_2)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_2)
MSG3_END(start_dtmf_2)

MSG3_BEGIN(start_dtmf_3)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_3)
MSG3_END(start_dtmf_3)

MSG3_BEGIN(start_dtmf_4)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_4)
MSG3_END(start_dtmf_4)

MSG3_BEGIN(start_dtmf_5)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_5)
MSG3_END(start_dtmf_5)

MSG3_BEGIN(start_dtmf_6)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
```

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    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_6)
MSG3_END(start_dtmf_6)

MSG3_BEGIN(start_dtmf_7)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_7)
MSG3_END(start_dtmf_7)

MSG3_BEGIN(start_dtmf_8)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_8)
MSG3_END(start_dtmf_8)

MSG3_BEGIN(start_dtmf_9)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_9)
MSG3_END(start_dtmf_9)

MSG3_BEGIN(start_dtmf_A)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_A)
MSG3_END(start_dtmf_A)

MSG3_BEGIN(start_dtmf_B)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_B)
MSG3_END(start_dtmf_B)

MSG3_BEGIN(start_dtmf_C)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_C)
MSG3_END(start_dtmf_C)

MSG3_BEGIN(start_dtmf_D)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_D)
MSG3_END(start_dtmf_D)
```

```
MSG3_BEGIN(start_dtmf_star)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_star)
MSG3_END(start_dtmf_star)

MSG3_BEGIN(start_dtmf_hash)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_message_type)
    IE(iei_2C)
    IE(keypad_facility_hash)
MSG3_END(start_dtmf_hash)

MSG3_BEGIN(start_dtmf_acknowledge_0)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_0)
MSG3_END(start_dtmf_acknowledge_0)

MSG3_BEGIN(start_dtmf_acknowledge_1)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_1)
MSG3_END(start_dtmf_acknowledge_1)

MSG3_BEGIN(start_dtmf_acknowledge_2)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_2)
MSG3_END(start_dtmf_acknowledge_2)

MSG3_BEGIN(start_dtmf_acknowledge_3)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_3)
MSG3_END(start_dtmf_acknowledge_3)

MSG3_BEGIN(start_dtmf_acknowledge_4)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_4)
MSG3_END(start_dtmf_acknowledge_4)

MSG3_BEGIN(start_dtmf_acknowledge_5)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
```

```
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_5)
MSG3_END(start_dtmf_acknowledge_5)

MSG3_BEGIN(start_dtmf_acknowledge_6)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_6)
MSG3_END(start_dtmf_acknowledge_6)

MSG3_BEGIN(start_dtmf_acknowledge_7)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_7)
MSG3_END(start_dtmf_acknowledge_7)

MSG3_BEGIN(start_dtmf_acknowledge_8)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_8)
MSG3_END(start_dtmf_acknowledge_8)

MSG3_BEGIN(start_dtmf_acknowledge_9)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_9)
MSG3_END(start_dtmf_acknowledge_9)

MSG3_BEGIN(start_dtmf_acknowledge_A)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_A)
MSG3_END(start_dtmf_acknowledge_A)

MSG3_BEGIN(start_dtmf_acknowledge_B)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_B)
MSG3_END(start_dtmf_acknowledge_B)

MSG3_BEGIN(start_dtmf_acknowledge_C)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_C)
MSG3_END(start_dtmf_acknowledge_C)
```



```
MSG3_BEGIN(start_dtmf_acknowledge_D)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_D)
MSG3_END(start_dtmf_acknowledge_D)

MSG3_BEGIN(start_dtmf_acknowledge_star)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_star)
MSG3_END(start_dtmf_acknowledge_star)

MSG3_BEGIN(start_dtmf_acknowledge_hash)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(start_dtmf_acknowledge_message_type)
    IE(iei_2C)
    IE(keypad_facility_hash)
MSG3_END(start_dtmf_acknowledge_hash)

MSG3_BEGIN(handover_command)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_command_message_type)
    IE(cell_description)
    IE(channel_description_ho)
    IE(handover_reference)
    IE(power_command)
    IE(iei_D)
    IE(sync_ind_synch)
MSG3_END(handover_command)

MSG3_BEGIN(handover_access)
    IE(handover_reference)
MSG3_END(handover_access)

MSG3_BEGIN(handover_failure)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(handover_failure_message_type)
    IE(rr_cause_1)
MSG3_END(handover_failure)

MSG3_BEGIN(assignment_failure)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(assignment_failure_message_type)
    IE(rr_cause_6F)
MSG3_END(assignment_failure)

MSG3_BEGIN(modify_data)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(modify_message_type)
    IE(bearer_capability_data)
```

```
MSG3_END(modify_data)

MSG3_BEGIN(modify_reject)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(modify_reject_message_type)
    IE(bearer_capability)
    IE(cause_57)
MSG3_END(modify_reject)

MSG3_BEGIN(hold)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(hold_message_type)
MSG3_END(hold)

MSG3_BEGIN(hold_acknowledge)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(hold_acknowledge_message_type)
MSG3_END(hold_acknowledge)

MSG3_BEGIN(system_information_type_1_A)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter_reest)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_A)
MSG3_BEGIN(system_information_type_2_A)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(bcch_frequency_list)
    IE(ncc_permitted)
    IE(rach_control_parameter_reest)
MSG3_END(system_information_type_2_A)
MSG3_BEGIN(system_information_type_3_A)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity)
    IE(location_area_identification)
    IE(control_channel_description)
    IE(cell_options)
    IE(cell_selection_parameter)
    IE(rach_control_parameter_reest)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_A)
MSG3_BEGIN(system_information_type_4_A)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification)
    IE(cell_selection_parameter)
```

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    IE(rach_control_parameter_reest)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_A)

MSG3_BEGIN(system_information_type_1_B)
    IE(l2_pseudo_length_21)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_1_message_type)
    IE(cell_channel_description)
    IE(rach_control_parameter_reest)
    IE(si_1_rest_octets)
MSG3_END(system_information_type_1_B)
MSG3_BEGIN(system_information_type_2_B)
    IE(l2_pseudo_length_22)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_2_message_type)
    IE(bcch_frequency_list)
    IE(ncc_permitted)
    IE(rach_control_parameter_reest)
MSG3_END(system_information_type_2_B)
MSG3_BEGIN(system_information_type_3_B)
    IE(l2_pseudo_length_18)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_3_message_type)
    IE(cell_identity_B)
    IE(location_area_identification_B)
    IE(control_channel_description)
    IE(cell_options)
    IE(cell_selection_parameter)
    IE(rach_control_parameter_reest)
    IE(si_3_rest_octets)
MSG3_END(system_information_type_3_B)
MSG3_BEGIN(system_information_type_4_B)
    IE(l2_pseudo_length_12)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_4_message_type)
    IE(location_area_identification_B)
    IE(cell_selection_parameter)
    IE(rach_control_parameter_reest)
    IE(si_4_rest_octets)
MSG3_END(system_information_type_4_B)
MSG3_BEGIN(system_information_type_5_B)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_5_message_type)
    IE(bcch_frequency_list)
MSG3_END(system_information_type_5_B)
MSG3_BEGIN(system_information_type_6_B)
    IE(skip_indicator)
    IE(rr_management_protocol_discriminator)
    IE(system_information_type_6_message_type)
    IE(cell_identity)
    IE(location_area_identification_B)
    IE(cell_options)
    IE(ncc_permitted)
MSG3_END(system_information_type_6_B)
```

```
MSG3_BEGIN( tmsi_reallocation_command)
    IE( skip_indicator )
    IE( mobility_management_protocol_discriminator )
    IE( tmsi_reallocation_command_message_type )
    IE( location_area_identification)
    IE( mobile_identity_tmsi)
MSG3_END( tmsi_reallocation_command)
MSG3_BEGIN( tmsi_reallocation_complete)
    IE( skip_indicator )
    IE( mobility_management_protocol_discriminator )
    IE( tmsi_reallocation_complete_message_type )
MSG3_END( tmsi_reallocation_complete)
MSG3_BEGIN(ss_register_unstructured_data)
    IE(transaction_identifier_source)
    IE(supplementary_services_protocol_discriminator)
    IE(ss_register_message_type)
    IE(iei_1C)
    IE(facility_unstructured_data)
    IE(iei_7F)
    IE(ss_version)
MSG3_END(ss_register_unstructured_data)

MSG3_BEGIN(facility_mt_aoc)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(facility_message_type)
    IE(facility_return_result_aoc)
MSG3_END(facility_mt_aoc)

MSG3_BEGIN(facility_aoc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(facility_message_type)
    IE(facility_invoke_aoc)
MSG3_END(facility_aoc)

MSG3_BEGIN(facility_mo_aoc)
    IE(transaction_identifier_source)
    IE(call_control_protocol_discriminator)
    IE(facility_message_type)
    IE(facility_return_result_aoc)
MSG3_END(facility_mo_aoc)

MSG3_BEGIN(facility_msg_notify_cd_a)
    IE(transaction_identifier_dest)
    IE(call_control_protocol_discriminator)
    IE(facility_message_type)
    IE(facility_notify_cd_a)
MSG3_END(facility_msg_notify_cd_a)
```

4 TEST CASES

4.1 Preambles

4.1.1 MCC001: Power On

Description: This test describes the initialization of environment and activation of the Mobile Station.

Preamble: None

Script:

```
ISS_INIT (4);

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

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

ISS_DELAY (1000); /* Give simulation environment some time to start PS. */

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

History:	17.12.97	LE	Initial
	08.05.02	HM	Improved startup behaviour

4.1.2 MCC197: Power On (Dualband Extended)

Description: This test describes the initialization of environment and activation of the Mobile Station.

Preamble: None

Script:

```
ISS_INIT (4);

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

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

ISS_DELAY (1000); /* Give simulation environment some time to start PS. */

COMMAND ("PL CONFIG STD=6"); /* Set Dualband Version */
ISS_DELAY (4000);
AT_SEND ("AT+CFUN=1\r\n", "Power On");
AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+COPS=0\r\n", "Start Registration");
AT_RECEIVE ("OK", SILENT );
```

History:	17.12.97	LE	Initial
	08.05.02	HM	Improved startup behaviour

4.1.3 MCC198: Power On (PCS 1900)

Description: This test describes the initialization of environment and activation of the Mobile Station.

Preamble: None

Script:

```
ISS_INIT (4);

BS_SET_SYS_INFO ( 0 , system_information_type_1_1900 );
BS_SET_SYS_INFO ( 0 , system_information_type_2_1900 );
BS_SET_SYS_INFO ( 0 , system_information_type_3_1900 );
BS_SET_SYS_INFO ( 0 , system_information_type_4_1900 );
BS_SET_SYS_INFO_SACCH ( 0 , system_information_type_5_1900 );
BS_SET_SYS_INFO_SACCH ( 0 , system_information_type_6_1900 );

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH_1900 );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

ISS_DELAY (1000); /* Give simulation environment some time to start PS. */

COMMAND ("PL CONFIG STD=3"); /* Set PCS 1900 Version */

AT_SEND ("AT+CFUN=1\r\n", "Power On");
AT_RECEIVE ("OK", SILENT );
ISS_DELAY (2000);
AT_SEND ("AT+COPS=0\r\n", "Start Registration");
AT_RECEIVE ("OK", SILENT );
```

History:	17.12.97	LE	Initial
	08.05.02	HM	Improved startup behaviour

4.1.4 MCC199: Power On (Dualband)

Description: This test describes the initialization of environment and activation of the Mobile Station.

Preamble: None

Script:

```
ISS_INIT (4);

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

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

ISS_DELAY (1000); /* Give simulation environment some time to start PS. */

COMMAND ("PL CONFIG STD=5"); /* Set Dualband Version */

AT_SEND ("AT+CFUN=1\r\n", "Power On");
AT_RECEIVE ("OK", SILENT );
ISS_DELAY (5000); /* Interference from CCD traces related to SMS */
```

```
AT_SEND ("AT+COPS=0\r\n", "Start Registration");  
AT_RECEIVE ("OK", SILENT);
```

History:	17.12.97	LE	Initial
	08.05.02	HM	Improved startup behaviour

4.1.5 MCC002: MOC procedure 1, U0.1 (26.8.1.2/1)

Description: This test describes the mobile originated call setup up to the CC state U0.1.

Preamble: MCC001

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);  
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);  
BS_STORE_RACH_PARAMS (0, 0);  
BS_MSG3_SEND (0,immediate_assignment,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);  
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.6 MCC003: MOC procedure 2, U1 (26.8.1.2/2)

Description: This test describes the mobile originated call setup up to the CC state U1.

Preamble: MCC001

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);  
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);  
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);  
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,channel_mode_modify,SILENT);  
BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);  
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_AWAIT(0,setup_moc,SILENT);
```

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.7 MCC004: MOC procedure 4, U1 (26.8.1.2/4)

Description: This test describes the mobile originated call setup up to the CC state U1.

Preamble: MCC001

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);  
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
```

```
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,identity_request,SILENT);
BS_MSG3_AWAIT(0,identity_response,SILENT);
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc,SILENT);
```

History: 17.12.97 LE Initial

4.1.8 MCC005: MOC procedure 1, U1 (26.8.1.2/1)

Description: This test describes the mobile originated call setup up to the CC state U1.

Preamble: MCC002

Script:

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc,SILENT);
```

History: 17.12.97 LE Initial

4.1.9 MCC006: MOC procedure 2, U3 (26.8.1.2/2)

Description: This test describes the mobile originated call setup up to the CC state U3.

Preamble: MCC003

Script:

```
BS_MSG3_SEND (0,call_proceeding,SILENT);
```

History: 17.12.97 LE Initial

4.1.10 MCC007: MOC procedure 3, U3 (26.8.1.2/3)

Description: This test describes the mobile originated call setup up to the CC state U3.

Preamble: MCC001

Script:

```
/*
IE_BF_SET_VAL (ms_classmark, classmark_3, 0, "no class 3 info available" )
*/
```

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
```


BS_MSG3_AWAIT(0,authentication_response,SILENT) ;

BS_MSG3_SEND (0,call_proceeding,SILENT) ;

History:	17.12.97	LE	Initial
	23.05.02	HM	Revised

4.1.11 MCC008: MOC procedure 4, U3 (26.8.1.2/4)

Description: This test describes the mobile originated call setup up to the CC state U3.

Preamble: MCC004

Script:

BS_MSG3_SEND (0,channel_mode_modify,SILENT) ;

BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT) ;

BS_MSG3_SEND (0,call_proceeding,SILENT) ;

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.12 MCC009: MOC procedure 1, U3 (26.8.1.2/1)

Description: This test describes the mobile originated call setup up to the CC state U3.

Preamble: MCC005

Script:

BS_MSG3_SEND (0,call_proceeding,SILENT) ;

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.13 MCC010: MOC procedure 3, U4 (26.8.1.2/3)

Description: This test describes the mobile originated call setup up to the CC state U4.

Preamble: MCC007

Script:

BS_MSG3_SEND (0,assignment_command,SILENT) ;

BS_MSG3_AWAIT(0,assignment_complete,SILENT) ;

BS_MSG3_SEND (0,alerting,SILENT) ;

ISS_DELAY (10000)

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.14 MCC011: MOC procedure 2, U4 (26.8.1.2/2)

Description: This test describes the mobile originated call setup up to the CC state U4.

Preamble: MCC006

Script:

BS_MSG3_SEND (0,alerting,SILENT) ;

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.15 MCC012: MOC procedure 1, U4 (26.8.1.2/1)

Description: This test describes the mobile originated call setup up to the CC state U4.

Preamble: MCC009

Script:

BS_MSG3_SEND (0,alerting,SILENT) ;

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.16 MCC013: MOC procedure 4, U4 (26.8.1.2/4)

Description: This test describes the mobile originated call setup up to the CC state U4.

Preamble: MCC008

Script:

```
BS_MSG3_SEND (0,alerting,SILENT);
```

History: 17.12.97 LE Initial

4.1.17 MCC014: MOC procedure 1, U10 (26.8.1.2/1)

Description: This test describes the mobile originated call setup up to the CC state U10.

Preamble: MCC012

Script:

```
BS_MSG3_SEND (0,assignment_command,SILENT);  
BS_MSG3_AWAIT(0,assignment_complete,SILENT);
```

```
BS_MSG3_SEND (0,connect,SILENT);  
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 17.12.97 LE Initial

4.1.18 MCC015: MOC procedure 2, U10 (26.8.1.2/2)

Description: This test describes the mobile originated call setup up to the CC state U10.

Preamble: MCC012

Script:

```
BS_MSG3_SEND (0,connect,SILENT);  
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 17.12.97 LE Initial

4.1.19 MCC016: MOC procedure 3, U11 (26.8.1.2/3)

Description: This test describes the mobile originated call setup up to the CC state U11.

