3GPP TSG CN Plenary **Tdoc NP-010264**
Meeting #12, Stockholm, Sweden
13th - 15th June 2001

Source: **TSG CN WG 1**

Title: **All LSs sent from CN1 since TSG#11 meeting,- pack1**

Agenda item: **6.1.1**

Document for: **Information**

Introduction:

This document contains 1**0 agreed** LSs sent from **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #12 for information only.

Meeting	TDoc #	Source	Tdoc Title	Comments
CN1_SA2_04_SIP	N1-010582	Keith	Proposed LS related with N1-010532	To: S2, N1/2/3/4 JM
CN1_SA2_04_SIP	N1-010588	Andrew Allen	LS to SA3 proposing joint meeting	To: S3, N1 CC: S2
Meeting	**TDoc #**	**Source**	**Tdoc Title**	**Comments**
CN1_17	N1-010685	Chairman	Proposed LS on introduction of new Mobile Country Codes (MCC)	To: TSGN Plenary
CN1_17	N1-010718	Arne	Reply to GERAN WG4 on GPRS attach type in NMO I	To: GERAN WG4 GPRS
CN1_17	N1-010799	Fransesco	Liaison Statement on "Duplication avoidance protocol moved from 04.18 to 24.007"	Reply to N1-010689. To:GERAN WG2 Cc: R2, R3
CN1_17	N1-010800	Rouzbeh/Inma	Introduction of AMR-WB	Reply to N1-010693 To: GERAN Cc: N4, S4
CN1_17	N1-010801	Andrew	Indication of Extended uplink TBF capability	Reply to N1-010696 To: GERAN Cc: S2, CN, SA
CN1_17	N1-010813	Francesco	Liaison Statement on "RRC establish cause mapping"	Reply to N1-010767 To: R2
CN1_17	N1-010814	Apostolis	Response to LS -UTRAN Initiated RAB Renegotiation/Reconfiguration (N1-010771 or TSGR3#18(01)0305)	Reply to N1-010771 To: R3 Cc: S2
CN1_17	N1-010815	Apostolis	Response to LS on NAS messages maximum length (N1-010774 or TSGR3#19(01)0953)	Reply to N1-010774 To: R3 Cc: R2

3GPP TSG_CN WG1-SA WG2 Joint and CN1 Ad-Hoc **Tdoc N1-010582**
Sophia Antipolis, France
3 - 5 April, 2001

Title: **LS "on GPRS work covering break in radio transmission"**

Source: **TSG CN WG1-SA2 SIP joint meeting**

To: **SA2, CN1/CN2/CN3/CN4 joint meeting**

Cc:

Contact Person:

Name: **Keith Drage**
E-mail Address: **drage@lucent.com**
Tel. Number: +44 1793 776249

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1. Overall Description:

The joint meeting of SA2 and CN1 identified the following item within 23.228 (see extract under 3 in this liaison) which requires enhancement of a number of GPRS specifications under the control of various working groups.

It is desirable that the various work items are updated to reflect the required work, which appears to impact 23.060, GTP and possibly other document.

It is also desirable that appropriate changes are progressed, and we would appreciate that the appropriate changes are progressed by SA2 in 23.060 in order to lead this work.

2. Actions:

To TSG SA 2

ACTIONS: SA2 are asked to

Update their work item IM-CCR to identify changes to 23.060, and also to progress the required changes to 23.060.

Consider what is the mechanism to transfer the indication of the loss of radio coverage from GPRS protocols to the CSCF.

To TSG CN 4

ACTION: CN4 are asked to capture new work on GTP in a work item and to progress those changes.

3. Attachments:

In full below (extract from 23.228)

"5.10.3 Network initiated session release

In case of a break in the radio connection or accidental/malicious removal of a PDP Context that is related to an IMS session, the corresponding session should be terminated in order to avoid billing for session inactivity time. In the event of a break in the radio connection, the RNC initiates the RAB release procedure, which in turn shall result in session termination and a corresponding PDP context deactivation.
The following figure presents GPRS subsystem events that occur following a break in the radio connection. Only the parameters that are required for the communication between the GGSN and the P-CSCF/PCF are shown in the description below.

