3GPP TSG_CN#6   **NP-99441**

ETSI SMG3 Plenary Meeting #6,
Nice, France
13th – 15th December 1999

Agenda item: **5.1.3**

Source: **TSG_N WG1**

Title: **CRs Work Item CC related items**

Introduction:

This document contains **"2"** CRs agreed by **TSG_N WG1** and forwarded to **TSG_N Plenary** meeting **#6** for approval.

Tdoc	Spec	CR	Rev	CAT	Rel.	Old Ver	New Ver	Subject
N1-99D28	24.008	026	2	C	R99	3.1.0	3.2.0	Extended Transaction Identifier Reject
N1-99F51	24.007	001	5	C	R99	3.1.0	3.2.0	Transaction Identifier Extension

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

24.008 **CR** 026rev2   Current Version: 3.1.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑   ↑ *CR number as allocated by MCC support team*

For submission to: CN#6   for approval **X**   strategic ☐ *(for SMG use only)*
list expected approval meeting # here ↑   for information ☐   non-strategic ☐

Form: CR cover sheet, version 2 for 3GPP and SMG   The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ☐   ME **X**   UTRAN / Radio ☐   Core Network **X**
(at least one should be marked with an X)

Source:	Fujitsu Limited	**Date:**

Subject:	Extended Transaction Identifier Reject

Work item:	CC Related Items

Category:
(only one category shall be marked with an X)

			Release:	
F	Correction	☐	Phase 2	☐
A	Corresponds to a correction in an earlier release	☐	Release 96	☐
B	Addition of feature	☐	Release 97	☐
C	Functional modification of feature	**X**	Release 98	☐
D	Editorial modification		Release 99	**X**
			Release 00	

Reason for change:	When a future mobile terminal sends a message with Extended TI to a R99 network, the network is not able to analyse the extended TI and will ignore the message. The terminal is put on hold until time out and the user may make repeated service request with extended TI. This will degrade user service. To avoid the situation, the R99 network should reject the message with extended TI.

Clauses affected:	8.3.1;8.3.2

Other specs affected:

Other 3G core specifications	**X**	→ List of CRs:	24.007(001rev2)
Other GSM core specifications	☐	→ List of CRs:	
MS test specifications	☐	→ List of CRs:	
BSS test specifications	☐	→ List of CRs:	
O&M specifications	☐	→ List of CRs:	

Other comments:	Since SM has already had immediate rejection mechanism using SM STATUS, no modification is necessary on it.

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<---------- double-click here for help and instructions on how to create a CR.

8.3 Unknown or unforeseen transaction identifier

8.3.1 Call Control

The mobile station and network shall ~~ignore~~ reject a ~~call control~~SETUP, EMERGENCY SETUP or START CC message received with octet 1 part of the TI value coded as "111" by sending RELEASE COMPLETE with cause #81 "Invalid transaction identifier value" The TI value in RELEASE COMPLETE shall be the complete TI value including all possible extension octets from the message that caused the rejection .

Any message other than SETUP, EMERGENCY SETUP or START CC received with octet 1 part of the TI value coded as "111" shall be ignored.

For a call control message received with octet 1 part of the TI value not coded as "111"~~TI different from "111"~~, the following procedures shall apply:

a) For a network that does not support the "Network initiated MO call" option and for all mobile stations:

Whenever any call control message except EMERGENCY SETUP, SETUP or RELEASE COMPLETE is received specifying a transaction identifier which is not recognized as relating to an active call or to a call in progress, the receiving entity shall send a RELEASE COMPLETE message with cause #81 "invalid transaction identifier value" using the received transaction identifier value and remain in the Null state.