Preamble: MCC010

Script:

```
BS_MSG3_SEND (0,connect,SILENT);  
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT(0,disconnect_ms, SILENT);
```

History: 17.12.97 LE Initial

4.1.20 MCC017: MOC procedure 4, U11 (26.8.1.2/4)

Description: This test describes the mobile originated call setup up to the CC state U11.

Preamble: MCC013

Script:

```
BS_MSG3_SEND (0,connect,SILENT);  
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT(0,disconnect_ms, SILENT);
```

History: 17.12.97 LE Initial

4.1.21 MCC018: MOC procedure 1, U12 (26.8.1.2/1 A)

Description: This test describes the mobile originated call setup up to the CC state U12.

Preamble: MCC014

Script:

```
BS_MSG3_SEND (0,disconnect_8,SILENT) ;  
ISS_DELAY (10000) ;
```

History: 17.12.97 LE Initial

4.1.22 MCC019: MOC procedure 2, U12 (26.8.1.2/2 A)

Description: This test describes the mobile originated call setup up to the CC state U12.

Preamble: MCC015

Script:

```
BS_MSG3_SEND (0,disconnect_8,SILENT) ;
```

History: 17.12.97 LE Initial

4.1.23 MCC020: MOC procedure 3, U12 (26.8.1.2/3 A)

Description: This test describes the mobile originated call setup up to the CC state U12.

Preamble: MCC010

Script:

```
BS_MSG3_SEND (0,connect,SILENT) ;  
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT) ;  
  
BS_MSG3_SEND (0,disconnect_8,SILENT) ;
```

History: 17.12.97 LE Initial

4.1.24 MCC021: MOC procedure 4, U19 (26.8.1.2/4)

Description: This test describes the mobile originated call setup up to the CC state U19.

Preamble: MCC013

Script:

```
BS_MSG3_SEND (0,connect,SILENT) ;  
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT) ;  
  
BS_MSG3_SEND (0,disconnect,SILENT) ;  
BS_MSG3_AWAIT(0,release,SILENT) ;
```

History: 17.12.97 LE Initial

4.1.25 MCC022: MOC procedure 1, U19 (26.8.1.2/1)

Description: This test describes the mobile originated call setup up to the CC state U19.

Preamble: MCC014

Script:

```
BS_MSG3_SEND (0,disconnect,SILENT) ;  
BS_MSG3_AWAIT(0,release,SILENT) ;
```

History: 17.12.97 LE Initial

4.1.26 MCC023: MTC procedure 2, U6 (26.8.1.3/2)

Description: This test describes the mobile terminated call setup up to the CC state U6.

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0) ;  
BS_MSG3_SEND (0,paging_request_type_1,SILENT) ;
```

```
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);  
BS_STORE_RACH_PARAMS (0, 0);  
BS_MSG3_SEND (0,immediate_assignment,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);  
BS_MSG3_AWAIT(0,paging_response,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);  
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_SEND (0,setup,SILENT);
```

History: 17.12.97 LE Initial

4.1.27 MCC024: MTC procedure 2, U9 (26.8.1.3/2)

Description: This test describes the mobile terminated call setup up to the CC state U9.

Preamble: MCC023

Script:

```
BS_MSG3_AWAIT(0,call_confirmed,SILENT);
```

History: 17.12.97 LE Initial

4.1.28 MCC025: MTC procedure 4, U9 (26.8.1.3/4)

Description: This test describes the mobile terminated call setup up to the CC state U6.

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);  
BS_MSG3_SEND (0,paging_request_type_1,SILENT);  
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);  
BS_STORE_RACH_PARAMS (0, 0);  
BS_MSG3_SEND (0,immediate_assignment,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);  
BS_MSG3_AWAIT(0,paging_response,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);  
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_SEND (0,setup_no_signal,SILENT);  
BS_MSG3_AWAIT(0,call_confirmed,SILENT);
```

History: 17.12.97 LE Initial

4.1.29 MCC026: MTC procedure 3, U7 (26.8.1.3/3)

Description: This test describes the mobile terminated call setup up to the CC state U7.

Preamble: MCC001

Script:

```
/* COMMAND ("MM CONFIG TIMER_SET=<T3240, 400>"); T3240 = 20 Sec */
```

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);  
BS_MSG3_SEND (0,paging_request_type_1,SILENT);  
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,setup,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);
AT_RECEIVE("RING", "RING unsolicited indication");
```

History:	17.12.97	LE	Initial
	03.07.02	HM	Added check for "RING"

4.1.30 MCC027: MTC procedure 1, U7 (26.8.1.3/1)

Description: This test describes the mobile terminated call setup up to the CC state U7.

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);
```

History:	17.12.97	LE	Initial
----------	----------	----	---------

4.1.31 MCC028: MTC procedure 2, U7 (26.8.1.3/2)

Description: This test describes the mobile terminated call setup up to the CC state U7.

Preamble: MCC024

Script:

```
BS_MSG3_AWAIT(0,alerting,SILENT);
```

History: 17.12.97 LE Initial

4.1.32 MCC029: MTC procedure 2, U8 (26.8.1.3/2)

Description: This test describes the mobile terminated call setup up to the CC state U8.

Preamble: MCC028

Script:

```
BS_MSG3_SEND (0,assignment_command,SILENT);  
BS_MSG3_AWAIT(0,assignment_complete,SILENT);
```

```
ISS_DELAY (5000);  
AT_SEND ("ATA\r\n", "Hook Off");
```

```
BS_MSG3_AWAIT(0,connect,SILENT);
```

History: 17.12.97 LE Initial

4.1.33 MCC030: MTC procedure 3, U8 (26.8.1.3/3)

Description: This test describes the mobile terminated call setup up to the CC state U8.

Preamble: MCC026

Script:

```
AT_SEND ("ATA\r\n", "Hook Off");
```

```
BS_MSG3_AWAIT(0,connect,SILENT);
```

```
ISS_DELAY (5000);
```

History: 17.12.97 LE Initial

4.1.34 MCC031: MTC procedure 1, U8 (26.8.1.3/1)

Description: This test describes the mobile terminated call setup up to the CC state U8.

Preamble: MCC027

Script:

```
AT_SEND ("ATA\r\n", "HOOK OFF");
```

```
BS_MSG3_AWAIT(0,connect,SILENT);
```

History: 17.12.97 LE Initial

4.1.35 MCC032: MTC procedure 1, U10 (26.8.1.3/1)

Description: This test describes the mobile terminated call setup up to the CC state U10.

Preamble: MCC031

Script:

```
BS_MSG3_SEND (0,assignment_command,SILENT);  
BS_MSG3_AWAIT (0,assignment_complete,SILENT);
```

```
BS_MSG3_SEND (0,connect_acknowledge,SILENT);
```

History: 17.12.97 LE Initial

4.1.36 MCC033: Two Base Stations and Power On

Description: This test describes the initialization of environment and activation of the Mobile Station.

Preamble: None

Script:

```
ISS_INIT (4);

BS_SET_SYS_INFO ( 0 , system_information_type_1_A );
BS_SET_SYS_INFO ( 0 , system_information_type_2_A );
BS_SET_SYS_INFO ( 0 , system_information_type_3_A );
BS_SET_SYS_INFO ( 0 , system_information_type_4_A );
BS_SET_SYS_INFO_SACCH ( 0 , system_information_type_5 );
BS_SET_SYS_INFO_SACCH ( 0 , system_information_type_6 );

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

BS_SET_SYS_INFO ( 1 , system_information_type_1_B );
BS_SET_SYS_INFO ( 1 , system_information_type_2_B );
BS_SET_SYS_INFO ( 1 , system_information_type_3_B );
BS_SET_SYS_INFO ( 1 , system_information_type_4_B );
BS_SET_SYS_INFO_SACCH ( 1 , system_information_type_5_B );
BS_SET_SYS_INFO_SACCH ( 1 , system_information_type_6_B );

BS_SET_SCH ( 1 , BSIC , RFN );
BS_SET_ARFCN ( 1 , ARFCN_BCCH_B );
BS_SET_POWER ( 1 , -70 );
BS_ON_OFF ( 1 , TRUE );

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

ISS_DELAY (20000);
```

History: 17.12.97 LE Initial

4.2 Mobile Originated Call Establishment

4.2.1 MCC100: U0 / MM connection requested (26.8.1.2.1)

Description: The call control entity of the Mobile Station requests the MM-sublayer to establish a mobile originating MM-connection. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.
To verify that upon initiation of an outgoing basic call by user the MS initiates establishment of an MM connection, using as first MM message a CM SERVICE REQUEST message with CM service type "Mobile originating call establishment or packet mode connection establishment".

Preamble: MCC001

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc, "initiate outgoing call");
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,"TCH");

BS_CONFIG_CHANNEL (0, FACCH, ACK, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request, "verify the type of call which is asked
for basic or
emergency by the MS");
```

```
BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_AWAIT(0,cm_service_abort, SILENT);

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link
(DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.2 MCC101: U0.1 / CM service rejected (26.8.1.2.2.1)

Description: A request for MM connection is rejected by the SS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service. To verify that a CC entity of the MS in CC-state U0.1, "MM-connection pending", upon the MS receiving a CM SERVICE REJECT message, returns to CC state U0, "Null".

Preamble: MCC002

Script:

```
BS_MSG3_SEND (0,cm_service_reject,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");
```



```
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling  
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.3 MCC102: U0.1 / CM service accepted (26.8.1.2.2.2)

Description: A CM request is accepted for the MM-connection by the SS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service. To verify that a CC entity of the MS in CC-state U0.1, "MM-connection pending", upon the MS receiving a CM SERVICE ACCEPT message, sends a SETUP message specifying the Called party BCD number that was entered into the MS and then enters CC state U1, "Call initiated".

Preamble: MCC002

Script:

```
BS_MSG3_SEND (0,cm_service_accept, SILENT);
```

```
BS_MSG3_AWAIT(0, setup_moc, SILENT)
```

```
BS_MSG3_SEND (0,status_enquiry_0,SILENT);
```

```
BS_MSG3_AWAIT(0,status_30_1, "cause shall be 30# (response to enq.) and  
state U1 call initiated");
```

```
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling  
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.4 MCC103: U0.1 / Lower Layer Failure (26.8.1.2.2.3)

Description: The call control entity of the MS being in the state, U0.1, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

To verify that after the MS with a CC entity in state U0.1, "MM-connection pending", has detected a lower layer failure and has returned to idle mode, the CC entities relating to the seven mobile originating transaction identifiers are in state U0, "Null".

Preamble: MCC002

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */
```

```
ISS_DELAY (20000);
```

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

```
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
```

```
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
```

```
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
```

```
BS_MSG3_AWAIT(0,paging_response,SILENT);
```

```
BS_MSG3_SEND (0,status_enquiry_0,SILENT);
```

```
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_1,SILENT);
```

```
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.5 MCC104: U1 / Receiving Call Proceeding (26.8.1.2.3.1)

Description: The call control entity of the MS being in the state, U1, a CALL PROCEEDING message is sent by the SS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.
To verify that a CC entity of the MS in CC-state U1, "Call initiated", upon receipt of a CALL PROCEEDING message, enters CC state U3, "Mobile originating call proceeding".

Preamble: MCC003

Script:

```
BS_MSG3_SEND (0,call_proceeding,"tone generation not mandatory");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,status_30_3, "cause shall be 30# (response to enq.) state
U3 call proceeding");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.6 MCC105: U1 / Rejecting with Release Complete (26.8.1.2.3.2)

Description: The call control entity of the MS being in the state, U1, the call is rejected by a RELEASE COMPLETE message sent by the SS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.
To verify that a CC entity of the MS in CC-state U1, "Call initiated", upon receipt of a RELEASE COMPLETE message with valid cause value, enters CC state U0, "Null".
To verify that in returning to idle mode, the CC entities relating to the seven mobile originating transaction identifiers are in state U0, "Null".
To verify that in releasing the MM-connection, the MS shall wait for MM layer release initiated by SS.

Preamble: MCC003

Script:

```
BS_MSG3_SEND (0,release_complete,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.7 MCC106: U1 / T303 expiry (26.8.1.2.3.3)

Description: The call control entity of the MS being in the state, U1, if no response is then received from the SS, timer T303 expires at the MS side. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

To verify that a CC entity of the MS in CC-state U1, "Call initiated", upon expiry of T303 (accuracy +/-20 % between reception of CM SERVICE REQUEST and DISCONNECT by SS) sends a DISCONNECT message to its peer entity and enters state U11, "Disconnect request".

The DISCONNECT message shall be transmitted between 24 and 36 seconds after the CM SERVICE REQUEST. So an initial delay of 30 seconds will be correct.

Preamble: MCC003

Script:

```
/* ISS_DELAY (18000) */
SET_TIMEOUT (30000)
BS_MSG3_AWAIT (0,disconnect_t303, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,status_30_11, "cause shall be 30# (response to enq.) and
state U11");

BS_MSG3_SEND (0,channel_release, "MS shall release the main signalling link
(DISC/UA)");
```

History: 17.12.97 LE Initial
01.03.99 VK Change to ISS_DELAY (18000) - was 10000. Note that T303 is 30000.
29.02.00 HM Initial timeout is now 30 seconds.

4.2.8 MCC107: U1 / Lower Layer Failure (26.8.1.2.3.4)

Description: The call control entity of the MS being in the state, U1, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

To verify that after the MS with a CC entity in state U1 "Call initiated", has detected a lower layer failure and has returned to idle mode, the CC entities relating to the seven mobile originating transaction identifiers are in state U0, "Null".

Preamble: MCC004

Script:

```
BS_SET_ERROR (0, 1);          /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.9 MCC108: U1 / receiving ALERTING (26.8.1.2.3.5)

Description: The call control entity of the MS being in the state, U1, an ALERTING message is sent to the MS as a indication that a call is being alerted at a called end. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC004

Script:

```
BS_MSG3_SEND ( 0, alerting,          SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0,  SILENT)
BS_MSG3_AWAIT( 0, status_30_4,       "cause 30#, state U4")
```

History: 17.12.97 MS Initial

4.2.10 MCC109: U1 / entering state U10 (26.8.1.2.3.6)

Description: The call control entity of the MS being in the state, U1, a CONNECT message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC004

Script:

```
BS_MSG3_SEND ( 0, connect, SILENT)
BS_MSG3_AWAIT( 0, connect_acknowledge, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History: 17.12.97 MS Initial

4.2.11 MCC110: U1 / unknown message received (26.8.1.2.3.7)

Description: The call control entity of the MS being in the state, U1, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC005

Script:

```
BS_MSG3_SEND ( 0, unknown_message, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_1, "cause 97#, state U1")

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_1, "cause 30#, state U1")
```

History: 17.12.97 MS Initial

4.2.12 MCC111: U3 / ALERTING received (26.8.1.2.4.1)

Description: The call control entity of the MS being in the state, U3, an ALERTING message is sent to the MS as a indication that a call is being alerted at a called end. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, alerting, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_4, "cause 30#, state U4")
```

History: 17.12.97 MS Initial

4.2.13 MCC112: U3 / CONNECT received (26.8.1.2.4.2)

Description: The call control entity of the MS being in the state, U3, a CONNECT message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, connect, "MS shall stop tone generation")
BS_MSG3_AWAIT( 0, connect_acknowledge, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History: 17.12.97 MS Initial

4.2.14 MCC113: U3 / PROGRESS received without in band information (26.8.1.2.4.3)

Description: The call control entity of the MS being in the state, U3, a PROGRESS message is received by the MS. The PROGRESS message does not contain indication of in-band information availability. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0,progress,          SILENT)

BS_MSG3_SEND ( 0,status_enquiry_0,  SILENT)
BS_MSG3_AWAIT( 0,status_30_3,       "cause 30#, state U3")

NOT_IMPLEMENTED("SS waits at least 45 seconds and checks")
NOT_IMPLEMENTED("no DISCONNECT is sent by the MS")

ISS_DELAY (30000);

BS_MSG3_SEND ( 0,status_enquiry_0,  SILENT)
BS_MSG3_AWAIT( 0,status_30_3,       "cause 30#, state U3")
```

History: 17.12.97 MS Initial

4.2.15 MCC114: U3 / PROGRESS with in band information (26.8.1.2.4.4)

Description: The call control entity of the MS being in the state, U3, a PROGRESS message indicating availability of in band information is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, progress_1,          SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0,    SILENT)
BS_MSG3_AWAIT( 0, status_30_3,         "cause 30#, state U3")

NOT_IMPLEMENTED("SS waits at least 45 seconds and checks no DISCONNECT")
NOT_IMPLEMENTED("is sent by the MS.")