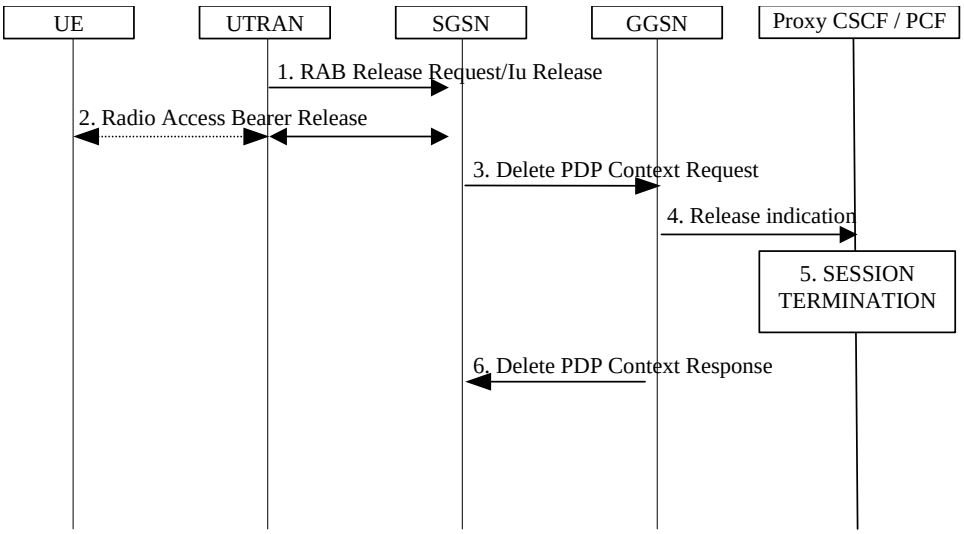

Figure 5.24: Network initiated session release - loss of radio

1. The RNC sends the RAB Release Request or Iu Release Request message to the SGSN to release the RAB.
2. The radio access bearer release procedure is performed. The radio bearers are released if they still exist.
3. The SGSN deactivates the PDP context by sending the Delete PDP Context Request message to the GGSN.
4. If a request state was created in the PCF at PDP context activation, the GGSN sends the Release indication message to the PCF. The message indicates that the corresponding PDP context has been deactivated.
5. The Proxy-CSCF performs session termination.
6. The GGSN sends the Delete PDP Context Response message to the SGSN to acknowledge the PDP context deletion.

After coverage is regained, the UE shall delete the PDP context in conversational or streaming class.

In the event that the UMTS bearer used for the transport of SIP signalling is released prior normal termination of the session using SIP signalling then the IM Subsystem shall be informed.

The following figure presents GPRS subsystem events that occur as a result of accidental removal of a PDP Context used for the transport of SIP signalling. Only the parameters which are required for the communication between the GGSN and the P-CSCF/PCF are shown in the description below.

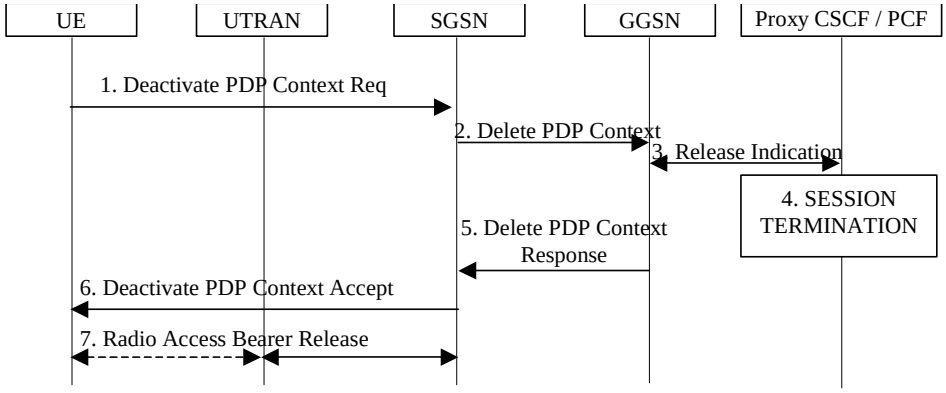

Figure 5.25: Network initiated session release - loss of SIP signalling context

1. The UE deactivates a PDP context by sending a Deactivate PDP Context Request message to the network.
2. The SGSN deactivates the PDP context by sending the Delete PDP Context Request message to the GGSN.
3. If a request state was created in the PCF at PDP context activation, the GGSN sends the Release indication message to the PCF. The message indicates that the corresponding PDP context has been deactivated.
4. The proxy CSCF performs session termination, which is FFS.
5. The GGSN sends the Delete PDP Context Response message to the SGSN to acknowledge the PDP context deactivation.
6. The SGSN responds to the UE with a Deactivate PDP Context Accept message
7. The UE performs the radio access bearer release procedure."

3GPP CN1-SA2 SIP adhoc
3 – 4 April, 2001
Sophia Antipolis, France

Tdoc N1-010588

Title: **LS on "Security for IM SIP session Signaling"**

Source: **TSG SA2-CN1 Joint SIP Adhoc**

To: **TSG SA WG3, TSG CN WG1**

CC; **TSG SA WG2**

Contact Person:

Name: Andrew Allen

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Attachments: **None**

CN1 is currently developing the signaling flows for the IM subsystem in TS 24.228. In this specification CN1 has already started the process of specifying the use of SIP header fields within the SIP signalling messages, including which nodes add headers or modify their contents, based on the architecture specified in TS 23.228

CN1 is aware that SA3 held a joint meeting with SA2 in February where security issues with the IM subsystem were discussed including the security associations between nodes. CN1 also understands that at this meeting some concern was raised that there are issues arising between the security associations currently proposed by SA3 and the SIP protocol header useage currently being defined by CN1.

