

**3GPP TSG CN Plenary
Meeting #11, Palm Springs, U.S.A
14th - 16th March 2001**

Tdoc NP-010124

Source: TSG CN WG1
Title: CR to Rel-4 on Work Item TEI
Agenda item: 8.16
Document for: APPROVAL

Introduction:

This document contains 1 CR on **Rel-4** Work Item "TEI", that have been agreed by **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #11 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
24.011	012		N1-010066	Rel-4	Multiple SMS for PS in lu mode	B	3.5.0

CHANGE REQUEST

⌘ **24.011 CR 021** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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:	⌘ Multiple SMS		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI4	Date:	⌘ 4/1/01
Category:	⌘ B	Release:	⌘ REL-4
Use <u>one</u> 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 <u>one</u> 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:	⌘ Introduction of the MO SMS concatenating mechanism at the CM layer for PS in lu mode
Summary of change:	⌘ In sec. 5.4 the MO concatenated SMS mechanism is described for CS only. A similar mechanism for PS in lu mode is proposed. In order to make the two mechanisms as similar as possible (that means to have an SMC entity as much generic as possible), a modification for the CS mechanism is proposed where the sending of the final CP-ACK before the new CP-DATA is not mandatory any more.
Consequences if not approved:	⌘ The concatenated MO SMS at the application level (TL) will not be radio efficient for PS in lu mode. This means that sending concatenated SMS via GPRS in A/Gb mode (old technology) could be more efficient than PS in lu mode (new technology).

Clauses affected:	⌘ 5.4		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications	⌘	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> 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.

5.4 Concatenating short message or notification transfers

If an entity has more than one short message or notification to send, then it is useful to maintain the Radio Resource (RR) connection (in A/Gb mode) or the signalling connection (in Iu mode) in between transfers ~~for circuit-switched service~~. For mobile terminated short messages this is simple because the network decides when, and whether, to release the RR connection (in A/Gb mode) or the signalling connection (in Iu mode). However, for mobile originated transfers, the network does not know whether or not the mobile has more messages to transfer.

If another short message or a memory available notification is to be sent, an originating SMR entity in the MS may choose to continue to use the same RR connection (in A/Gb mode) or the signalling connection (in Iu mode).

In the case of a SMS transfer via the CS domain, wWhen the MS chooses to use the same RR or CS signalling connection, then:

- the MS shall transmit a CM SERVICE REQUEST for the new CM connection before the final CP-ACK (i.e. ~~the one that acknowledges the CP-DATA that carried the RP-ACK~~) for the old MM connection is transmitted;
- before transmission of the first CP-DATA on the new MM connection, the MS ~~shall~~ may transmit the CP-ACK for the old MM connection; the MS shall not transmit the final CP-ACK after the new CP-DATA.
- the Transaction Identifier used on the new MM connection shall be different to that used on the old MM connection; and
- the MS shall not initiate establishment of the new MM connection before the final CP-DATA (e.g. the one carrying the RP-ACK) has been received.

In the case of a SMS transfer via the PS domain, wWhen the MS chooses to use the same PS signalling connection (in Iu mode), then:

- the MS shall transmit the CP-DATA for the successive RPDU and shall not transmit the final CP-ACK for the current SMS (i.e. the one that acknowledges the CP-DATA that carried the RP-ACK);
- the Transaction Identifier used for the successive RPDU shall be different to that used for the current RPDU; and
- the MS shall not transmit the CP-DATA for the successive RPDU before the final CP-DATA (i.e. the one that carried the RP-ACK) has been received.

NOTE: When an MS sends successive memory available notifications and/or mobile originated short messages on different RR connections (in A/Gb mode) or signalling connections (in Iu mode), the MS is strongly recommended to use different Transaction Identifiers for the old and new MM connections.

It is possible that the final CP-ACK of a short message transfer may not be received (e.g. due to transmission errors and/or hand overs).

For mobile terminated transfers, if the CP-ACK is lost, the reception of a CP-DATA with a different transaction identifier and carrying an RPDU shall be interpreted as the implicit reception of the awaited CP-ACK followed by the reception of the new CP-DATA message.

For mobile originated transfers, if the CP-ACK is lost or not sent by the MS, the following events shall be interpreted as the implicit reception of the awaited CP-ACK:

- in the case of a SMS transfer via the CS domain, the reception of a CM SERVICE REQUEST followed by a CP-DATA with a different transaction identifier and carrying an RPDU; or
- in the case of a SMS transfer via the PS domain, the reception of a CP-DATA with a different transaction identifier and carrying an RPDU; ~~shall be interpreted as the implicit reception of the awaited CP-ACK followed by the reception of the new CP-DATA message.~~