ISS_DELAY (45000)

BS_MSG3_SEND ( 0,status_enquiry_0,    SILENT)
BS_MSG3_AWAIT( 0,status_30_3,         "cause 30#, state U3")

NOT_IMPLEMENTED("If the channel mode is speech the SS will check that the")
NOT_IMPLEMENTED("user connection for speech is attached (both downlink")
NOT_IMPLEMENTED("and uplink)")
```

History: 17.12.97 MS Initial

4.2.16 MCC115: U3 / DISCONNECT with in band tones (26.8.1.2.4.5)

Description: The call control entity of the MS being in the state, U3, a DISCONNECT message indicating availability of in band information is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, disconnect_8,        "with in band tones")
```

NOT_IMPLEMENTED("TCH in speech mode: the SS will check that the audio")
NOT_IMPLEMENTED("path for in band tones is attached.")

BS_MSG3_SEND (0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT(0, status_30_12, "cause 30#, state U12")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0, release, SILENT)

BS_MSG3_SEND (0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT(0, status_30_19, "cause 30#, state U19")

History:	17.12.97	MS	Initial
	26.06.01	HM	Revised

4.2.17 MCC116: U3 / DISCONNECT without in band tones (26.8.1.2.4.6)

Description: The call control entity of the MS being in the state, U3, a DISCONNECT message is received by the MS. The DISCONNECT message does not contain indication of in-band information availability. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

BS_MSG3_SEND (0, disconnect, SILENT)
BS_MSG3_AWAIT(0, release, SILENT)

BS_MSG3_SEND (0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT(0, status_30_19, "4: cause 30#, state U19")

History:	17.12.97	MS	Initial
----------	----------	----	---------

4.2.18 MCC117: U3 / RELEASE received (26.8.1.2.4.7)

Description: The call control entity of the MS being in the state, U3, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC006

Script:

BS_MSG3_SEND (0, release_bs, SILENT)
BS_MSG3_AWAIT(0, release_complete_bs, SILENT)

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");
BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

```
BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.19 MCC118: U3 termination requested by the user (26.8.1.2.4.8)

Description: The call control entity of the MS being in the state, U3, the user requests to terminate the call. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC007

Script:

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 17.12.97 MS Initial
26.06.01 HM Revised

4.2.20 MCC119: U3 / traffic channel allocation (26.8.1.2.4.9)

Description: The call control entity of the MS being in the state, U3, a traffic channel assignment procedure is performed. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC007

Script:

```
BS_MSG3_SEND ( 0, assignment_command, "TCH assignment")
BS_MSG3_AWAIT( 0, assignment_complete, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_3, "cause 30#, state U3")
```

History: 17.12.97 MS Initial

4.2.21 MCC120: U3 / Timer T310 time-out (26.8.1.2.4.10)

Description: The call control entity of the MS being in the state, U3, if no response is then received from the SS, timer T310 expires at the MS side. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC007

Script:

```
NOT_IMPLEMENTED ("the SS waits for T310 time-out")
```

```
SET_TIMEOUT (45000)
```

```
BS_MSG3_AWAIT ( 0, disconnect_t310, "check the timer T310 accuracy")

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT ( 0, status_30_11, "cause 30#, state U11")
```

History: 17.12.97 MS Initial

4.2.22 MCC121: U3 / Lower Layer Failure (26.8.1.2.4.11)

Description: The call control entity of the MS being in the state, U3, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC008

Script:

```
BS_SET_ERROR (0, 1);          /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");
```

History: 17.12.97 MS Initial

4.2.23 MCC122: U3 / unknown message received (26.8.1.2.4.12)

Description: The call control entity of the MS being in the state, U3, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC009

Script:

```
BS_MSG3_SEND ( 0, unknown_message, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_3,      "cause 97#, state U3")

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_3,      "cause 30#, state U3")
```

History: 17.12.97 MS Initial

4.2.24 MCC123: U3 / Internal alerting indication (26.8.1.2.4.13)

Description: The call control entity of the MS being in the state, U3, an ALERTING message is sent to the MS when the user connection is not attached to the radio path. This test is applicable for any equipment supporting mobile originated circuit switched basic service for telephony.

Preamble: MCC009

Script:

```
BS_MSG3_SEND ( 0, alerting,          SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0,  SILENT)
BS_MSG3_AWAIT( 0, status_30_4,      "cause 30#, state U4")
```

History: 17.12.97 MS Initial

4.2.25 MCC124: U4 / CONNECT received (26.8.1.2.5.1)

Description: The call control entity of the MS being in the state, U4, a CONNECT message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC010

Script:

```
BS_MSG3_SEND ( 0, connect, SILENT)
BS_MSG3_AWAIT( 0, connect_acknowledge, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History: 17.12.97 MS Initial

4.2.26 MCC125: U4 / termination requested by the user (26.8.1.2.5.2)

Description: The call control entity of the MS being in the state, U4, the user requests to terminate the call. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC010

Script:

```
AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 17.12.97 MS Initial
26.06.01 HM Revised

4.2.27 MCC126: U4 / DISCONNECT with in band tones (26.8.1.2.5.3)

Description: The call control entity of the MS being in the state, U4, a DISCONNECT message indicating availability of in band information is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC011

Script:

```
BS_MSG3_SEND ( 0, disconnect_8, "with in band tones")

NOT_IMPLEMENTED("TCH in speech mode: the SS will check that the audio")
NOT_IMPLEMENTED("path for in band tones is attached.")

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_12, "cause 30#, state U12")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, release, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "cause 30#, state U19")
```

History: 17.12.97 MS Initial
26.06.01 HM Revised

4.2.28 MCC127: U4 / DISCONNECT without in band tones (26.8.1.2.5.4)

Description: The call control entity of the MS being in the state, U4, a DISCONNECT message is received by the MS. The DISCONNECT message does not contain indication of in-band information availability. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC011

Script:

```
BS_MSG3_SEND ( 0, disconnect,          SILENT)
BS_MSG3_AWAIT( 0, release,             SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0,    SILENT)
BS_MSG3_AWAIT( 0, status_30_19,        "4: cause 30#, state U19")
```

History: 17.12.97 MS Initial

4.2.29 MCC128: U4 / RELEASE received (26.8.1.2.5.5)

Description: The call control entity of the MS being in the state, U4, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC011

Script:

```
BS_MSG3_SEND ( 0, release_bs,          SILENT)
BS_MSG3_AWAIT( 0, release_complete_bs, SILENT)

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.30 MCC129: U4 / Lower Layer Failure (26.8.1.2.5.6)

Description: The call control entity of the MS being in the state, U4, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC011

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */
```

```
ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 LE Initial

4.2.31 MCC130: U4 / Traffic Channel Allocation (26.8.1.2.5.7)

Description: The call control entity of the MS being in the state, U4, a traffic channel assignment procedure is performed. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC012

Script:

```
BS_MSG3_SEND ( 0, assignment_command, "TCH assignment")
BS_MSG3_AWAIT( 0, assignment_complete, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_4, "cause 30#, state U4")
```

History: 17.12.97 MS Initial

4.2.32 MCC131: U4 / unknown message received (26.8.1.2.5.8)

Description: The call control entity of the MS being in the state, U4, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC013

Script:

```
BS_MSG3_SEND ( 0, unknown_message, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_4, "cause 97#, state U4")
```

```
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_4, "cause 30#, state U4")
```

History: 17.12.97 MS Initial

4.2.33 MCC132: U10 / Termination requested by the user (26.8.1.2.6.1)

Description: The call control entity of the MS being in the state, U10, the user requests to terminate the call. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC014

Script:

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 17.12.97 MS Initial

4.2.34 MCC133: U10 / RELEASE received (26.8.1.2.6.2)

Description: The call control entity of the MS being in the state, U10, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC014

Script:

```
BS_MSG3_SEND ( 0, release_bs, SILENT)
BS_MSG3_AWAIT( 0, release_complete_bs, SILENT)
```

```
BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.35 MCC134: U10 / DISCONNECT with in band tones (26.8.1.2.6.3)

Description: The call control entity of the MS being in the state, U10, a DISCONNECT message indicating availability of in band information is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Comment: No speech mode is assigned.

Preamble: MCC015

Script:

```
BS_MSG3_SEND ( 0, disconnect_8, "with in band tones")

NOT_IMPLEMENTED("TCH in speech mode: the SS will check that the audio")
NOT_IMPLEMENTED("path for in band tones is attached.")

BS_MSG3_AWAIT( 0, release, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "cause 30#, state U12")
```

History: 17.12.97 MS Initial

4.2.36 MCC135: U10 / DISCONNECT without in band tones (26.8.1.2.6.4)

Description: The call control entity of the MS being in the state, U10, a DISCONNECT message is received by the MS. The DISCONNECT message does not contain indication of in-band information availability. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC015

Script:

```
BS_MSG3_SEND ( 0, disconnect, SILENT)
BS_MSG3_AWAIT( 0, release, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "4: cause 30#, state U19")
```

History: 17.12.97 MS Initial

4.2.37 MCC136: U10 / RELEASE COMPLETE received (26.8.1.2.6.5)

Description: The call control entity of the MS being in the state, U10, the call is cleared by a RELEASE COMPLETE message sent by the SS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC004

Script:

```
BS_MSG3_SEND (0,release_complete, "with cause 03");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.38 MCC137: U10 / SETUP received (26.8.1.2.6.6)

Description: If the MS does not react correctly when receiving a SETUP message on a new Transaction Identifier during an active call, the active call may be lost.
This test is applicable for all GSM 900 and DCS 1 800 MS supporting at least one mobile originated circuit switched basic service.

Preamble: MCC014

Script:

```
BS_MSG3_SEND ( 0, setup, "MTC for second TI, same value." )
BS_MSG3_AWAIT( 0, call_confirmed_user_busy,"Cause is user busy, 2. TI")
BS_MSG3_AWAIT( 0, alerting, "with the TI of the 2. transaction")

BS_MSG3_SEND ( 0, release_complete_bs, "with the TI of the 2. transaction")

BS_MSG3_SEND ( 0, status_enquiry_0, "with the TI of the 1. transaction")
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10, 1. TI")
```

History: 17.12.97 MS Initial

4.2.39 MCC138: U11 / Clear Collision (26.8.1.2.7.1)

Description: The call control entity of the MS being in the state, U11, a DISCONNECT message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC016

Script:

```
BS_MSG3_SEND (0, disconnect, SILENT);
BS_MSG3_AWAIT(0, release, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,status_30_19, "cause shall be 30#, U19")
```

History: 17.12.97 MS Initial

4.2.40 MCC139: U11 / RELEASE received (26.8.1.2.7.2)

Description: The call control entity of the MS being in the state, U11, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC016

Script:

```
BS_MSG3_SEND ( 0, release_bs, SILENT)
BS_MSG3_AWAIT( 0, release_complete_bs, SILENT)

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.41 MCC140: U11 / Timer T305 time-out (26.8.1.2.7.3)

Description: The call control entity of the MS being in the state, U11, if no response is then received from the SS, timer T305 expires at the MS side. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC016

Script:

```
SET_TIMEOUT (20000)
ISS_DELAY (20000)
```

```
BS_MSG3_AWAIT( 0, release_t305, "SS checks the T305 time")

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,status_30_19, "with cause 30# (resp. to status enquiry,
U19)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.42 MCC141: U11 / Lower Layer Failure (26.8.1.2.7.4)

Description: The call control entity of the MS being in the state, U11, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC017

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);
```



```

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");

```

History: 17.12.97 MS Initial

4.2.43 MCC142: U11 / unknown message received (26.8.1.2.7.5)

Description: The call control entity of the MS being in the state, U4, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC017

Script:

```

BS_MSG3_SEND ( 0, unknown_message, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_11, "cause 97#, state U11")

```

```

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")

```

History: 17.12.97 MS Initial

4.2.44 MCC143: U12 / Call Releasing requested by the User (26.8.1.2.8.1)

Description: The call control entity of the MS being in the state, U12, the user requests to terminate the call. This test is applicable only for mobile stations supporting bearer capability for speech.

Preamble: MCC018

Script:

```

AT_SEND ("ATH\r\n", "Hook On");

```

```

BS_MSG3_AWAIT( 0, release, SILENT)

```

```
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "cause 30#, state U19")
```

History: 17.12.97 MS Initial

4.2.45 MCC144: U12 / RELEASE received (26.8.1.2.8.2)

Description: The call control entity of the MS being in the state, U12, a RELEASE message is received by the MS. This test is applicable only for mobile stations supporting bearer capability for speech.

Preamble: MCC018

Script:

```
BS_MSG3_SEND ( 0, release_bs, SILENT)
BS_MSG3_AWAIT( 0, release_complete_bs, SILENT)

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.46 MCC145: U12 / Lower Layer Failure (26.8.1.2.8.3)

Description: The call control entity of the MS being in the state, U12, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable only for mobile stations supporting bearer capability for speech.

Preamble: MCC019

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.47 MCC146: U12 / Unknown Message received (26.8.1.2.8.4)

Description: The call control entity of the MS being in the state, U12, an unknown message is received by the MS. This test is applicable only for mobile stations supporting bearer capability for speech.

Preamble: MCC020

Script:

```
BS_MSG3_SEND ( 0, unknown_message, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_12, "cause 97#, state U12")

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_12, "cause 30#, state U12")
```

History: 17.12.97 MS Initial

4.2.48 MCC147: U19 / timer T308 time-out (26.8.1.2.9.1)

Description: The call control entity of the MS being in the state, U19, if no response is then received from the SS, timer T308 expires at the MS side. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC021

Script:

```
SET_TIMEOUT (50000)

BS_MSG3_AWAIT( 0, release, "SS checks the T308 time")

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,status_30_19, "with cause 30# (resp. to status enquiry,
U19)");
```

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling link (DISC/UA)");

History: 17.12.97 MS Initial

4.2.49 MCC148: U19 / 2nd timer T308 time-out (26.8.1.2.9.2)

Description: The call control entity of the MS being in the state, U19, if no response is then received after timer T308 has expired two times in success at the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC021

Script:

SET_TIMEOUT (50000)

BS_MSG3_AWAIT(0, release, "SS checks the T308 time")

BS_MSG3_SEND (0,status_enquiry_0,SILENT);

BS_MSG3_AWAIT(0,status_30_19, "with cause 30# (resp. to status enquiry, U19)");

NOT_IMPLEMENTED ("SS waits until the second T308 expiry at the MS")

NOT_IMPLEMENTED ("link shall be released by the MS (L2: DISC/UA)")

NOT_IMPLEMENTED ("SS waits 10 s for the MS to return to idle")

ISS_DELAY (50000)

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);

BS_MSG3_SEND (0,paging_request_type_1,SILENT);

BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);

BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);

BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);

BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);

BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);

BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);

BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);

BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);

BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);

BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

```
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling  
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.50 MCC149: U19 / RELEASE received (26.8.1.2.9.3)

Description: The call control entity of the MS being in the state, U19, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC021

Script:

```
BS_MSG3_SEND ( 0, release_bs, SILENT)

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling  
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.51 MCC150: U19 / RELEASE COMPLETE received (26.8.1.2.9.4)

Description: The call control entity of the MS being in the state, U19, a RELEASE COMPLETE message is received by the MS. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC022

Script:

```
BS_MSG3_SEND (0,release_complete, SILENT)

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
```

```
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.2.52 MCC151: U19 / Lower Layer Failure (26.8.1.2.9.5)

Description: The call control entity of the MS being in the state, U19, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC022

Script:

```
BS_SET_ERROR (0, 1);          /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");
```

```
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling  
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3 Mobile Terminated Call Establishment

4.3.1 MCC152: U0 / SETUP received with a non supported bearer cap. (26.8.1.3.1.1)

Description: The call control entity of the MS, being in the state U0, receives a SETUP message with only one bearer capability and this bearer capability is not supported by the MS. This test is applicable for all equipment.
To verify that a CC entity of the MS, upon receipt of SETUP containing one bearer capability and this bearer capability is not supported, returns a RELEASE COMPLETE with correct cause value to its peer entity, and returns to the idle mode. To verify that the CC-entities relating to the seven mobile terminating transaction identifiers are then in the state U0,"Null".