In order to achieve a full mutual understanding by both working groups of the issues of mutual interest regarding SIP signalling security and to prevent any incompatible work progressing in this area between the two groups, CN1 believes that a presentation by SA3 on the issue of SIP signalling security would be very beneficial and therefore invites SA3 to send representatives to make such a presentation to CN1 in the near future. CN1 would also be happy to provide experts to make a presentation to SA3 on the current details of SIP signalling.

The following security related issues have already been identified by CN1:

- SIP Header Parameter modification by I-CSCF
- Via and Record Route Header Hiding by I-CSCF
- Contact header modification by P-CSCF
- Useage of the User Private Identity
- Authentication of Invite and other SIP session signaling messages
- Integrity protection of SIP signalling messages (especially the first message that is sent)
- Requirement for SIP signaling to support Key exchange for encryption of bearer

CN1 has their next meeting on the week of 14th May.

3GPP TSG CN WG1 Meeting #17
Puerto Rico, 14th - 18th May 2001

Tdoc N1-010685

Title: **LS on Introduction of new Mobile Country Codes (MCC)**

Reference LS
(If available)

Source: **CN1 Chairman**

TO [1]: **TSGN Plenary**

Cc:

WI: **TEI**

Contact Person:

Name: Hannu Hietalahti
E-mail Address: Hannu.Hietalahti@nokia.com
Tel. Number: +358-40-5021724

Attachments:

(Please list documents numbers to be attached)

Date: **10.5.2001**

CN1 was asked to study how the addition of new Mobile Country Code (MCC) would impact the operation of the system. The matter was discussed in CN1 #17 and the following scenarios were identified:

1. Using a new MCC in a country where none was used before

This can happen when a new political country is formed but it applies to all cases where a new MCC is allocated to a country which for one or another reason did not use an MCC code before. For a mobile which is registered in a PLMN under any other MCC the new PLMNs under the new MCC will be considered to be abroad. In this scenario this will be true. So allocating an MCC to the new country causes no problems in UMTS system.

2. Using a new MCC in a country where at least one MCC is already in use

The use of additional MCC code(s) to a country which already has got at least one MCC will effect the operation of mobiles which have been manufactured before the addition. The following points were identified:

- **National roaming:** Periodic HPLMN search is mandatory when roaming in home country. As the old mobiles will not know that the new MCC is in the same country as the old MCC(s) of that country, they will not perform HPLMN search when it would be needed as the new MCC will be assumed to be abroad, which in this case will not be true. Periodic HPLMN search is defined already in GSM Phase 2+ Release 96 (GSM 03.22 v. 4.b.0 / 4.4.3.3)
  The consequence of this is that these old mobiles will not return to the HPLMN until they lose coverage from the network with the new MCC code.
- **Background scan of higher priority PLMNs:** When mobiles are roaming they perform the mandatory background scan of higher priority PLMNs in the same country. Any Mobile Network Code (MNC) will be ignored by the old mobiles if it is associated with the new MCC as it will be assumed to be in a different country. Background scan is defined for the first time in R99 specification (TS 03.22 v.3.6.0 / 4.4.3.3)
  The consequence of this is the old mobiles will not move to the higher priority PLMN until they lose coverage from the network with the new MCC code.

CN1 is aware that there are several countries to which multiple MCC codes have been allocated. But the only specified case on support of multiple MCC in one specific area corresponds to North America. This case has been explicitly covered by specific exception handling for Country Codes in range of 310 to 316 which has been defined in GSM 03.22 from R'98 onwards.

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[1] Please write any action required from the groups in a clear way.

Deletion of an existing MCC was also discussed briefly and that has got no side effect on the system behaviour.

To keep an homogeneous behaviour of all terminals (legacy ones and new ones supporting a potential evolution of MCC meaning) before and after a PLMN starts using new MCC in area where one MCC was already in use, it will be necessary to update all legacy terminals.