For a network that does support the "Network initiated MO call" option $(CCBS)$:

Whenever any call control message except EMERGENCY SETUP, SETUP, START CC or RELEASE COMPLETE is received specifying a transaction identifier which is not recognized as relating to an active call or to a call in progress, the receiving entity shall send a RELEASE COMPLETE message with cause #81 "invalid transaction identifier value" using the received transaction identifier value and remain in the Null state.

b) When a RELEASE COMPLETE message is received specifying a transaction identifier which is not recognized as relating to an active call or to a call in progress, the MM connection associated with that transaction identifier shall be released.

c) For a network that does not support the "Network initiated MO call" option and for all mobile stations:

When an EMERGENCY SETUP or, a SETUP message is received specifying a transaction identifier which is not recognized as relating to an active call or to a call in progress, and with a transaction identifier flag incorrectly set to "1", this message shall be ignored.

For a network that does support the "Network initiated MO call" option $(CCBS)$:

When an EMERGENCY SETUP, a START CC or, a SETUP message is received specifying a transaction identifier which is not recognised as relating to an active call or to a call in progress, and with a transaction identifier flag incorrectly set to "1", this message shall be ignored.

d) When a SETUP message is received by the mobile station specifying a transaction identifier which is recognized as relating to an active call or to a call in progress, this SETUP message shall be ignored.

e) For a network that does not support the "Network initiated MO call" option:

When an EMERGENCY SETUP message or a SETUP message is received by the network specifying a transaction identifier which is recognized as relating to an active call or to a call in progress, this message need not be treated and the network may perform other actions.

For a network that does support the "Network initiated MO call" option $(CCBS)$:

When an EMERGENCY SETUP message or a START CC message is received by the network specifying a transaction identifier which is recognised as relating to an active call or to a call in progress, this message need not be treated and the network may perform other actions.

The same applies to a SETUP message unless the transaction has been established by a START_CC message and the network is in the "recall present" state (N0.6).

n1-99d28 (ext ti reject).rtf

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

	24.007	**CR**	**001rev5**	Current Version:	**3.1.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑   *↑ CR number as allocated by MCC support team*

For submission to:	**CN#6**	for approval	**X**	Strategic		*(for SMG*
list expected approval meeting # here ↑		for information		non-strategic		*use only)*

Form: CR cover sheet, version 2 for 3GPP and SMG   The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM   ME **X**   UTRAN / Radio   Core Network **X**
(at least one should be marked with an X)

Source:	Ericsson		**Date:**	3-Dec-99

Subject:	Transaction Identifier Extension

Work item:	TEI

Category: F   Correction   **Release:**   Phase 2
              A   Corresponds to a correction in an earlier release   Release 96
(only one category   B   Addition of feature   Release 97
shall be marked   C   Functional modification of feature   **X**   Release 98
with an X)   D   Editorial modification   Release 99   **X**
                                                                                                             Release 00

Reason for change:	To increase the number of simultaneous calls/sessions from the present 7, the TI value needs to be increased.

Clauses affected:	11.2.3.1.3

Other specs affected:	Other 3G core specifications	→ List of CRs:	
	Other GSM core specifications	→ List of CRs:	
	MS test specifications	→ List of CRs:	
	BSS test specifications	→ List of CRs:	
	O&M specifications	→ List of CRs:	

| **Other comments:** | This is an alternative to 24.007 CR 001 rev 1. This version restricts the TI value to 128 and hence is much easier to implement.

Companion CR to 24.008 is needed. |
|---|---|

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<-------- double-click here for help and instructions on how to create a CR.

11.2.3.1.3   Transaction identifier

A L3 protocol may define that bits 5 to 8 of octet 1 of a standard L3 message of the protocol contains the transaction identifier (TI). The TI allows to distinguish up to 16 different bi-directional messages flows for a given PD and a given SAP. Such a message flow is called a transaction.

An extension mechanism for TI is also defined. This mechanism allows to distinguish up to 256 different bi-directional messages flows for a given PD and a given SAP. The extension mechanism shall not be used unless explicitly stated in the core specification(s) for the protocol.

The TI IE is coded as shown in figure 11.9 and table 11.3. It is composed of the TI value and the TI flag.

The TI value and the TI flag occupy bits 5 - 7 and bit 8 of the first octet respectively.

The extended TI shall not be used unless TI values of 7 or greater are needed.