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);  
BS_MSG3_SEND (0,paging_request_type_1,SILENT);  
BS_RACH_AWAIT(0,channel_request,SILENT);  
  
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);  
BS_STORE_RACH_PARAMS (0, 0);  
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);  
  
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);  
BS_MSG3_AWAIT(0,paging_response,SILENT);  
  
BS_MSG3_SEND (0,authentication_request, SILENT);  
BS_MSG3_AWAIT(0,authentication_response, SILENT);  
  
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);  
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);  
  
BS_MSG3_SEND (0,setup_data,SILENT);  
BS_MSG3_AWAIT(0,release_complete_88, SILENT)  
  
BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);  
BS_MSG3_AWAIT(0,release_complete_0_mtc, "with cause 81# (invalid TI  
value)");  
  
BS_MSG3_SEND (0,status_enquiry_1_mtc,SILENT);  
BS_MSG3_AWAIT(0,release_complete_1_mtc, "with cause 81# (invalid TI  
value)");  
  
BS_MSG3_SEND (0,status_enquiry_2_mtc,SILENT);  
BS_MSG3_AWAIT(0,release_complete_2_mtc, "with cause 81# (invalid TI  
value)");  
  
BS_MSG3_SEND (0,status_enquiry_3_mtc,SILENT);  
BS_MSG3_AWAIT(0,release_complete_3_mtc, "with cause 81# (invalid TI  
value)");  
  
BS_MSG3_SEND (0,status_enquiry_4_mtc,SILENT);  
BS_MSG3_AWAIT(0,release_complete_4_mtc, "with cause 81# (invalid TI  
value)");
```

```
BS_MSG3_SEND (0,status_enquiry_5_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_5_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_6_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_6_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.2 MCC153: U9 / Alerting (26.8.1.3.3.1)

Description: The call control entity of the MS having entered the state, U9, with signal information received in the preceding SETUP message, the subsequent behaviour of the MS is tested. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service.

To verify that a CC entity in CC-state U9, "MS Terminating Call Confirmed", (if signalled by the network in previous SETUP message that it may alert) will either send a ALERTING message to its peer entity and enter state U7, or send a CONNECT message to its peer entity and enter U8.

Preamble: MCC024

Script:

```
BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_7, "with cause 30# (resp. to status
enq., U7)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.3 MCC154: U9 / TCH Assignment (26.8.1.3.3.2)

Description: The call control entity of the MS being in the state, U9, an assignment procedure is performed for traffic channel. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used. To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", when allocated a traffic channel by the network performing the assignment procedure, performs a layer 2 establishment on the FACCH, sends a ALERTING message and enters state U7.

Preamble: MCC025

Script:

```
BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_7, "with cause 30# (resp. to status
enq., U7)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```


History: 17.12.97 MS Initial

4.3.4 MCC155: U9 / Termination requested by the User (26.8.1.3.3.3)

Description: The call control entity of the MS being in the state, U9, the user requests for releasing of the call. This test is applicable for any equipment supporting at least one MT circuit switched basic service for which immediate connection is not used and, in addition to this, the facility to send a DISCONNECT message in state U9.
To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", upon request by the user to terminate will send a DISCONNECT message and enter the CC-state U11, "Disconnect Request".

Preamble: MCC025

Script:

```
AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect_no_cause, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_11_mtc, "with cause 30# (resp. to status
enq., U11)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.5 MCC156: U9 / DISCONNECT received (26.8.1.3.3.4)

Description: The call control entity of the MS being in the state, U9, a DISCONNECT message is received by the MS. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used.
To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", upon receipt of a DISCONNECT returns a RELEASE message and enters the CC-state U19, "Release Request".

Preamble: MCC025

Script:

```
BS_MSG3_SEND (0,disconnect_ms, SILENT);
BS_MSG3_AWAIT(0,release_mtc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_19_mtc, "with cause 30# (resp. to status
enq., U19)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.6 MCC157: U9 / RELEASE received (26.8.1.3.3.5)

Description: The call control entity of the MS being in the state, U9, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used.
To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", upon receipt of a RELEASE will return a RELEASE COMPLETE and enter the CC-state U0, "Null".

To verify that the MS on returning to the idle mode releases the MM-connection and that the CC-entities relating to the seven mobile terminating transaction identifiers are in CC-state U0, "Null".

Preamble: MCC025

Script:

```
BS_MSG3_SEND (0,release, SILENT);
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc, SILENT);
BS_MSG3_AWAIT(0,release_complete_0_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_1_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_1_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_2_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_2_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_3_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_3_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_4_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_4_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_5_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_5_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_6_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_6_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.7 MCC158: U9 / Lower Layer Failure (26.8.1.3.3.6)

Description: The call control entity of the MS being in the state, U9, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used. To verify that a CC entity of the MS in CC-state U9, "MS Terminating Call Confirmed", having detected a lower layer failure returns to idle mode with the CC entities relating to the seven mobile terminating transaction identifiers in CC-state U0, "Null".

Preamble: MCC025

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.8 MCC159: U9 / unknown message received (26.8.1.3.3.7)

Description: The call control entity of the MS being in the state, U9, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile terminated circuit switched basic service.

Preamble: MCC025

Script:

```
BS_MSG3_SEND ( 0, unknown_message_mtc, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_9, "cause 97#, state U9")

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,SILENT)
BS_MSG3_AWAIT( 0, status_30_9, "cause 30#, state U9")

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.9 MCC160: U7 / Call accepted (26.8.1.3.4.1)

Description: The call control entity of the MS being in the state, U7, a user accepts the incoming call. This test is applicable for any equipment supporting at least one mobile terminated circuit switched basic service for which immediate connect is not used. To verify that a CC entity of a MS in CC-state U7, "Call Received", upon a user accepting the incoming call, shall send a CONNECT message to its peer entity and enter the CC-state U8, "Connect Request"

Preamble: MCC026

Script:

```
AT_SEND ("ATA\r\n", "Hook Off");

BS_MSG3_AWAIT( 0, connect, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_8, "cause 30#, state U8")

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.10 MCC161: U7 / Termination requested by the User (26.8.1.3.4.2)

Description: The call control entity of the MS being in the state, U7, a user requests to terminate incoming call. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service for which immediate connect is not used. To verify that a CC entity of a MS in CC-state U7, "Call Received", upon request by the user to terminate will send a DISCONNECT message and enter the CC-state U11, "Disconnect Request".

Preamble: MCC026

Script:

```
AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_no_cause, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_11_mtc, "cause 30#, state U11")

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.11 MCC162: U7 / DISCONNECT received (26.8.1.3.4.3)

Description: The call control entity of the MS being in the state, U7, a DISCONNECT message is received by the MS. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service for which immediate connect is not used. To verify that a CC entity of a MS in CC-state U7, "Call Received", upon receipt of a DISCONNECT with a progress indicator indicating in-band information from network, if a TCH was not assigned, returns a RELEASE message and enters the CC-state U19, "Release Request".

Preamble: MCC027

Script:

```
BS_MSG3_SEND ( 0, disconnect_ms, SILENT)
BS_MSG3_AWAIT( 0, release_mtc, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_19_mtc, "cause 30#, state U19")

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.12 MCC163: U7 / RELEASE received (26.8.1.3.4.4)

Description: The call control entity of the MS being in the state, U7, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one

mobile terminating circuit switched basic service for which immediate connect is not used.

To verify that a CC entity of a MS in CC-state U7, "Call Received", upon receipt of a RELEASE will return a RELEASE COMPLETE and enter the CC-state U0, "Null".

To verify that the MS on returning to the idle mode releases the MM-connection and that the CC-entities relating to the seven mobile terminating transaction identifiers are in CC-state U0, "Null".

Preamble: MCC027

Script:

```
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT( 0, release_complete_empty, SILENT)

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_0_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_1_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_1_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_2_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_2_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_3_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_3_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_4_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_4_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_5_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_5_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_6_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_6_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.13 MCC164: U7 / Lower Layer Failure (26.8.1.3.4.5)

Description: The call control entity of the MS being in the state, U7, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service for which immediate connect is not used.

To verify that a CC entity of a MS in CC-state U7, "Call Received", having detected a lower layer failure returns to idle mode with the CC entities relating to the seven mobile terminating transaction identifiers in CC-state U0, "Null".

Preamble: MCC028

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */

ISS_DELAY (20000);
```

```

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link
(DISC/UA)");

```

History: 17.12.97 MS Initial

4.3.14 MCC165: U7 / Unknown message received (26.8.1.3.4.6)

Description: The call control entity of the MS being in the state, U7, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile terminated circuit switched basic service.

Preamble: MCC026

Script:

```

BS_MSG3_SEND ( 0, unknown_message_mtc, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_7, "cause 97#, state U7")

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,SILENT)
BS_MSG3_AWAIT( 0, status_30_7, "cause 30#, state U7")

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");

```

History: 17.12.97 MS Initial

4.3.15 MCC166: U7 / TCH Assignment (26.8.1.3.4.7)

Description: The call control entity of the MS being in the state, U7, an assignment procedure is performed for traffic channel. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service for which immediate connect is not used.
To verify that a CC entity of a MS in CC-state U7, "Call Received", when allocated a traffic channel by the network performing the assignment procedure, shall perform a layer 2 establishment on the FACCH without changing the state of the call in progress.

Preamble: MCC027

Script:

```
BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_7, "with cause 30# (resp. to status
enq., U7)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.16 MCC167: U7 / RELEASE COMPLETE received (26.8.1.3.4.8)

Description: The call control entity of the MS being in the state, U7, the call is cleared by a RELEASE COMPLETE message sent by the SS. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service, for which immediate connect is not used.
To verify that a CC entity of the MS in CC-state U7, "Call received", upon receipt of a RELEASE COMPLETE message with valid cause value, enters CC state U0, "Null".
To verify that in returning to idle mode, the CC entities relating to the seven mobile terminating transaction identifiers are in state U0, "Null".

Preamble: MCC025

Script:

```
BS_MSG3_SEND (0,release_complete_bs, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_0_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_1_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_1_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_2_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_2_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_3_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_3_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_4_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_4_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_5_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_5_mtc, "with cause 81# (invalid TI
value)");
```

```
BS_MSG3_SEND (0,status_enquiry_6_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_6_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.17 MCC168: U8 / CONNECT acknowledged (26.8.1.3.5.1)

Description: The call control entity of the MS being in the state, U8, a CONNECT ACKNOWLEDGE message is received by the MS. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service. To verify that a CC entity of a MS in CC-state U8, "Connect Request", upon receipt of CONNECT ACKNOWLEDGE shall enter the CC-state U10, "Call Active".

Preamble: MCC029

Script:

```
BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);

BS_MSG3_SEND (0,connect_acknowledge, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_10_mtc, "with cause 30# (resp. to status
enq., U10)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.18 MCC169: U8 / Timer T313 time-out (26.8.1.3.5.2)

Description: The call control entity of the MS being in the state, U8, if no response is then received from the SS, timer T313 expires at the MS side. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service. To verify that a CC entity of a MS in CC-state U8, "Connect Request", having waited for a reasonable length of time (e.g. expiry of timer T313) without receiving the appropriate protocol message to complete the incoming call, shall initiate the clearing of that incoming call by sending the CC message DISCONNECT and enter the CC-state U11, "Disconnect Request"

Preamble: MCC029

Script:

```
SET_TIMEOUT (40000)

BS_MSG3_AWAIT(0,disconnect_t313, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_11_mtc, "with cause 30# (resp. to status
enq., U11)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.19 MCC170: U8 / Termination requested by the User (26.8.1.3.5.3)

Description: The call control entity of the MS being in the state, U8, the user requests for releasing of the call. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service.

To verify that a CC entity of a MS in CC-state U8, "Connect Request", upon request by the user to terminate will send a DISCONNECT message and enter the CC-state U11, "Disconnect Request".

Preamble: MCC029

Script:

```
AT_SEND ("ABORT\r\n", "Abort dialling and Hook On");
```

```
BS_MSG3_AWAIT(0,disconnect, SILENT);
```

```
BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
```

```
BS_MSG3_AWAIT(0,status_30_11_mtc, "with cause 30# (resp. to status  
enq., U11)");
```

```
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link  
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.20 MCC171: U8 / DISCONNECT with in-band tones received (26.8.1.3.5.4)

Description: The call control entity of the MS being in the state, U9, a DISCONNECT message is received by the MS. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used.

To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", upon receipt of a DISCONNECT returns a RELEASE message and enters the CC-state U19, "Release Request".

Preamble: MCC030

Script:

```
BS_MSG3_SEND ( 0, disconnect_8_mtc, "with in band tones")
```

```
NOT_IMPLEMENTED("TCH in speech mode: the SS will check that the audio")
```

```
NOT_IMPLEMENTED("path for in band tones is attached.")
```

```
BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
```

```
BS_MSG3_AWAIT( 0, status_30_12_mtc, "cause 30#, state U12")
```

```
ISS_DELAY (5000)
```

```
AT_SEND ("ABORT\r\n", "Abort ATA");
```

```
BS_MSG3_AWAIT( 0, release_mtc, SILENT)
```

```
BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
```

```
BS_MSG3_AWAIT( 0, status_30_19_mtc, "cause 30#, state U19")
```

```
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link  
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.21 MCC172: U8 / DISCONNECT without in-band tones received (26.8.1.3.5.5)

Description: The call control entity of the MS being in the state, U9, a DISCONNECT message is received by the MS. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used.

To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", upon receipt of a DISCONNECT returns a RELEASE message and enters the CC-state U19, "Release Request".

Preamble: MCC030

Script:

```
BS_MSG3_SEND (0,disconnect_ms, SILENT);
BS_MSG3_AWAIT(0,release_mtc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_19_mtc, "with cause 30# (resp. to status
enq., U19)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.22 MCC173: U8 / RELEASE received (26.8.1.3.5.6)

Description: The call control entity of the MS being in the state, U8, a RELEASE message is received by the MS. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service.

To verify that a CC entity of a MS in CC-state U8, "Connect Request", upon receipt of a RELEASE will return a RELEASE COMPLETE and enter the CC-state U0, "Null".

To verify that the MS on returning to the idle mode releases the MM-connection and that the CC-entities relating to the seven mobile terminating transaction identifiers are in CC-state U0, "Null".

Preamble: MCC030

Script:

```
BS_MSG3_SEND (0,release, SILENT);
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_0_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_1_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_1_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_2_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_2_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_3_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_3_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_4_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_4_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_5_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_5_mtc, "with cause 81# (invalid TI
value)");

BS_MSG3_SEND (0,status_enquiry_6_mtc,SILENT);
BS_MSG3_AWAIT(0,release_complete_6_mtc, "with cause 81# (invalid TI
value)");
```

```
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link  
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.23 MCC174: U8/ Lower Layer Failure (26.8.1.3.5.7)

Description: The call control entity of the MS being in the state, U8, a lower layer failure is accomplished at the MS and consequently, communication at layer 3 level with the peer entity is terminated. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service for which immediate connect is not used.

To verify that a CC entity of a MS in CC-state U8, "Call Received", having detected a lower layer failure returns to idle mode with the CC entities relating to the seven mobile terminating transaction identifiers in CC-state U0, "Null".

Preamble: MCC031

Script:

```
BS_SET_ERROR (0, 1); /* Lower Layer Failure */

ISS_DELAY (20000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_cksn_2,SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_1,SILENT);
BS_MSG3_AWAIT(0,release_complete_1, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_2,SILENT);
BS_MSG3_AWAIT(0,release_complete_2, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_3,SILENT);
BS_MSG3_AWAIT(0,release_complete_3, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_4,SILENT);
BS_MSG3_AWAIT(0,release_complete_4, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_5,SILENT);
BS_MSG3_AWAIT(0,release_complete_5, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_6,SILENT);
BS_MSG3_AWAIT(0,release_complete_6, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling  
link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.24 MCC175: U8 / TCH Assignment (26.8.1.3.5.8)

Description: The call control entity of the MS being in the state, U8, an assignment procedure is performed for traffic channel. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service for which immediate connect is not used.

To verify that a CC entity of a MS in CC-state U8, "Call Received", when allocated a traffic channel by the network performing the assignment procedure, shall perform a layer 2 establishment on the FACCH without changing the state of the call in progress.

Preamble: MCC031

Script:

```
BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_8, "with cause 30# (resp. to status
                             enq., U8)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
                             (DISC/UA)");
```

History: 17.12.97 MS Initial

4.3.25 MCC176: U8 / Unknown message received (26.8.1.3.5.9)

Description: The call control entity of the MS being in the state, U8, an unknown message is received by the MS. This test is applicable for any equipment supporting at least one mobile terminated circuit switched basic service.