3GPP TSG_CN WG1 **Tdoc N1-010718**
Porto Rico, USA
14 - 18 May, 2001

Title: **LS "Reply to GERAN WG4 on GPRS attach type in NMO I"**

Source: **TSG CN WG1**

To: **TSG GERAN WG4 GPRS**

Cc:

Contact Person:

Name: **Arne Lyzenga**
E-mail Address: **arne.lyzenga@mci.co.uk**
Tel. Number: +44 (0)1635 871466

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1. Overall Description:

TSG CN WG1 thanks TSG GERAN WG4 GPRS for their **LS G4-010330** dated **22nd – 26th April 2001** related to the GPRS attach type in NMO I**.**

2. Actions:

To GERAN WG4

In answer to your question related to the attach type in NMO I, CN1 provides the following explanation:

An MS in NMO I, which wishes to IMSI attach for GPRS and non-GPRS services shall always use the combined GPRS attach, using the attach type "Combined attach". This is independent of the value of the ATT flag.

An MS in NMO I, which is already IMSI attached for non-GPRS services, wishing to IMSI attach for GPRS services (i.e. which does not automatically attach for GPRS services at power up), shall use the combined GPRS attach, with attach type "Combined GPRS attach" or with attach type "GPRS attach while IMSI attached". This is independent of the value of the ATT flag.

CN1 is aware that the use of the attach type "GPRS attach while IMSI attached" is not clearly specified, but the use of it is optional in NMO I.

Network conditions	Mobile State (having just powered on)	Attach type
ATT=0	MS class A or B MS that does not auto attach MS in same LAI (No IMSI attach performed and no Normal location update as ATT = 0) GPRS attach requested by user	Combined GPRS attach / GPRS attach while IMSI attached
ATT=0	MS class A or B MS that does not auto attach MS in new LAI (Normal location update already performed due to new LAI) GPRS attach requested by user	Combined GPRS attach / GPRS attach while IMSI attached

ATT=1	MS class A or B MS that does not auto attach (LAI not relevant due to ATT flag) (Normal location update already performed as ATT=1) GPRS attach requested by user	Combined GPRS attach / GPRS attach while IMSI attached
ATT=0	MS class A or B MS auto attaches to GPRS MS in same LAI (Normal location update not necessary)	Combined GPRS / IMSI attach
ATT=0	MS class A or B MS auto attaches to GPRS MS in new LAI (Normal location update not possible due to combined GPRS procedures)	Combined GPRS / IMSI attach
ATT=1	MS class A or B MS auto attaches to GPRS MS in same or new LAI (No IMSI attach performed and no Normal location update due to combined GPRS procedures)	Combined GPRS / IMSI attach
ATT=0 and 1	MS class C in GPRS mode (IMSI attach not required)	GPRS attach

3GPP TSG CN WG1 Meeting #17 **Tdoc N1-010799**
Puerto Rico, 14th - 18th May 2001

Title: **Liaison Statement on "Duplication avoidance protocol moved from 04.18 to 24.007"**

Source: TSG_CN WG1

To: TSG_GERAN WG2

cc: TSG_RAN WG2, TSG_RAN WG3

Contact Person:
Name: **Francesco Pica**
E-mail Address: **francesco.pica@eml.ericsson.se**
Tel. Number: +447771774995

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1. Overall Description:

TSG CN WG1 thank TSG GERAN WG2 for their LS TSGG#03(01)0413 (N1-010689) dated 15th – 19th January 2001 on Information about current status in RAN2 on the interactions between RRC and upper layers.
CN1 would like to inform GERAN2 that in CN1#16 a CR to 24.007 introducing the description of the duplication avoidance protocol, was agreed (and then approved at CN plenary level). The CR is attached.

2. Actions:

To GERAN WG2 group.

TSG CN WG1 ask GERAN WG2 to remove section 3.1.4.3 from 04.18, as it is covered by 24.007 now.

3. Date of Next CN1 Meetings:

CN1_18	10th – 12th July 2001	Dresden, Germany.
CN1_19	27th – 31th August 2001	

4. Attachments:

N1-010486 included below:

3GPP TSG-CN1 Meeting #16 ***Tdoc N1-010486***
26 Feb. to 01 March 2001, Sophia France.
Revision of N1-010327

CR-Form-v3

CHANGE REQUEST

⌘ **24.007** **CR** **xxx** ⌘ rev **-** ⌘ Current version: **3.6.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☒ Core Network ☒

Title:	⌘	Transfer of the N(SD) duplication avoidance protocol from GSM 04.18
Source:	⌘	Ericsson

Work item code: ⌘	GSM/UMTS interworking	***Date:*** ⌘	12/02/01
Category: ⌘	**F**	***Release:*** ⌘	R99

Use one of the following categories:
- ***F*** *(essential correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(Addition of feature),*
- ***C*** *(Functional modification of feature)*
- ***D*** *(Editorial modification)*