Where the extended TI is used, the TI IE includes a second octet. The TI value in the first octet is ignored, and the TI value is encoded in bits 7-1 of the second octet.

NOTE: In other specifications, in respect to error handling, there are references to TI value "111". This refers to the binary encoding of bits 5 –7 in octet 1. For protocols which do not use the extended TI this '111' encoding is still handled as an error case.
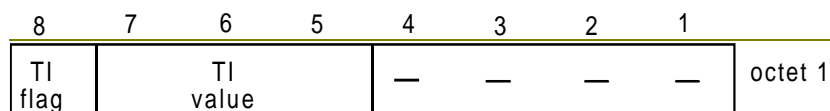
Transactions are dynamically created, and their TI value is assigned at creation time. TI values are assigned by the side of the interface initiating a transaction. At the beginning of a transaction a free TI value (i.e., a value not yet used for the given PD, the given SAP, and with the given initiator) is chosen and assigned to this transaction. It then remains fixed for the lifetime of the transaction. After a transaction ends, the associated TI value is free and may be reassigned to a later transaction.

Two identical TI values may be used when each value pertains to a transaction initiated by the different sides of the interface. In this case the TI flag shall avoid ambiguity. The transaction identifier flag can take the values "0" or "1". The TI flag is used to identify which side of the interface initiated the transaction. A message has a TI flag set to "0" when it belongs to transaction initiated by its sender, and to "1" otherwise.

Hence the TI flag identifies who allocated the TI value for this transaction and the only purpose of the TI flag is to resolve simultaneous attempts to allocate the same TI value.

~~The TI may in future evolutions of the L3 protocols be extended by using a combination of bits in the TI value field that is specified as "reserved for future extension" in table 11.3. In the present version, messages received on a SAP where standard L3 messages are expected and with a TI of TI value 111 may be ignored.~~
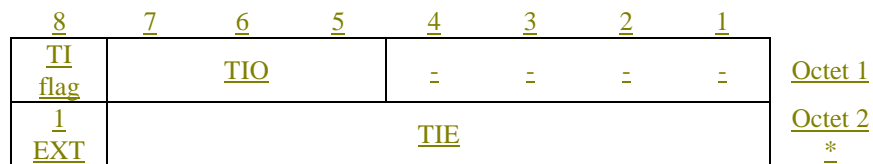
The TI extension mechanism may in future evolution of the L3 protocols be further extended by setting the EXT flag in octet 2 to "0" (see Figure 11.9).

8	7	6	5	4	3	2	1	
TI flag		TI value		—	—	—	—	octet 1

Figure 11.9: Transaction identifier

Table 11.3. Transaction identifier

TI flag (octet 1)	
Bit	
8	
0	The message is sent from the side that originates the TI
1	The message is sent to the side that originates the TI
TI value (octet 1)	
Bits	
7 6 5	
0 0 0	TI value 0
0 0 1	– – – 1
0 1 0	– – – 2
0 1 1	– – – 3
1 0 0	– – – 4
1 0 1	– – – 5
1 1 0	– – – 6
1 1 1	Reserved for future extension.

8	7	6	5	4	3	2	1	
TI flag	TIO			–	–	–	–	Octet 1
1 EXT	TIE							Octet 2 *

Figure 11.9: Transaction identifier

Table 11.3. Transaction identifier

TI flag (octet 1)	
Bit	
8	
0	The message is sent from the side that originates the TI
1	The message is sent to the side that originates the TI
TIO (octet 1)	
Bits	
7 6 5	
0 0 0	TI value 0
0 0 1	- - 1
0 1 0	- - 2
0 1 1	- - 3
1 0 0	- - 4
1 0 1	- - 5
1 1 0	- - 6
1 1 1	The TI value is given by the TIE in octet 2
TIE (octet 2)	
Bits 7-1	
0000000	Reserved.
0000001	
0000010	
0000011	
0000100	
0000101	
0000110	
All other values	The TI value is the binary representation of TIE
	Where bit 7 is the most significant bit
	And bit 1 is the least significant bit