Preamble: MCC031

Script:

```
BS_MSG3_SEND ( 0, unknown_message_mtc, "message type not defined for PD")
BS_MSG3_AWAIT( 0, status_97_8, "cause 97#, state U8")

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,SILENT)
BS_MSG3_AWAIT( 0, status_30_8, "cause 30#, state U8")

BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
                             link (DISC/UA)");
```

History: 17.12.97 MS Initial

4.4 In Call Functions

4.4.1 MCC177: DTMF information transfer (26.8.1.4.1.1)

Description: Dual Tone Multi Frequency (DTMF) is an inband one out of four plus one out of four signalling system primarily used from terminal instruments in telecommunication networks.

The support of DTMF is only permitted when a bearer capability for speech is in use or during the speech phase of alternate speech/data and alternate speech/facsimile tele-services.

To verify that an MS supporting the Mobile originating DTMF protocol control procedure, having a CC entity for speech in state U10, "Active": when made to send a DTMF tone, sends a START DTMF message on the correct DCCH.

To verify that an MS supporting the Mobile originating DTMF protocol control procedure, having a CC entity for speech in state U10, "Active": when made to send a DTMF tone (the corresponding IA5 character being selected from among the ones supported), sends a START

DTMF message specifying the correct IA5 character in the "keypad information" field of the keypad facility information element.

Note: The original 26.8.1.4.1.1 is not a part of GCF and therefore not tested at the test house. We think that the digits 'C' and 'D' are never sent over the air interface due to some restriction in GSM 11.11 chapter 10.5.1. There is also the problem that 'A', 'B', 'C', 'D' cannot be entered by using the keypad as defined in GSM 02.30. Therefore, the simulation test case doesn't check the digits 'C' and 'D' in contradiction to the original GSM 11.10 test case.

Preamble: MCC032

Script:

```
ISS_DELAY (10000);

AT_SEND ("AT+VTS=0,0\r\n", "DTMF 0");

BS_MSG3_AWAIT( 0, start_dtmf_0, SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_0, SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc, "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge, SILENT)

AT_SEND ("AT+VTS=1,0\r\n", "DTMF 1");
BS_MSG3_AWAIT( 0, start_dtmf_1, SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_1, SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc, "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge, SILENT)

AT_SEND ("AT+VTS=2,0\r\n", "DTMF 2");
BS_MSG3_AWAIT( 0, start_dtmf_2, SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_2, SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc, "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge, SILENT)

AT_SEND ("AT+VTS=3,0\r\n", "DTMF 3");
BS_MSG3_AWAIT( 0, start_dtmf_3, SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_3, SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc, "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge, SILENT)

AT_SEND ("AT+VTS=4,0\r\n", "DTMF 4");
BS_MSG3_AWAIT( 0, start_dtmf_4, SILENT)
```

```

BS_MSG3_SEND ( 0, start_dtmf_acknowledge_4,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                    SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,        SILENT)

AT_SEND ("AT+VTS=5,0\r\n", "DTMF 5");
BS_MSG3_AWAIT( 0, start_dtmf_5,                SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_5,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                    SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,        SILENT)

AT_SEND ("AT+VTS=6,0\r\n", "DTMF 6");
BS_MSG3_AWAIT( 0, start_dtmf_6,                SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_6,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                    SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,        SILENT)
AT_SEND ("AT+VTS=7,0\r\n", "DTMF 7");
BS_MSG3_AWAIT( 0, start_dtmf_7,                SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_7,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                    SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,        SILENT)

AT_SEND ("AT+VTS=8,0\r\n", "DTMF 8");
BS_MSG3_AWAIT( 0, start_dtmf_8,                SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_8,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                    SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,        SILENT)

AT_SEND ("AT+VTS=9,0\r\n", "DTMF 9");
BS_MSG3_AWAIT( 0, start_dtmf_9,                SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_9,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                    SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

```

```

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,      SILENT)

AT_SEND ("AT+VTS=#,0\r\n", "DTMF #");
BS_MSG3_AWAIT( 0, start_dtmf_hash,            SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_hash,SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                  SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,      SILENT)

AT_SEND ("AT+VTS=*,0\r\n", "DTMF *");
BS_MSG3_AWAIT( 0, start_dtmf_star,            SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_star,SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                  SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,      SILENT)

AT_SEND ("AT+VTS=A,0\r\n", "DTMF A");
BS_MSG3_AWAIT( 0, start_dtmf_A,              SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_A,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                  SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,      SILENT)

AT_SEND ("AT+VTS=B,0\r\n", "DTMF B");
BS_MSG3_AWAIT( 0, start_dtmf_B,              SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_B,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                  SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,      SILENT)

#if 0
AT_SEND ("AT+VTS=C,0\r\n", "DTMF C");
BS_MSG3_AWAIT( 0, start_dtmf_C,              SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_C,    SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,                  SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,        SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,            "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,      SILENT)

AT_SEND ("AT+VTS=D,0\r\n", "DTMF D");

```

```

BS_MSG3_AWAIT( 0, start_dtmf_D,          SILENT)
BS_MSG3_SEND ( 0, start_dtmf_acknowledge_D, SILENT)

BS_MSG3_AWAIT( 0, stop_dtmf,              SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,    SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,        "cause 30#, state U10")

BS_MSG3_SEND ( 0, stop_dtmf_acknowledge,    SILENT)
#endif /* #if 0 */

AT_SEND ("AT+VTS=1,0\r\n", "DTMF 1");

BS_MSG3_AWAIT( 0, start_dtmf_1,            SILENT)
BS_MSG3_SEND ( 0, start_dtmf_reject,        SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,      SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,          "cause 30#, state U10")

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

```

History:	17.12.97	MS	Initial
	31.5.02	HM	Revised, no "C" and no "D"

4.4.2 MCC178: User Notification (26.8.1.4.2.1)

Description: This is a case for testing user notification procedure terminated by the mobile station. The test is applicable for those equipments supporting at least one circuit switched basic service. To verify that a CC entity of a MS in CC-state U10, "active", upon receiving of a NOTIFY message remains in the active state.

Preamble: MCC032

Script:

```

BS_MSG3_SEND ( 0, notify,                  SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,      SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,          "cause 30#, state U10")

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

```

History:	17.12.97	MS	Initial
----------	----------	----	---------

4.4.3 MCC179: Channel Changes (26.8.1.4.3.1)

Description: This is a case to test a change of a physical channel during active state of a call. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service. To verify that the MS being in the call active state after having successfully completed a channel assignment or having completed a handover command remains in the call active state.

Preamble: MCC032

Script:

```

BS_MSG3_SEND ( 0, assignment_command, SILENT)
BS_MSG3_AWAIT( 0, assignment_complete, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,    "cause 30#, state U10")

```



```
BS_MSG3_SEND ( 0, handover_command,      SILENT)

/*
 * not visible in infrastructure simulation
 *
 * BS_RACH_AWAIT( 0, handover_access,      SILENT)
 * BS_RACH_AWAIT( 0, handover_access,      SILENT)
 * BS_RACH_AWAIT( 0, handover_access,      SILENT)
 * BS_RACH_AWAIT( 0, handover_access,      SILENT)
 */
BS_MSG3_AWAIT( 0, handover_complete, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc, SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,      "cause 30#, state U10")

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.4.4 MCC180: Unsuccessful Channel Changes (26.8.1.4.3.2)

Description: This is a case to test an unsuccessful change of a physical channel during active state of a call. This test is applicable for any equipment supporting at least one mobile terminating circuit switched basic service.
To verify that the MS, when returning to the old channel after handover or Assignment failure and correctly establishing the link, will remain in the call active state.

Preamble: MCC032

Script:

```
BS_SET_ERROR ( 0, 3 );                            /* No resumption on new layer 2 link */

BS_MSG3_SEND ( 0, handover_command,      SILENT)

SET_TIMEOUT (30000);

BS_RACH_AWAIT( 0, handover_access,      SILENT)

BS_MSG3_AWAIT( 0, handover_failure,      SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,      "cause 30#, state U10")

BS_SET_ERROR ( 0, 3 );                            /* No resumption on new layer 2 link */

BS_MSG3_SEND ( 0, assignment_command,      SILENT)
BS_MSG3_AWAIT( 0, assignment_failure,      SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,      "cause 30#, state U10")

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial
 26.02.99 VK remove reception of handover_access

4.4.5 MCC181: Mobile Terminated In-Call Modification (26.8.1.4.4.1)

Description: This is to test a special case of a in-call modification procedure, in which the new mode is not supported (and consequently not one of those negotiated and agreed during the establishment phase of the call). This test is applicable for any equipment supporting at least one circuit switched basic service.

To verify that an MS supporting the network originated in-call modification procedure, after having received a MODIFY message with a new mode which is not the actual one and cannot be supported by the MS, rejects it by sending a MODIFY REJECT.

To verify that an MS not supporting the network originated in-call modification procedure, after having received a MODIFY message, responds with a STATUS message.

Preamble: MCC032

Script:

```
BS_MSG3_SEND ( 0, modify_data,          SILENT)
BS_MSG3_AWAIT( 0, modify_reject,        SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0_mtc,SILENT)
BS_MSG3_AWAIT( 0, status_30_10_mtc,     "cause 30#, state U10")
```

History: 17.12.97 MS Initial

4.5 Call Re-Establishment

4.5.1 MCC182: Re-establishment allowed (26.8.2.1)

Description: This is to test a successful case of a call re-establishment procedure. This test is applicable for any equipment supporting at least one bearer capability. If the MS does not perform call re-establishment procedure correctly, the network will waste resources.

The purpose of this test is to verify that the MS can correctly perform a call re-establishment procedure.

Preamble: MCC033

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,tmsi_reallocation_command,SILENT);
BS_MSG3_AWAIT(0,tmsi_reallocation_complete,SILENT);
```

```

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

BS_MSG3_AWAIT(0,connect,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect_acknowledge,SILENT);

BS_SET_POWER ( 0 , -80 );
BS_SET_POWER ( 1 , -50 );

ISS_DELAY (10000)

BS_SET_ERROR ( 0 , 4);                                /* Radio Link Failure */

SET_TIMEOUT (20000);
BS_RACH_AWAIT(1,channel_request_reest_neci_0,SILENT);

BS_CONFIG_CHANNEL (1, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (1, 0);
BS_MSG3_SEND (1,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (1, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(1,cm_reestablish_request,SILENT);

BS_MSG3_SEND (1,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(1,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (1,assignment_command,SILENT);
BS_MSG3_AWAIT(1,assignment_complete,SILENT);

BS_MSG3_SEND (1,disconnect_ms,SILENT);
BS_MSG3_AWAIT(1,release_mtc,SILENT);
BS_MSG3_SEND (1,release_complete_bs, SILENT);

BS_MSG3_SEND (1,channel_release, "Release of the main signalling link
(DISC/UA)");

```

History: 17.12.97 MS Initial

4.5.2 MCC183: Re-establishment not allowed (26.8.2.2)

Description: This is to test a special case of a call re-establishment, in which it is not allowed for a MS to attempt re-establishment of a call. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service. The purpose of this test is to verify that the MS does not attempt call re-establishment when it is not allowed to take place because of the unavailability of a cell allowing call re-establishment.

Preamble: MCC001

Script:

```

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,tmsi_reallocation_command,SILENT);
BS_MSG3_AWAIT(0,tmsi_reallocation_complete,SILENT);

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

BS_MSG3_AWAIT(0,connect,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect_acknowledge,SILENT);

BS_SET_ERROR ( 0, 4);                               /* Radio Link Failure */

ISS_DELAY (10000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_cksn_2,SILENT);
```

History: 17.12.97 MS Initial

4.5.3 MCC184: Re-establishment not allowed during establishment (26.8.2.3)

Description: This is to test a special case of a call re-establishment, in which it is not allowed for a MS to attempt re-establishment of a call, since the call has not been established yet. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service. The purpose of this test is to verify that the MS does not attempt call re-establishment when it is not allowed to take place because of the call control state.

Preamble: MCC033

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,alerting,SILENT);

BS_SET_ERROR ( 0, 4);                                /* Radio Link Failure */

ISS_DELAY (10000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_cks_n_2,SILENT);

```

History:	17.12.97	MS	Initial
	02.03.99	VK	modify

4.5.4 MCC185: User-to-User Signalling (26.8.3.1)

Description: The "user to user" information element is used to convey information between the mobile user and a remote ISDN user. This test is therefore applicable for any equipment supporting at least one mobile terminating circuit switched basic service. The purpose of this test is to verify that inclusion of the "user-user" information element in either of the down link messages, SETUP or DISCONNECT causes no adverse effects on the operation of the MS.

Preamble: MCC001

Script:

```

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);

```

```
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_user_to_user,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,tmsi_reallocation_command,SILENT);
BS_MSG3_AWAIT(0,tmsi_reallocation_complete,SILENT);

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

BS_MSG3_AWAIT(0,connect,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect_acknowledge,SILENT);

BS_MSG3_SEND (0,disconnect_user_to_user,SILENT);

BS_MSG3_AWAIT(0,release_mtc,SILENT);
BS_MSG3_SEND (0,release_complete_bs, SILENT);

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 LE Initial

4.6 Additional Multilayer Test Cases

4.6.1 MCC200: Successive Mobile Terminated Calls

Description: Starting two Mobile Terminated Calls. Checking the sending point of Alerting message.

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);
```

```
AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (10000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 23.01.98 LE Initial

4.6.2 MCC201: Successive Mobile Terminated Calls (IMSI / TMSI)

Description: Starting two Mobile Terminated Calls. Paging with IMSI and TMSI.

Preamble: MCC001

Script:

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

```
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,tmsi_reallocation_command,SILENT);
BS_MSG3_AWAIT(0,tmsi_reallocation_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (10000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1_tmsi,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_tmsi,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);
```



```
BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 23.01.98 LE Initial

4.6.3 MCC202: Successive Mobile Terminated Calls (IMSI / Paging Type 2 TMSI)

Description: Starting two Mobile Terminated Calls. Paging with IMSI and TMSI. TMSI is send with a Paging Request Type 2 message on first position.

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,tmsi_reallocation_command,SILENT);
BS_MSG3_AWAIT(0,tmsi_reallocation_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
```

```
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (10000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_2_tmsi,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_tmsi,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 23.01.98 LE Initial

4.6.4 MCC203: Successive Mobile Terminated Calls (IMSI / Paging Type 3 TMSI)

Description: Starting two Mobile Terminated Calls. Paging with IMSI and TMSI. TMSI is send with a Paging Request Type 3 message on first position.

Preamble: MCC001

Script:

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
```

```
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,tmsi_reallocation_command,SILENT);
BS_MSG3_AWAIT(0,tmsi_reallocation_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (10000);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_3_tmsi,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_tmsi,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (5000);
```

```
AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND ( 0, release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 23.01.98 LE Initial

4.6.5 MCC204: MTC, Ringing, Network stops after Timeout (2 calls)

Description: A mobile terminated call is processed. The mobile station rings, but the user makes nothing. After a while the network disconnects the call. It is expected that the mobile station stops ringing.

Preamble: MCC025

Script:

```
BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_7, "with cause 30# (resp. to status
enq., U7)");

BS_MSG3_SEND (0,disconnect_ms, SILENT);
BS_MSG3_AWAIT(0,release_mtc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_19_mtc, "with cause 30# (resp. to status
enq., U19)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (10000)

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);
```

```
BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_7,          "with cause 30# (resp. to status
enq., U7)");

BS_MSG3_SEND (0,disconnect_ms, SILENT);
BS_MSG3_AWAIT(0,release_mtc,      SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_19_mtc,   "with cause 30# (resp. to status
enq., U19)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.6.6 MCC205: MOC, ringing, MS hooks on

Description: The call control entity of the MS being in the state, U1, an ALERTING message is sent to the MS as a indication that a call is being alerted at a called end. This test is applicable for any equipment supporting at least one mobile originated circuit switched basic service.

Preamble: MCC004

Script:

```
BS_MSG3_SEND ( 0, alerting,          SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0,  SILENT)
BS_MSG3_AWAIT( 0, status_30_4,       "cause 30#, state U4")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect_ms, SILENT);
BS_MSG3_SEND ( 0, release_bs,      SILENT)
BS_MSG3_AWAIT( 0, release_complete_bs, SILENT)

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 17.12.97 MS Initial
26.06.01 HM Revised

4.6.7 MCC206: Enhanced Full Rate Mobile Originated Call

Description: A mobile originated call is processed using enhanced full rate. The PCM is configured for EFR in the dualband version (STD=5).