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	The N(SD) duplication avoidance protocol applies to both UTRAN and GSM access. However today this protocol is specified in GSM 04.18 which is a GSM specification. This protocol should be described in a specification common for UTRAN and GSM access. Also this protocol is between the MS and the MSC and is therefore a core network protocol and should be described in the core network specifications. N1 sent a liaison (N1-001312) to GERAN WG2 to ask if the description could be moved from the GSM 04.18. GERAN WG2 replied in LS GP-010413 and the following text is quoted from this reply: "On the issue, duplication avoidance protocol, TSG GERAN agrees that it is a core network function and it should be moved to the CN1 specifications. TSG GERAN has identified section 3.1.4.3 in 04.18 as the section to be moved to the CN1 specifications and will remove the section from 04.18 when the addition in CN1 specifications has been confirmed."
Summary of change:	⌘	This CR copy/pastes the section 3.1.4.3 from GSM 04.18 v8.7.0 to a new section 11.2.3.2.3. This CR also contains some editorial clarifications in the pasted text and in sections 11.2.3.2.1 and 11.2.3.2.2 . (different Word revision colors have been used to differentiate the original text pasted from GSM 04.18 and the subsequent changes that have been made)
Consequences if not approved:	⌘	The N(SD) duplication avoidance protocol is not decribed in the specification set for the case of a single mode UTRAN mobile.

Clauses affected:	⌘	11.2.3.2.1, 11.2.3.2.2, 11.2.3.2.3 (new section)		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.2.3.2 Message type octet

11.2.3.2.1 Message type octet (when accessing Release 98 and older networks only)

The message type octet is the second in a standard L3 message.
When a standard L3 message is expected, and a message is received that is less than 16 bit long, that message shall be ignored.
When the radio connection started with a core network node of a Release 98 or older network, the message type IE is coded as shown in figure 11.10a.
Bit 8 is encoded as "0"; value "1" is reserved for possible future use as an extension bit. A protocol entity expecting a standard L3 message, and receiving a message containing bit 8 of octet 2 encoded as "1" shall diagnose a " message not defined for the PD" error and treat the message accordingly.
In messages of MM, CC, SS, GCC, BCC , TC (Test Control, see GSM 04.14 and TS 34.109) and LCS protocol sent using the transmission functionality provided by the RR layer to upper layers, and sent from the mobile station to the network , bit 7 of octet 2 is used for send sequence number, see section 11.2.3.2.3.
In all other standard layer 3 messages bit 7 is set to a default value. A protocol entity expecting a standard L3 message, and not using the transmission functionality provided by the RR layer, and receiving a message containing bit 7 of octet 2 encoded different to the default value shall diagnose a "message not defined for the PD" error and treat the message accordingly.
The default value for bit 7 is 0 except for the SM protocol where the default value is 1.

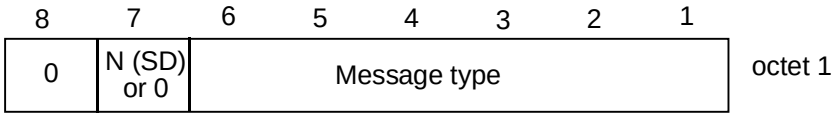

Figure 11.10a: Message type IE

Bit 1 to 6 of octet 2 of standard L3 messages contain the message type.
The message type determines the function of a message within a protocol in a given direction and for a given lower layer SAP. The meaning of the message type is therefore dependent on the protocol (the same value may have different meanings in different protocols), the direction (the same value may have different meanings in the same protocol, when sent from the Mobile Station to the network and when sent from the network to the Mobile Station) and the lower layer SAP (the same value may have different meanings, e.g., whether the message was sent on the SACCH or on the main DCCH).
Each protocol defines a list of allowed message types for each relevant SAP. A message received analysed as a standard L3 message, and with a message type not in the corresponding list leads to the diagnosis "message not defined for the PD".
Some message types may correspond to a function not implemented by the receiver. They are then said to be non implemented by the receiver.
The reaction of a protocol entity expecting a standard L3 message and receiving a message with message type not defined for the PD or not implemented by the receiver and the reception conditions is defined in the relevant protocol specification.
As a general rule, a protocol specification should not force the receiver to analyse the message further.

11.2.3.2.2 Message type octet (when accessing Release 99 and newer networks)

The message type octet is the second in a standard L3 message.
When a standard L3 message is expected, and a message is received that is less than 16 bit long, that message shall be ignored.
When the radio connection started with a core network node of a Release 99 network, the message type IE is coded as shown in figure 11.10b and 11.10c.
In messages of MM, CC, SS, GCC, BCC, TC (Test Control, see GSM 04.14 and TS 34.109) and LCS protocol sent using the transmission functionality provided by the RR and/or access stratum layer to upper layers, and sent from the mobile station to the network , bits 7 and 8 of octet 2 are used for send sequence number, see section 11.2.3.2.3.
In all other standard layer 3 messages bits 7 and 8 are set to a default value. A protocol entity expecting a standard L3 message, and not using the transmission functionality provided by the RR and/or access stratum layer, and receiving a message containing bit 7 or bit 8 of octet 2 encoded different to the default value shall diagnose a "message not defined for the PD" error and treat the message accordingly.
The default value for bit 8 is 0. The default value for bit 7 is 0 except for the SM protocol which has a default value of 1.