Preamble: MCC199

Script:

```
IE_BF_SET_VAL (ms_classmark, ps_capability, 0, "no pseudo sync cap" )
IE_BF_SET_VAL (ms_classmark, classmark_3, 1, "classmark 3 info available" )

AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_efr,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,assignment_command_efr,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 17.12.97 MS Initial

4.6.8 MCC207: Power Off during Connection

Description: A mobile originated call is established. In active state the MS is switched off.

Preamble: MCC001

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_AWAIT(0,setup_moc,SILENT);
```

```
BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);
```

```
BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);
```

```
BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

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

History: 17.12.97 MS Initial

4.6.9 MCC208: MOC with special number (unstructured SS data)

Description: An unstructured SS Data number is entered: *00*0123456789012345678#.

Preamble: MCC001

Script:

```
AT_SEND ("ATD*00*0123456789012345678#\r\n", "Dial USSD");
```

```
BS_RACH_AWAIT(0,channel_request_ss,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
```

```
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
```

```
BS_MSG3_AWAIT(0,cm_service_request_ss,SILENT);
```

```
BS_MSG3_SEND (0,cm_service_accept,SILENT);
```

```
BS_MSG3_AWAIT(0,ss_register_unstructured_data, SILENT);
```

```
BS_MSG3_SEND (0,channel_release,SILENT);
```

History: 17.12.97 MS Initial

4.6.10 MCC209: MTC with / without advice of charge information

Description: A mobile terminated call is started with advice of charge information.

Preamble: MCC198

Script:

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

```
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
```

```
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
```

```
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_1900,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
```

```
BS_MSG3_AWAIT(0,paging_response_1900,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
```

```
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_SEND (0,setup_no_signal,SILENT);
```

```
BS_MSG3_AWAIT(0,call_confirmed_1900,SILENT);
```

```
BS_MSG3_SEND (0,assignment_command_1900,SILENT);
```

```
BS_MSG3_AWAIT (0,assignment_complete,SILENT);
```

```
BS_MSG3_AWAIT(0,alerting,SILENT);
```

```
AT_SEND ("ATA\r\n", "Hook Off");
```

```
BS_MSG3_AWAIT(0,connect,SILENT);
```

```
BS_MSG3_SEND (0,connect_acknowledge,SILENT);
```

```
ISS_DELAY (5000);
```

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT(0,disconnect, SILENT);
```

```
BS_MSG3_SEND ( 0, release, SILENT)
```

```
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
```

```
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link  
(DISC/UA)");
```

```
ISS_DELAY (10000)

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_1900,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_1900,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal_aoc,SILENT);
BS_MSG3_AWAIT(0,call_confirmed_1900,SILENT);
BS_MSG3_AWAIT(0,facility_mt_aoc,SILENT);

BS_MSG3_SEND (0,assignment_command_1900,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

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

BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

BS_MSG3_SEND (0,facility_aoc,SILENT);
BS_MSG3_AWAIT(0,facility_mt_aoc,SILENT);

ISS_DELAY (5000);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT(0,disconnect, SILENT);
BS_MSG3_SEND (0,release, SILENT)
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 23.01.98 LE Initial

4.6.11 MCC210: MOC with / without advice of charge information

Description: A mobile originated call is started with advice of charge information.

Preamble: MCC198

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_1900,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request_1900,SILENT);
```



```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_1900,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,assignment_command_1900,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_ms,          SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0,      SILENT)
BS_MSG3_AWAIT( 0, status_30_11,          "cause 30#, state U11")

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (10000)

AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_1900,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request_1900,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_1900,SILENT);

BS_MSG3_SEND (0,call_proceeding_aoc,SILENT);
BS_MSG3_AWAIT(0,facility_mo_aoc, SILENT);
BS_MSG3_SEND (0,alerting_aoc,SILENT);
BS_MSG3_AWAIT(0,facility_mo_aoc, SILENT);

BS_MSG3_SEND (0,assignment_command_1900,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect_aoc,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
BS_MSG3_AWAIT(0,facility_mo_aoc, SILENT);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_ms,          SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0,      SILENT)
BS_MSG3_AWAIT( 0, status_30_11,          "cause 30#, state U11")
```

```
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link  
(DISC/UA)");
```

History: 17.12.97 MS Initial

4.6.12 MCC211: Power Off while entering PIN

Description: During PIN entering the mobile is switched off. It is checked whether all layers are deactivated.

Preamble: None

Script:

```
ISS_INIT (4);

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

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

COMMAND ("SIM CONFIG MODE=7")
AT_SEND ("AT+CFUN=1\r\n", "Power On");
AT_SEND ("AT+COPS=0\r\n", "Start registration");

ISS_DELAY (10000);

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

ISS_DELAY (10000);
```

History: 17.12.97 LE Initial

4.6.13 MCC212: Multiple Power On/Off

Description: The mobile is switched on/off three times.

Preamble: None

Script:

```
ISS_INIT (4);

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

BS_SET_SCH ( 0 , BSIC , RFN );
BS_SET_ARFCN ( 0 , ARFCN_BCCH );
BS_SET_POWER ( 0 , -50 );
BS_ON_OFF ( 0 , TRUE );

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

ISS_DELAY (10000);
```

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

ISS_DELAY (10000);

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

ISS_DELAY (10000);

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

ISS_DELAY (10000);

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

ISS_DELAY (10000);

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

ISS_DELAY (10000);
```

History: 17.12.97 LE Initial

4.6.14 MCC213: U3 / DISCONNECT with CCBS offered, inband tones

Description: A mobile originated call attempt is made. The destination is busy, CCBS is offered in the DISCONNECT message. This is refused, so the mobile behaves like a mobile which doesn't support the CCBS feature.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, disconnect_8_ccbs_offered, "with in band tones")

AT_RECEIVE("BUSY", SILENT);

NOT_IMPLEMENTED("TCH in speech mode: the SS will check that the audio")
NOT_IMPLEMENTED("path for in band tones is attached.")

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_12, "cause 30#, state U12")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, release, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "cause 30#, state U19")
```

History: 25.02.00 HM Initial
16.10.00 HM Revised, ACI now supports CCBS
better

4.6.15 MCC214: U3 / DISCONNECT with CCBS offered, no inband tones

Description: A mobile originated call attempt is made. The destination is busy, CCBS is offered in the DISCONNECT message. This is refused, so the mobile behaves like a mobile which doesn't support the CCBS feature until CCBS is fully implemented in all layers. Inband tones are not provided.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, disconnect_ccbs_offered, SILENT)

AT_RECEIVE("BUSY", SILENT);

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_12, "cause 30#, state U12")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, release, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "cause 30#, state U19")
```

History:	25.02.00	HM	Initial
	16.10.00	HM	Revised, ACI now supports CCBS

better

4.6.16 MCC215: U3 / DISCONNECT with CCBS offered, CCBS invoked

Description: A mobile originated call attempt is made. The destination is busy, CCBS is offered in the DISCONNECT message. The offering of CCBS is accepted, the mobile sends a RELEASE message with facility to the network.

Preamble: MCC006

Script:

```
BS_MSG3_SEND ( 0, disconnect_ccbs_offered, SILENT)

AT_RECEIVE("BUSY", SILENT);

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_12, "cause 30#, state U12")

AT_SEND ("AT+CHLD=5\r\n", "Hook On");

BS_MSG3_AWAIT( 0, release_ccbs, SILENT)

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_19, "cause 30#, state U19")

BS_MSG3_SEND (0, release_complete, SILENT)

BS_MSG3_SEND (0, channel_release, "the MS shall release the main signalling
link (DISC/UA)");
```

History:	20.03.02	HM	Initial
----------	----------	----	---------

4.6.17 MCC216: U0 / CCBS Recall received, MS Idle, accepted by user

Description: The network performs the CCBS recall, successfully without problems, user accepts. See figure 4.3.1 of GSM 04.93.

Preamble: MCC001

Script:

```
AT_SEND ("AT%CCBS=1\r\n", "CCBS enable in ACI");
AT_RECEIVE("OK", "Answer to AT%CCBS");

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0, paging_request_type_1, SILENT);
BS_RACH_AWAIT(0, channel_request, SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0, cm_service_prompt, SILENT);
BS_MSG3_AWAIT (0, start_cc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_35, "cause 30#, state U0.3")

BS_MSG3_SEND (0, cc_establishment, SILENT);
BS_MSG3_AWAIT (0, cc_establishment_confirmed, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_37, "cause 30#, state U0.5")

BS_MSG3_SEND (0,recall,SILENT);
AT_RECEIVE("%CCBS: 3,1,\"493039094444\",145", "CCBS indication");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_38, "cause 30#, state U0.6")

AT_SEND ("ATA\r\n", "Accept CCBS recall");
BS_MSG3_AWAIT(0,setup_moc,SILENT);
AT_RECEIVE("OK", "Answer to ATA (speech call)");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_1, "cause 30#, state U1")

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 20.03.02 HM Initial

4.6.18 MCC217: U0 / CCBS Recall received, MS Idle, not accepted by user

Description: The network performs the CCBS recall, user declines. See figure 4.3.1 of GSM 04.93.

Preamble: MCC001

Script:

```
AT_SEND ("AT%CCBS=1\r\n", "CCBS enable in ACI");
AT_RECEIVE("OK", "Answer to AT%CCBS");

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0, cm_service_prompt, SILENT);
BS_MSG3_AWAIT (0, start_cc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_35, "cause 30#, state U0.3")

BS_MSG3_SEND (0, cc_establishment, SILENT);
BS_MSG3_AWAIT (0, cc_establishment_confirmed, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_37, "cause 30#, state U0.5")

BS_MSG3_SEND (0,recall,SILENT);
AT_RECEIVE("%CCBS: 3,1,\"493039094444\",145", "CCBS indication");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_38, "cause 30#, state U0.6")

AT_SEND ("ATH\r\n", "Reject CCBS recall");
BS_MSG3_AWAIT(0,release_complete_cause_21,SILENT);
AT_RECEIVE("OK", "Answer to ATH");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

History: 04.04.02 HM Initial

4.6.19 MCC218: U0 / CCBS Recall received, MS not Idle, not accepted by user

Description: The network performs the CCBS recall, user declines. See figure 4.3.2 of GSM 04.93.

Preamble: MCC032

Script:

```
AT_SEND ("AT%CCBS=1\r\n", "CCBS enable in ACI");
AT_RECEIVE("OK", "Answer to AT%CCBS");

BS_MSG3_SEND (0, cm_service_prompt, SILENT);
BS_MSG3_AWAIT (0, start_cc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_35, "cause 30#, state U0.3")

BS_MSG3_SEND (0, cc_establishment, SILENT);
BS_MSG3_AWAIT (0, cc_establishment_confirmed_busy, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_37, "cause 30#, state U0.5")

BS_MSG3_SEND (0,recall,SILENT);
AT_RECEIVE("%CCBS: 3,1,\"493039094444\",145", "CCBS indication");
```

```
BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_38, "cause 30#, state U0.6")

AT_SEND ("ATH\r\n", "Reject CCBS recall");
BS_MSG3_AWAIT(0,release_complete_cause_21,SILENT);
AT_RECEIVE("OK", "Answer to ATH");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,release_complete_0, "with cause 81# (invalid TI value)");

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_10_mtc, "with cause 30# (resp. to status
enq., U10");
```

History: 04.04.02 HM Initial

4.6.20 MCC219: U0 / CCBS Recall received, MS not Idle, ex. call released and accepted

Description: The network performs the CCBS recall, user released the existing call and accepts the CCBS recall. See figure 4.3.2 of GSM 04.93.

Preamble: MCC032

Script:

```
AT_SEND ("AT%CCBS=1\r\n", "CCBS enable in ACI");
AT_RECEIVE("OK", "Answer to AT%CCBS");

BS_MSG3_SEND (0, cm_service_prompt, SILENT);
BS_MSG3_AWAIT (0, start_cc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_35, "cause 30#, state U0.3")

BS_MSG3_SEND (0, cc_establishment, SILENT);
BS_MSG3_AWAIT (0, cc_establishment_confirmed_busy, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_37, "cause 30#, state U0.5")

BS_MSG3_SEND (0,recall,SILENT);
AT_RECEIVE("%CCBS: 3,1,\"493039094444\",145", "CCBS indication");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_38, "cause 30#, state U0.6")

AT_SEND ("AT+CHLD=1\r\n", "Release active, accept waiting call");
BS_MSG3_AWAIT(0,disconnect,SILENT);
BS_MSG3_AWAIT(0,setup_moc,SILENT);
AT_RECEIVE("OK", "Answer to AT+CHLD=1 (speech call)");

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_11_mtc, "cause 30#, state U11");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT(0,status_30_1, "cause 30#, state U1")

BS_MSG3_SEND (0,release, SILENT);
BS_MSG3_AWAIT(0,release_complete_empty, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
```

```
BS_MSG3_AWAIT( 0, status_30_1, "cause 30#, state U1")

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 04.04.02 HM Initial

4.6.21 MCC220: U0 / CCBS Recall received, MS not Idle, ex. call placed on hold

Description: The network performs the CCBS recall, user places the existing call on hold and accepts the CCBS recall. See figure 4.3.3 of GSM 04.93.

Preamble: MCC032

Script:

```
AT_SEND ("AT%CCBS=1\r\n", "CCBS enable in ACI");
AT_RECEIVE("OK", "Answer to AT%CCBS");

BS_MSG3_SEND (0, cm_service_prompt, SILENT);
BS_MSG3_AWAIT (0, start_cc, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_35, "cause 30#, state U0.3")

BS_MSG3_SEND (0, cc_establishment, SILENT);
BS_MSG3_AWAIT (0, cc_establishment_confirmed_busy, SILENT);

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_37, "cause 30#, state U0.5")

BS_MSG3_SEND (0,recall,SILENT);
AT_RECEIVE("%CCBS: 3,1,\"493039094444\",145", "CCBS indication");

BS_MSG3_SEND (0,status_enquiry_0,SILENT);
BS_MSG3_AWAIT( 0, status_30_38, "cause 30#, state U0.6")

AT_SEND ("AT+CHLD=2\r\n", "Hold active, accept waiting call");
BS_MSG3_AWAIT(0, hold, SILENT);
BS_MSG3_SEND(0, hold_acknowledge, SILENT)
BS_MSG3_AWAIT(0, setup_moc, SILENT);
AT_RECEIVE("OK", "Answer to AT+CHLD=2 (speech call)");

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 08.04.02 HM Initial

4.6.22 MCC230: MTC after non-finished MOC

Description: A mobile originated call attempt is made. The call attempt is not finished as the number is not existent, a DISCONNECT message with progress indicator #8 is received in CS_3. Then a mobile terminated call is attempted.

Preamble: MCC001

Script:

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```



```
BS_RACH_AWAIT(0,channel_request_moc, SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND ( 0, disconnect_8,          "with in band tones")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, release,              SILENT)
BS_MSG3_SEND (0,release_complete,SILENT);
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
                                link (DISC/UA)");

/* End of MOC */

ISS_DELAY ( 10000 );

/* Start of MTC */

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_progress_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed_no_neg,SILENT); /* Is this ok? */

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_AWAIT (0,alerting,SILENT);

ISS_DELAY ( 5000 );

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT (0,connect,SILENT);
```

```
BS_MSG3_SEND (0,connect_acknowledge,SILENT);
```

History: 11.12.00 HM Initial

4.6.23 MCC231: MTC after non-finished emergency call

Description: A mobile originated emergency call attempt is made. The call attempt is not finished as the number is not existent, a DISCONNECT message with progress indicator #8 is received in CS_3. Then a mobile terminated call is attempted.

Preamble: MCC001

Script:

```
AT_SEND ("ATD112;", "Dial emergency number");

BS_RACH_AWAIT(0,channel_request_ec, SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request_ec,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,emergency_setup,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND ( 0, disconnect_8, "with in band tones")

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, release, SILENT)
BS_MSG3_SEND (0,release_complete,SILENT);
BS_MSG3_SEND (0,channel_release, "the MS shall release the main signalling
link (DISC/UA)");

/* End of MOC */

ISS_DELAY ( 10000 );

/* Start of MTC */

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
```

```
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_progress_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmed_no_neg,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_AWAIT (0,alerting,SILENT);

ISS_DELAY ( 5000 );

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT (0,connect,SILENT);

BS_MSG3_SEND (0,connect_acknowledge,SILENT);
```

History:	11.12.00	HM	Initial
	01.10.02	SBK	Corrected send to await (alerting)

4.6.24 MCC232: MTC with automatic connect, early assignment, no Signal IE

Description: A mobile terminated call is started with automatic connect. The network uses early assignment and sends a SETUP message with no Signal IE.

Preamble: MCC198

Script:

```
AT_SEND ("ATS0=1\r\n", "Auto Connect");

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1, "PAGING REQUEST TYPE 1");
BS_RACH_AWAIT(0,channel_request, "CHANNEL REQUEST");

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_1900,"IMMEDIATE ASSIGNMENT");

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_1900, "PAGING RESPONSE 1900");

BS_MSG3_SEND (0,ciphering_mode_command, "CIPHERING MODE COMMAND");
BS_MSG3_AWAIT(0,ciphering_mode_complete, "CIPHERING MODE COMPLETE");

BS_MSG3_SEND (0,setup_no_signal, "SETUP without Signal IE");
BS_MSG3_AWAIT(0,call_confirmed_1900, "CALL CONFIRMED");

ISS_DELAY (3000);

BS_MSG3_SEND (0,assignment_command_1900, "ASSIGNMENT COMMAND");
BS_MSG3_AWAIT (0,assignment_complete, "ASSIGNMENT COMPLETE");

BS_MSG3_AWAIT(0,alerting, "ALERTING");

BS_MSG3_AWAIT(0,connect, "CONNECT");
AT_RECEIVE("RING", "RING unsolicited indication");
BS_MSG3_SEND (0,connect_acknowledge, "CONNECT ACKNOWLEDGE");

ISS_DELAY (5000);
AT_SEND ("ATH\r\n", "Hook On");
BS_MSG3_AWAIT(0,disconnect, "DISCONNECT");
BS_MSG3_SEND ( 0, release, "RELEASE")
```

```
BS_MSG3_AWAIT(0,release_complete_empty, "RELEASE COMPLETE");
AT_RECEIVE("OK", "Answer to ATH");
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

ISS_DELAY (10000)

History:	11.09.00	LE	Initial
	16.10.00	HM	Revised (Removed ALERTING mes-
sage)			
	18.12.01	SBK	Changed e.g. order of
RING+CONNECT			
	18.03.02	HM	Anwer to ATH after REL. COMPL.
	04.07.02	HM	ALERTING before CONNECT, also
OK			

4.6.25 MCC233: MTC with automatic connect, very late assignment, Signal IE

Description: A mobile terminated call is started with automatic connect. The network uses late TCH assignment and sends a SETUP message with Signal IE.

Preamble: MCC198

Script:

```
AT_SEND ("ATS0=1\r\n", "Auto Connect");

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1, "PAGING REQUEST TYPE 1");
BS_RACH_AWAIT(0,channel_request, "CHANNEL REQUEST");

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_1900, "IMMEDIATE ASSIGNMENT");

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_1900, "PAGING RESPONSE");

BS_MSG3_SEND (0,ciphering_mode_command, "CIPHERING MODE COMMAND");
BS_MSG3_AWAIT(0,ciphering_mode_complete, "CIPHERING MODE COMPLETE");

BS_MSG3_SEND (0,setup, "SETUP with Signal IE");
BS_MSG3_AWAIT(0,call_confirmed_1900, "CALL CONFIRMED");

BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_AWAIT(0,connect, "CONNECT");
AT_RECEIVE("RING", "RING unsolicited indication");
BS_MSG3_SEND (0,connect_acknowledge, "CONNECT ACKNOWLEDGE");

ISS_DELAY (3000);

BS_MSG3_SEND (0,assignment_command_1900, "ASSIGNMENT COMMAND");
BS_MSG3_AWAIT (0,assignment_complete, "ASSIGNMENT COMPLETE");

ISS_DELAY (5000);
AT_SEND ("ATH\r\n", "Hook On");
BS_MSG3_AWAIT(0,disconnect, "DISCONNECT");
BS_MSG3_SEND ( 0, release, "RELEASE")
BS_MSG3_AWAIT(0,release_complete_empty, "RELEASE COMPLETE");
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");
```

ISS_DELAY (10000)

History:	11.09.00	LE	Initial
	16.10.00	HM	Revised (Removed ALERTING message)
	18.12.01	SBK	Added expected RING indication
	04.07.02	HM	ALERTING before CONNECT, also OK.

4.6.26 MCC234: Long number dialling (80 digits)

Description: A mobile originated call is started with the maximum number of calling party digits, which is 80 by now.

Preamble: MCC001

Script:

```
AT_SEND ("ATD1234567890123456789012345678901234567890123456789012345678901234567890;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
```

```
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
```

```
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,channel_mode_modify,SILENT);
```

```
BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
```

```
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_AWAIT(0,setup_moc_lnd,SILENT);
```

```
BS_MSG3_SEND (0,call_proceeding,SILENT);
```

```
BS_MSG3_SEND (0,alerting,SILENT);
```

```
BS_MSG3_SEND ( 0, connect, SILENT)
```

```
BS_MSG3_AWAIT( 0, connect_acknowledge, SILENT)
```

```
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
```

```
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History:	15.03.02	HM	Initial
----------	----------	----	---------

4.6.27 MCC240: Call Deflection Invocation. Successful case.

Description: A mobile terminated speech call is arriving. The user invokes call deflection. Successful case.

Preamble: MCC026

Script:

```
AT_SEND ("AT+CTFR=\"03039094117\";\r\n", "Deflect incoming call");
```

```
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
```

```
BS_MSG3_SEND (0, release_facility_result, SILENT);
```

```
BS_MSG3_AWAIT(0, release_complete_empty, SILENT);
```

```
AT_RECEIVE ("OK", SILENT );
```

History:	24.04.02	HM	Initial
----------	----------	----	---------

4.6.28 MCC241: Call Deflection Invocation. Timeout of T305.

Description: A mobile terminated speech call is arriving. The user invokes call deflection. Instead of a RELEASE containing a RESULT component the BS sends nothing so that T305 expires.

Preamble: MCC026

Script:

```
AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+CTFR=\"03039094117\"\r\n", "Deflect incoming call");
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
SET_TIMEOUT (35000)
BS_MSG3_AWAIT(0, release_mtc_normal, "RELEASE after T305 expiry");
BS_MSG3_SEND(0, release_complete_bs, SILENT);
AT_RECEIVE ("+CME ERROR: 31", "Network timeout");
```

History: 24.04.02 HM Initial

4.6.29 MCC242: Call Deflection Invocation. Release without facility from network.

Description: A mobile terminated speech call is arriving (MT-Setup). The user invokes call deflection. Instead of a RELEASE containing a RESULT component the BS sends a RELEASE containing no facility information element. As error code a network timeout is indicated. (This may not be the optimal error cause, "operation not supported" maybe a more appropriate error cause for such an unexpected network behaviour.)

Preamble: MCC026

Script:

```
AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+CTFR=\"03039094117\"\r\n", "Deflect incoming call");
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
BS_MSG3_SEND (0, release, SILENT);
BS_MSG3_AWAIT(0, release_complete_empty, SILENT);
AT_RECEIVE ("+CME ERROR: 31", "Network timeout");
```

History: 24.04.02 HM Initial

4.6.30 MCC243: Call Deflection Invocation. Return Error from the network.

Description: A mobile terminated speech call is arriving. The user invokes call deflection. The network returns a "return error" component.

Preamble: MCC026

Script:

```
AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+CTFR=\"03039094117\"\r\n", "Deflect incoming call");
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
BS_MSG3_SEND (0, release_facility_error, SILENT);
BS_MSG3_AWAIT(0, release_complete_empty, SILENT);
AT_RECEIVE ("+CME ERROR: 4", "Operation not supported");
```

History: 24.04.02 HM Initial

4.6.31 MCC244: Call Deflection Invocation. Reject from the network.

Description: A mobile terminated speech call is arriving. The user invokes call deflection. The network returns a "reject" component.

Preamble: MCC026

Script:

```
AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+CTFR=\"03039094117\"\\r\\n", "Deflect incoming call");
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
BS_MSG3_SEND (0, release_facility_reject, SILENT);
BS_MSG3_AWAIT(0, release_complete_empty, SILENT);
AT_RECEIVE ("CME ERROR: 4", "Operation not supported");
```

History: 24.04.02 HM Initial

4.6.32 MCC245: Call Deflection Invocation. Deflected-to mobile subscriber side. (I)

Description: A mobile terminated speech call is arriving. The user invokes call deflection. Successful case. The MT Setup message contained no Redirecting party number address.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );
```

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);
```

```
BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);
```

```
BS_MSG3_SEND (0,setup_deflected,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);
```

```
BS_MSG3_AWAIT(0,alerting,SILENT);
AT_RECEIVE ("RING", SILENT );
AT_RECEIVE ("C+CSSU: 9", SILENT );
AT_RECEIVE ("RING", SILENT );
```

History: 24.04.02 HM Initial

4.6.33 MCC246: Call Deflection Invocation. Deflected-to mobile subscriber side. (II)

Description: A mobile terminated speech call is arriving. The user invokes call deflection. Successful case. The MT Setup message contained a Redirecting party number address.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );
```

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,setup_deflected_redir,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);
AT_RECEIVE ("RING", SILENT );
AT_RECEIVE ("+CSSU: 9,,\"03039094117\",129", SILENT );
AT_RECEIVE ("RING", SILENT );
```

History: 24.04.02 HM Initial

4.6.34 MCC247: Call Deflection Invocation. Deflected-to mobile subscriber side. (III)

Description: A mobile terminated speech call is arriving. The user invokes call deflection. Successful case. The MT Setup message contained a Redirecting party number address. Late assignment, no signalling information element in the MT Setup message included.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );
```

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_deflected_redir,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);
```


ISS_DELAY (2000)

```
BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);
AT_RECEIVE ("RING", SILENT );
AT_RECEIVE ("+CSSU: 9,,\"03039094117\",129", SILENT );
AT_RECEIVE ("RING", SILENT );
```

History: 24.04.02 HM Initial

4.6.35 MCC248: Call Deflection: Calling mobile subscriber side

Description: A mobile terminated originated speech call is started. The A-party receives a notification that her call has been deflected.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );
```

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_AWAIT(0,setup_moc,SILENT);
```

```
BS_MSG3_SEND (0, facility_msg_notify_cd_a, SILENT);
AT_RECEIVE ("+CSSI: 8", SILENT );
```

```
BS_MSG3_SEND (0,call_proceeding,SILENT);
```

```
BS_MSG3_SEND (0,alerting,SILENT);
```

```
BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);
```

```
BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 24.04.02 HM Initial

4.6.36 MCC249: Call Deflection: Checking test command etc. for call deflection.

Description: The mobile is brought to an appropriate state for call deflection. In this test case the functionality of the test command for call deflection is tested. It is also checked that the mobile only accepts call deflection invocations which are syntactically correct.

Preamble: MCC026

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
```

```

AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("AT+CTFR=?\r\n", "Call Deflection Test Command");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("AT+CTFR?\r\n", "Call Deflection Read Command, not existent");
AT_RECEIVE ("+CME ERROR: 3", "operation not allowed");

AT_SEND ("AT+CTFR=\r\n", "Deflect incoming call, no number, won't work");
AT_RECEIVE ("+CME ERROR: 3", "operation not allowed");

AT_SEND ("AT+CTFR=\"03039094117\"\r\n,47", "TON garbage");
AT_RECEIVE ("+CME ERROR: 3", "operation not allowed");

/* There is only garbage, but no dialled number */
AT_SEND ("AT+CTFR=\"XXXXX\"\r\n", "Only garbage");
AT_RECEIVE ("+EXT ERROR: 0", "parameter error");

/* The same with international prefix */
AT_SEND ("AT+CTFR=\"+XXXXX\"\r\n", "International garbage");
AT_RECEIVE ("+EXT ERROR: 0", "parameter error");

/*
 * Additional chars like " ", "X" should work as ACI only
 * considers the valid chars aside of "-" which has a special meaning
 * as a separator.
 */
AT_SEND ("AT+CTFR=\"030XYZ390 94 117\"\r\n", "Additional chars in number");
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
BS_MSG3_SEND (0, release_facility_result, SILENT);
BS_MSG3_AWAIT(0, release_complete_empty, SILENT);
AT_RECEIVE ("OK", SILENT );

```

History: 24.04.02 HM Initial

4.6.37 MCC250: Call Deflection Invocation. Timeout of T305 and T308

Description: A mobile terminated speech call is arriving. The user invokes call deflection. Instead of a RELEASE containing a RESULT component the BS sends nothing so that T305 expires.

Preamble: MCC026

Script:

```

AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT );
AT_SEND ("AT+CTFR=\"03039094117\"\r\n", "Deflect incoming call");
BS_MSG3_AWAIT(0, disconnect_cd, "DISCONNECT with CD invoke");
SET_TIMEOUT (35000) /* Await expiry of T305 */
BS_MSG3_AWAIT(0, release_mtc_normal, "RELEASE after T305 expiry");
AT_RECEIVE ("+CME ERROR: 31", "Network timeout");
SET_TIMEOUT (35000) /* Await first expiry of T308 */
BS_MSG3_AWAIT(0, release_mtc_normal, "RELEASE after first T308 expiry");
ISS_DELAY (35000) /* Await second expiry of T308 */
/*
 * No trackable action for the outside anymore.
 * MM T3240 expiry is awaited 10 seconds after second CC T308 expiry,
 * but this event also cannot be tracked by the means of multilayer
 * test environment.
 */

```

History: 04.07.02 HM Initial

4.6.38 MCC251: Call Deflection: Wrong state for call deflection.

Description: The mobile is brought to a non-appropriate state for call deflection. In this test case the active state U10 is chosen. It is expected that if the user invokes call deflection, this is rejected by the AT command interpreter without sending DISCONNECT message containing a call deflection invoke component to the network. It is checked that CC didn't leave active state U10 as a result of the CD attempt.

Preamble: MCC014

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT);
AT_SEND ("AT+CMEE=1\r\n", "Enable numeric result codes");
AT_RECEIVE ("OK", SILENT);

AT_SEND ("AT+CTFR=\"03039094117\"\r\n", "Deflect incoming call");
AT_RECEIVE ("+CME ERROR: 3", "operation not allowed");

BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History: 04.07.02 HM Initial

4.6.39 MCC260: Closed User Group. Mobile Terminated Call, (I): early assignment.

Description: A mobile terminated speech call is arriving. The scenario uses no signal IE but early assignment. The network indicates by including a facility IE the Closed User Group (CUG) Index, see the stage 3 of CUG. ACI will indicate the CUG via the AT command +CSSU.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,setup_cug,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);
```

```
BS_MSG3_AWAIT(0,alerting,SILENT);
AT_RECEIVE ("RING", SILENT );
AT_RECEIVE ("+CSSU: 1,9", SILENT );
AT_RECEIVE ("RING", SILENT );
```

History: 11.09.02 SBK Initial

4.6.40 MCC261: Closed User Group. Mobile Terminated Call, (II): early assignment.

Description: A mobile terminated speech call is arriving. The scenario uses no signal IE but early assignment. The network indicates by including a facility IE the Closed User Group (CUG) Index, see the stage 3 of CUG. ACI will indicate the CUG via the AT command +CSSU. Difference to MCC260 is that the CUG Index is occupying 2 octets for its value part.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );
```

```
BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);
```

```
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);
```

```
BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);
```

```
BS_MSG3_SEND (0,setup_cug_773,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);
```

```
BS_MSG3_AWAIT(0,alerting,SILENT);
AT_RECEIVE ("RING", SILENT );
AT_RECEIVE ("+CSSU: 1,773", SILENT );
AT_RECEIVE ("RING", SILENT );
```

History: 11.09.02 SBK Initial

4.6.41 MCC262: Closed User Group. Mobile Terminated Call, (I): late assignment.

Description: A mobile terminated speech call is arriving. The scenario uses no signal IE and late assignment, i.e. alerting and a corresponding RING is delayed until the TCH is assigned. The network indicates by including in the SETUP message a facility IE the Closed User Group (CUG) Index, see the stage 3 of CUG. ACI will indicate (after buffering) the CUG via the AT command +CSSU.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,authentication_request,SILENT);
BS_MSG3_AWAIT(0,authentication_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_cug,SILENT);
BS_MSG3_AWAIT(0,call_confirmed,SILENT);

ISS_DELAY (4000); /* simulate that TCH assignment is taking some time in the
                  NW */
BS_MSG3_SEND (0,assignment_command, SILENT);
BS_MSG3_AWAIT(0,assignment_complete, SILENT);
BS_MSG3_AWAIT(0,alerting,SILENT);

AT_RECEIVE ("RING", SILENT );
AT_RECEIVE ("+CSSU: 1,9", SILENT );
AT_RECEIVE ("RING", SILENT );
```

History: 14.11.02 SBK Initial

4.6.42 MCC263: Closed User Group. Mobile Originated Call, (I): +CCUG=1,7,2.

Description: A mobile originated speech call is established with CUG settings made in temporary mode via AT+CCUG before: +CCUG=1,7,2.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("AT+CCUG=1,7,2\r\n", "CUG temp. mode, index=7, suppress pref.
CUG");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,channel_mode_modify,SILENT);
BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_cug,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_ms,          SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0,      SILENT)
BS_MSG3_AWAIT( 0, status_30_11,          "cause 30#, state U11")
```

History: 18.11.02 SBK Initial

4.6.43 MCC264: Closed User Group. Mobile Originated Call, (II): +CCUG=1,7,3.

Description: A mobile originated speech call is established with CUG settings made in temporary mode via AT+CCUG before: +CCUG=1,7,3.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("AT+CCUG=1,7,3\r\n", "CUG temp. mode, index=7, suppress pref. CUG
and OA");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,channel_mode_modify,SILENT);
BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_cug_supp_OA_supp_pref,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 18.11.02 SBK Initial

4.6.44 MCC265: Closed User Group. Mobile Originated Call, (III): +CCUG=1,7,1.

Description: A mobile originated speech call is established with CUG settings made in temporary mode via AT+CCUG before: +CCUG=1,7,1.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );
```

```
AT_SEND ("AT+CCUG=1,7,1\r\n", "CUG temp. mode, index=7, suppress OA");
AT_RECEIVE ("OK", SILENT );
```

```
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");
```

```
BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
```

```
BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);
```

```
BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);
```

```
BS_MSG3_SEND (0,channel_mode_modify,SILENT);
BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT);
```

```
BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);
```

```
BS_MSG3_AWAIT(0,setup_moc_cug_supp_OA,SILENT);
```

```
BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);
```

```
BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

```
AT_SEND ("ATH\r\n", "Hook On");
```

```
BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 18.11.02 SBK Initial

4.6.45 MCC266: Closed User Group. Mobile Originated Call, (IV): +CCUG=1,7,0.

Description: A mobile originated speech call is established with CUG settings made in temporary mode via AT+CCUG before: +CCUG=1,7,0.