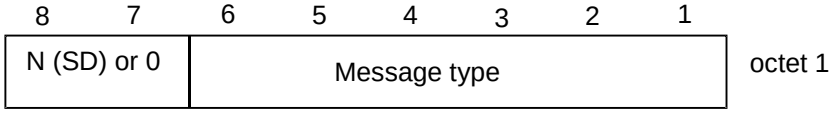

Figure 11.10b: Message type IE (MM, CC, SS, GCC, BCC, TC and LCS)

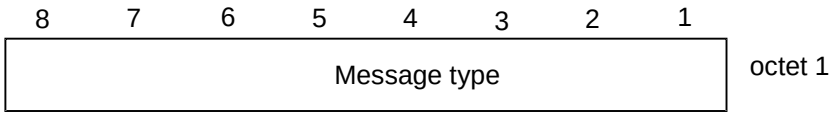

Figure 11.10c: Message type IE (protocol other than MM, CC, SS, GCC, BCC, TC and LCS)

Bit 1 to 6 of octet 2 of standard L3 messages contain the message type.
The message type determines the function of a message within a protocol in a given direction and for a given lower layer SAP. The meaning of the message type is therefore dependent on the protocol (the same value may have different meanings in different protocols), the direction (the same value may have different meanings in the same protocol, when sent from the Mobile Station to the network and when sent from the network to the Mobile Station) and the lower layer SAP (the same value may have different meanings, e.g., whether the message was sent on the SACCH or on the main DCCH).
Each protocol defines a list of allowed message types for each relevant SAP. A message received analysed as a standard L3 message, and with a message type not in the corresponding list leads to the diagnosis "message not defined for the PD".
Some message types may correspond to a function not implemented by the receiver. They are then said to be non implemented by the receiver.
The reaction of a protocol entity expecting a standard L3 message and receiving a message with message type not defined for the PD or not implemented by the receiver and the reception conditions is defined in the relevant protocol specification. As a general rule, a protocol specification should not force the receiver to analyse the message further.

11.2.3.2.3 Sequenced message transfer operation

Upper layer messages sent using the RR sub-layer transport service from the mobile station to the network can be duplicated by the data link layer in at least the following cases:

- in A/Gb mode, when a channel change of dedicated channels is required (assignment or handover procedure) and the last layer 2 frame has not been acknowledged by the peer data link layer before the mobile station leaves the old channel.
- in Iu mode, when an RLC re-establishment occurs (e.g. due to relocation) and the RLC layer has not acknowledged the last one or more RLC PDUs before RLC re-establishment
- an inter-system change from Iu mode to A/Gb mode is performed and the RLC layer has not acknowledged the last one or more RLC PDUs.
- an inter-system change from A/Gb mode to Iu mode is performed and the the last layer 2 frame in A/Gb mode has not been acknowledged by the peer data link layer before the mobile station leaves the old channel.

In these cases, the mobile station does not know whether the network has received the messages correctly. Therefore, the mobile station has to send the messages againwhen the channel change is completed.
The network must be able to detect the duplicated received messages. Therefore, each concerned upper layer messages must be marked with a send sequence number.
To allow for different termination points in the infrastructure of the messages of different PDs, the sequence numbering is specific to each PD. For historical reasons, an exception is that messages sent with the CC, SS and MM PDs share the same sequence numbering. In the following, the phrase **upper layer message flow** refers to a flow of messages sharing the same sequence numbering. The different upper layer flows are MM+CC+SS, GCC, BCC, TC (Test Control, see GSM 04.14 and TS 34.109) ,LCS. The GMM, SM and SMS protocols do not use layer 3 sequence numbering.

11.2.3.2.3.1 Variables and sequence numbers

11.2.3.2.3.1.1 Send state variable V(SD)

The mobile station shall have one associated send state variable V(SD) ("Send Duplicated") for each upper layer message flow. The send state variable denotes the sequence number of the next in sequence numbered message in the flow to be transmitted. The value of the corresponding send state variable shall be incremented by one with each numbered message transmission. When the RR connection starts with a core network of release '98 or earlier arithmetic operations on V(SD) are performed modulo 2. When the RR connection starts with a core network of Release '99 or later, arithmetic operations on V(SD) are performed modulo 4. The mobile station shall keep using the same modulo (2 or 4) for the duration of the RR connection.

11.2.3.2.3.1.2 Send sequence number N(SD)

At the time when such a message to be numbered is designated for transmission, the value of N(SD) for the message to be transferred is set equal to the value of the send state variable V(SD).

11.2.3.2.3.2 Procedures for the initiation, transfer execution and termination of the sequenced message transfer operation

11.2.3.2.3.2.1 Initiation

The sequenced message transfer operation is initiated by establishing a RR connection. The send state variables V(SD) are set to 0.

11.2.3.2.3.2.2 Transfer Execution

A release '98 or earlier core network must compare the send sequence numbers of pairs of subsequent messages in the same upper layer messages flow. In case the send sequence numbers of two subsequent messages in a flow are not identical, no duplication has occurred. In case the send sequence numbers are identical, the network must ignore the second one of the received messages.

A release '99 or later core network shall discard any message whose N(SD) is not greater by one (modulo 4) than the N(SD) of the last accepted message.

11.2.3.2.3.2.3 Termination

The sequenced message transfer operation is terminated by the RR connection release procedure.

Inter system change from A/Gb mode to Iu mode or from Iu mode to A/Gb mode shall not terminate the sequenced message transfer. UMTS SRNC relocation shall not terminate the sequenced message transfer.

3GPP TSG CN WG1 Meeting #17 **Tdoc N1-010800**
Puerto Rico, 14th - 18th May 2001

Title: **Introduction of AMR-WB**

Reference LS ***TSGG#4(01)0944 (*****N1-010493)**

Source: **TSG CN WG1**

To: **TSG GERAN**

cc: **TSG CN WG4, TSG SA WG4**

Contact Person:
Name: **Rouzbeh Farhoumand**
E-mail Address: **rouzbeh.farhoumand@ericsson.com**
Tel. Number: **+1 972 583 8061**

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1. Overall Description:

CN1 would like to thank TSG GERAN on their response Liaison Statement answering questions from CN1. CN1 would like to inform TSG GERAN that the issue was discussed in CN1#17 with agreement to create a new CN R5 WI to investigate the protocol impacts due to the introduction of Wideband AMR service.

CN1 discussed the two possible alternatives of indicating new codec types, either populating the BC IE octet 3a, or using the Supported Codecs List IE. The use of Supported Codecs List IE was agreed as preferable, although further investigation to result into CR's to indicate this will be required. This will be part of the new WI for Release 5 and therefore no new codepoints in BC IE Octet 3a are allocated at this time.

Separate system identifiers for GSM 8-PSK / GSM GMSK were also discussed and agreed to be considered in the WI.

2. Actions:

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3. Date of Next CNx Meetings:

CN1_18	10th – 12th July 2001	Dresden, Germany.
CN1_19	27th – 31th August 2001	

4. Attachment:

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3GPP TSG CN WG1 Meeting #17 **Tdoc N1-010801**
Puerto Rico, 14th - 18th May 2001

Agenda item: 9

Liaison Statement

From: **3GPP TSG CN WG1**

To: **3GPP TSG GERAN**

Cc: **3GPP TSG SA2, 3GPP TSG CN, 3GPP TSG SA**

Subject: **Indication of Extended uplink TBF capability**

Contact: Andrew Howell, Motorola
andrew.howell@motorola.com

3GPP TSG CN WG1 thanks 3GPP TSG GERAN for the LS and corresponding CRs (TDoc GP-010978) on the introduction of the new feature called “Extended uplink TBF” in the GPRS RLC/MAC protocol.

3GPP TSG CN WG1 has reviewed the change request on 3GPP TS 24.008 (REL-4), proposing to introduce the MS_EXT_UTBF parameter as a one-bit field, and agrees that the CR is technically correct except for the fact that the current version of TS 24.008 is v4.2.0.

In addition, 3GPP TSG CN WG1 has considered whether it would be acceptable, to introduce an option for new mobile stations to utilise the feature on a R97 (or R99) basis by including the MS_EXT_UTBF parameter in the R97 version of 3GPP TS 04.08, and has the following general comments:

- The proposal would add a new feature to R97, which is already frozen. Although the new feature would be optional it was felt that the general principle should be discussed at the relevant plenary meetings, that is 3GPP TSG GERAN, CN and SA, rather than at the working group level.
- Cherry picking features from later versions without any specification support in the reference versions was not seen as a feasible approach.
- Finally, 3GPP TSG CN WG1 believe that there is a potential technical problem in introducing the feature into R97. An implementation based on a previous version, e.g. of R97 in this case, might only interpret part of the MS Radio Access Capability IE contents, meaning that some valid information could be lost leading to undefined behaviour in the network. The current R97 definition of the MS Radio Access Capability IE specifies a maximum length of 14 octets and the addition of the MS_EXT_UTBF parameter, along with the extra bits needed to place it in the correct position, could potentially take the IE beyond the currently defined limit.