Preamble: MCC001

Script:

```
AT_SEND ("AT+CSSN=1,1\r\n", "CSSI, CSSU unsolicited result codes enable");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("AT+CCUG=1,7,0\r\n", "CUG temp. mode, index=7, no info");
AT_RECEIVE ("OK", SILENT );

AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,channel_mode_modify,SILENT);
BS_MSG3_AWAIT(0,channel_mode_modify_acknowledge,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_cug_no_info,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);

AT_SEND ("ATH\r\n", "Hook On");

BS_MSG3_AWAIT( 0, disconnect_ms, SILENT)
BS_MSG3_SEND ( 0, status_enquiry_0, SILENT)
BS_MSG3_AWAIT( 0, status_30_11, "cause 30#, state U11")
```

History: 18.11.02 SBK Initial

4.6.46 MCC267: Mobile Originated Call with CTM Request

Description: A mobile originated call is processed using enhanced full rate. The PCM is configured for EFR in the dualband version (STD=5).

Preamble: MCC199

Script:

```
IE_BF_SET_VAL (ms_classmark, ps_capability, 0, "no pseudo sync cap" )
IE_BF_SET_VAL (ms_classmark, classmark_3, 1, "classmark 3 info available" )

AT_SEND ("AT%CTTY=0,1\r\n", "Set CTM Request");
AT_RECEIVE ("OK", SILENT);
AT_SEND ("ATD03039094117;\r\n", "Dial Voice Call");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

AT_RECEIVE ("OK", SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
```



```
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_efr_ctm,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);
BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,assignment_command_efr,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 13.01.2003 FK Initial

4.6.47 MCC268: Mobile Originated Call with CTM Indication

Description: A mobile originated call is processed using enhanced full rate. The PCM is configured for EFR in the dualband version (STD=5).

Preamble: MCC199

Script:

```
IE_BF_SET_VAL (ms_classmark, ps_capability, 0, "no pseudo sync cap" )
IE_BF_SET_VAL (ms_classmark, classmark_3, 1, "classmark 3 info available" )

AT_SEND ("AT%CTTY=1,0\r\n", "Set CTM Status Indication");
AT_RECEIVE ("OK", SILENT);
AT_SEND ("ATD*55#03039094117;\r\n", "Dial Voice Call with CTM request");

BS_RACH_AWAIT(0,channel_request_moc,SILENT);
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

AT_RECEIVE ("%CTYI: 1", "CTM requested");
AT_RECEIVE ("OK", SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_AWAIT(0,setup_moc_efr_ctm,SILENT);

BS_MSG3_SEND (0,call_proceeding,SILENT);

AT_RECEIVE ("%CTYI: 3", "CTM granted");

BS_MSG3_SEND (0,alerting,SILENT);

BS_MSG3_SEND (0,assignment_command_efr,SILENT);
BS_MSG3_AWAIT(0,assignment_complete,SILENT);

BS_MSG3_SEND (0,connect,SILENT);
BS_MSG3_AWAIT(0,connect_acknowledge,SILENT);
```

History: 13.01.2003 FK Initial

4.6.48 MCC269: Mobile Terminated Call with CTM Support

Description: Mobile Terminated Call, configured to request CTM Service and to indicate the CTM negotiation.

Preamble: MCC199

Script:

```
IE_BF_SET_VAL (ms_classmark, ps_capability, 0, "no pseudo sync cap" )
IE_BF_SET_VAL (ms_classmark, classmark_3, 1, "classmark 3 info available" )

AT_SEND ("AT%CTTY=1,1\r\n", "Set CTM Request and Status Indication");
AT_RECEIVE ("OK", SILENT);

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1,SILENT);
BS_RACH_AWAIT(0,channel_request,SILENT);

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,SILENT);

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response,SILENT);

BS_MSG3_SEND (0,ciphering_mode_command,SILENT);
BS_MSG3_AWAIT(0,ciphering_mode_complete,SILENT);

BS_MSG3_SEND (0,setup_no_signal,SILENT);
BS_MSG3_AWAIT(0,call_confirmedEFRCTM,SILENT);

BS_MSG3_SEND (0,assignment_command,SILENT);
BS_MSG3_AWAIT (0,assignment_complete,SILENT);

BS_MSG3_AWAIT(0,alerting,SILENT);

AT_RECEIVE ("RING", SILENT);
AT_RECEIVE ("%CTYI: 3", "CTM granted");

AT_SEND ("ATA\r\n", "Hook Off");
BS_MSG3_AWAIT(0,connect,SILENT);
BS_MSG3_SEND (0,connect_acknowledge,SILENT);

ISS_DELAY (1000);
```

History: 14.01.2003 FK Initial

4.6.49 MCC270: U9 / TCH Assignment Failure (14.5.1 / TS8950)

Description: The call control entity of the MS being in the state, U9, an assignment procedure is performed for traffic channel. This test is applicable for any equipment supporting at least one MT circuit switched basic service, for which immediate connect is not used. To verify that a CC-entity of the MS in CC-state U9, "MS Terminating Call Confirmed", when allocated a traffic channel by the network performing the assignment procedure, performs a layer 2 establishment on the FACCH, sends a ALERTING message and enters state U7.

Preamble: MCC025

Script:

```
BS_MSG3_SEND (0,assignment_command_TS8950, SILENT);
/*BS_MSG3_AWAIT(0,assignment_failure_freq_not_implemented, SILENT);*/
BS_MSG3_AWAIT(0,assignment_complete, SILENT);
```

```
BS_MSG3_AWAIT(0,alerting,SILENT);

BS_MSG3_SEND (0,status_enquiry_0_mtc,SILENT);
BS_MSG3_AWAIT(0,status_30_7, "with cause 30# (resp. to status
                             enq., U7)");

BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
                             (DISC/UA)");
```

History: 05.11.2003 MSB Initial

4.7 Fax and Data

4.7.1 MCC300: F&D Test house Preamble, neglecting activation of RA

Description: The system simulator mirrors the received bearer capabilities in the call proceeding message. A basic data MOC is established. Activation of RA is not taken into account in contrast to MCC301.

Preamble: MCC197

Script:

```
/* set async non-transparent */
AT_SEND ("AT+CBST=71,0,1\r\n",
         "9600 bps (V.110 or X.31 flag stuffing), circuit async, NT");
AT_SEND ("ATD03039094117\r\n", "Dial Data Call");

BS_RACH_AWAIT(0,channel_request_moc, "CHANNEL REQUEST");
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch, "IMMEDIATE ASSIGNMENT");

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request_dual_ext, "CM SERVICE REQUEST");

BS_MSG3_SEND (0,ciphering_mode_command, "CIPHERING MODE COMMAND");
BS_MSG3_AWAIT(0,ciphering_mode_complete, "CIPHERING MODE COMPLETE");

BS_MSG3_AWAIT(0,setup_rlp, "SETUP");

BS_MSG3_SEND (0,authentication_request, "AUTHENTICATION REQUEST");
BS_MSG3_AWAIT(0,authentication_response, "AUTHENTICATION RESPONSE");

BS_MSG3_SEND (0,call_proceeding_rlp, "CALL PROCEEDING");

BS_MSG3_SEND ( 0, status_enquiry_0, "STATUS ENQUIRY")
BS_MSG3_AWAIT( 0, status_30_3, "cause 30#, state U3")

BS_MSG3_SEND ( 0, alerting, "ALERTING")

BS_MSG3_SEND ( 0, status_enquiry_0, "STATUS ENQUIRY")
BS_MSG3_AWAIT( 0, status_30_4, "cause 30#, state U4")

BS_MSG3_SEND (0,assignment_command_data_12k, "ASSIGNMENT COMMAND");
BS_MSG3_AWAIT(0,assignment_complete, "ASSIGNMENT COMPLETE");

BS_MSG3_SEND ( 0, connect, "CONNECT, MS shall stop tone generation")
BS_MSG3_AWAIT( 0, connect_acknowledge, "CONNECT ACKNOWLEDGE")
```

```
BS_MSG3_SEND ( 0, status_enquiry_0, "STATUS ENQUIRY")
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History: 29.04.99 LE Initial

4.7.2 MCC301: F&D Test house Preamble, considering activation of RA

Description: The system simulator accept the received bearer capabilities in the call proceeding message. A basic data MOC is established. Activation of RA is taken into account in contrast to MCC300.

Preamble: MCC197

Script:

```
/* necessary to configure UART source table in ACI */
COMMAND ("MMI CONFIG START_DTI")

AT_SEND ("AT+CBST=71,0,1\r\n", "9600 bps (V.110 or X.31 flag stuffing),
        circuit async, NT");
AT_SEND ("ATD03039094117\r\n", "Dial Data Call");

BS_RACH_AWAIT(0,channel_request_moc,"CHANNEL REQUEST");
BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);

BS_MSG3_SEND (0,immediate_assignment_tch,"IMMEDIATE ASSIGNMENT");

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,cm_service_request_dual_ext,"CM SERVICE REQUEST");

BS_MSG3_SEND (0,ciphering_mode_command,"CIPHERING MODE COMMAND");
BS_MSG3_AWAIT(0,ciphering_mode_complete, "CIPHERING MODE COMPLETE");

BS_MSG3_AWAIT(0,setup_rlp,"SETUP");

BS_MSG3_SEND (0,authentication_request,"AUTHENTICATION REQUEST");
BS_MSG3_AWAIT(0,authentication_response,"AUTHENTICATION RESPONSE");

BS_MSG3_SEND (0,call_proceeding,"CALL PROCEEDING");

BS_MSG3_SEND ( 0, status_enquiry_0, "STATUS ENQUIRY")
BS_MSG3_AWAIT( 0, status_30_3, "cause 30#, state U3")

BS_MSG3_SEND ( 0, alerting, "ALERTING")

BS_MSG3_SEND ( 0, status_enquiry_0, "STATUS ENQUIRY")
BS_MSG3_AWAIT( 0, status_30_4, "cause 30#, state U4")

BS_MSG3_SEND (0,assignment_command_data_12k, "ASSIGNMENT COMMAND");
BS_MSG3_AWAIT(0,assignment_complete, "ASSIGNMENT COMPLETE");

BS_MSG3_SEND ( 0, connect, "CONNECT, MS shall stop tone
        generation")
BS_MSG3_AWAIT( 0, connect_acknowledge, "CONNECT ACKNOWLEDGE")

COMMAND ("RA CONFIG RA_CONFIRM")

BS_MSG3_SEND ( 0, status_enquiry_0, "STATUS ENQUIRY")
BS_MSG3_AWAIT( 0, status_30_10, "cause 30#, state U10")
```

History: 29.04.99 LE Initial

4.7.3 MCC302: MOC followed by MTC for data calls

Description: The mobile originated call in the preamble is released. Then a mobile terminated call is started.

[This testcase currently is not expected to run.]

Preamble: MCC301

Script:

```
ISS_DELAY (10000); /* was 20000 */
BS_MSG3_SEND (0,release_bs, "RELEASE")
BS_MSG3_AWAIT(0,release_complete_bs, "RELEASE COMPLETE");
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link
(DISC/UA)");

ISS_DELAY (3000);
COMMAND ("L2R CONFIG DEACT_CNF")
ISS_DELAY (3000);
COMMAND ("RA CONFIG RA_DEACTIVATE")

BS_CONFIG_CHANNEL (0, PCH, UNACK, SAPI_0);
BS_MSG3_SEND (0,paging_request_type_1, "PAGING REQUEST TYPE 1");
BS_RACH_AWAIT(0,channel_request, "CHANNEL REQUEST");

BS_CONFIG_CHANNEL (0, AGCH, UNACK, SAPI_0);
BS_STORE_RACH_PARAMS (0, 0);
BS_MSG3_SEND (0,immediate_assignment,"IMMEDIATE ASSIGNMENT");

BS_CONFIG_CHANNEL (0, SDCCH, 1, SAPI_0);
BS_MSG3_AWAIT(0,paging_response_2, "PAGING RESPONSE");

BS_MSG3_SEND (0,ciphering_mode_command, "CIPHERING MODE COMMAND");
BS_MSG3_AWAIT(0,ciphering_mode_complete, "CIPHERING MODE COMPLETE");

BS_MSG3_SEND (0,setup_rlp, "SETUP");
BS_MSG3_AWAIT(0,call_confirmed_no_neg, "CALL CONFIRMED");

BS_MSG3_SEND (0,assignment_command_data_12k,"ASSIGNMENT COMMAND");
BS_MSG3_AWAIT (0,assignment_complete,"ASSIGNMENT COMPLETE");

BS_MSG3_AWAIT(0,alerting, "ALERTING");
AT_RECEIVE("RING", "RING indication");

ISS_DELAY (4000);

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

BS_MSG3_AWAIT(0,connect,"CONNECT");
BS_MSG3_SEND (0,connect_acknowledge,"CONNECT ACKNOWLEDGE");

ISS_DELAY (5000);

COMMAND ("RA CONFIG RA_CONFIRM");

ISS_DELAY (1000); /* was 6000 */

COMMAND ("L2R CONFIG CONNECT_CNF");

ISS_DELAY (2000); /* was 20000 */

AT_SEND ("ATH\r\n", "hook on");
```

```
BS_MSG3_AWAIT(0,disconnect, "DISCONNECT");  
BS_MSG3_SEND (0,release, "RELEASE")  
BS_MSG3_AWAIT(0,release_complete_empty, "RELEASE COMPLETE");  
BS_MSG3_SEND (0,channel_release, "Release of the main signalling link  
                (DISC/UA)");
```

```
ISS_DELAY (5000);
```

History:	23.01.98	LE	Initial
	04.12.02	SBK	Corrected RING and alerting se-
quence			

Appendices

A. Acronyms

DS-WCDMA Direct Sequence/Spread Wideband Code Division Multiple Access

B. Glossary

International Mobile Telecommunication 2000 (IMT-2000/ITU-2000) Formerly referred to as FPLMTS (Future Public Land-Mobile Telephone System), this is the ITU's specification/family of standards for 3G. This initiative provides a global infrastructure through both satellite and terrestrial systems, for fixed and mobile phone users. The family of standards is a framework comprising a mix/blend of systems providing global roaming. <URL: <http://www.imt-2000.org/>>