Attached Tdocs:

Tdoc GP-010978 (N1-010696), incoming LS from GERAN


"N1-010696_LS IN.zip"

3GPP TSG CN WG1 Meeting #17 **Tdoc N1-010813**
Puerto Rico, 14th - 18th May 2001

Title: **Liaison Statement on "RRC establish cause mapping"**

Source: TSG_CN WG1

To: TSG_RAN WG2,

cc:

Contact Person:
Name: **Francesco Pica**
E-mail Address: **francesco.pica@eml.ericsson.se**
Tel. Number: +447771774995

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1. Overall Description:

TSG CN WG1 thank TSG RAN WG2 for their LS R2-010984 (N1-010767) dated 9th – 13th April 2001 on RRC establish cause mapping, and would like to inform RAN2 about the outcome of the discussion on this issue in CN1#17.
It is CN1's understanding that the mapping from PS NAS procedures and RRC establishment cause should be such that the MS shall:

1. at request to re-establish RABs, use either of RRC establishment causes: 'Originating Conversational Call'/'Originating Streaming Call'/'Originating Interactive Call'/'Originating Background Call' depending on the Traffic class in QoS of the most demanding PDP context for which the MS requests an re-establishment of the RAB.

2. at new PDP context activation, use either of RRC establishment causes:
'Originating Conversational Call'/'Originating Streaming Call'/'Originating
Interactive Call'/'Originating Background Call'; depending on the Traffic class in QoS of the most demanding active PDP context.If QoS is not available, e.g. if there is not any PDP context active, then the MS shall use RRC establishment cause 'Originating High Priority Signalling'.

3. at modification of an existing PDP context, use either of RRC establishment causes:
'Originating Conversational Call'/'Originating Streaming Call'/'Originating
Interactive Call'/'Originating Background Call'; depending on the Traffic class in QoS of the most demanding active PDP context.

4. at deactivation of a PDP context, use RRC establishment cause 'Originating High Priority Signalling'.

5. when performing a Routing Area Update in order to re-establish the signalling connection at RRC connection release with cause "Directed signalling connection re-establishment", use RRC establishment cause 'Call re-establsihment',

NOTE: in 2. and 3. the term "active context" refer to already activated PDP contexts, meaning that either the QoS of the new context being activated, or the requested QoS for the context being modified shall not be taken into consideration.

CN1 kindly ask RAN2 to indicate whether RAN2 agree with CN1 and share the same understanding. In such a case, a CR to 24.008 updating annex L could be agreed in CN1.

3. Date of Next CNx Meetings:

CN1_18	10th – 12th July 2001	Dresden, Germany.
CN1_19	27th – 31th August 2001	

4. Attachments:

3GPP TSG-CN-WG1, Meeting #17
14 – 18 May, 2001, Puerto Rico, USA

Tdoc N1-010814

From: TSG CN WG1

To: TSG RAN WG3

CC: TSG SA WG2

Title: Response to LS - UTRAN Initiated RAB Renegotiation/Reconfiguration (N1-010771 or TSGR3#18(01)0305)

Date: 15 May 2001

Contact: Apostolis Salkintzis, Motorola [mailto:salki@motorola.com]

CN1 thanks RAN3 for their LS on "UTRAN Initiated RAB Renegotiation/Reconfiguration".

CN1 understands that RAN3 has updated RANAP protocol for Rel-4 so as to allow (re-)negotiation of the RAB parameters Maximum Bit Rate and Guaranteed Bit Rate. On the contrary, Traffic Class, RAB Asymmetry Indicator, Delivery of Erroneous SDUs, and Source Statistic Descriptor parameters cannot be negotiated in Rel-4.

CN1 wishes to inform RAN3 that TS 24.008/Rel-4 does not allow the definition of negotiable QoS parameters and, therefore, a Rel-4 mobile is not able to indicate any negotiable QoS parameters at call/session setup. It is expected that the definition of negotiable QoS parameters will be included in the Release 5 of TS 24.008.

Whether CN1 will make certain QoS parameters negotiable at call setup only, but not renegotiable later on, is for further study and it is expected to be discussed at the CN1#19 meeting, 27 – 31 August. 2001.

3GPP TSG-CN-WG1, Meeting #17
14 – 18 May, 2001, Puerto Rico, USA

Tdoc N1-010815

From: TSG CN WG1

To: TSG RAN WG3

CC: TSG RAN WG2

Title: Response to LS on NAS messages maximum length (N1-010774 or TSGR3#19(01)0953)

Date: 15 May 2001

Contact: Apostolis Salkintzis, Motorola [mailto:salki@motorola.com]

CN1 thanks RAN3 for their LS on NAS messages maximum length.

CN1 confirms that the length of a NAS message does not exceed 4095 octets, so it can fit in the RRC NAS message IE without segmentation.