

Source: TSG-SA WG4
Title: CR to TS 26.102
Document for: Approval
Agenda Item: 7.4.3

The following CR was agreed by correspondence after the TSG-SA WG4 meeting #14 and is presented to TSG SA #10 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Ver	WG	Meeting	S4 doc
26.102	005	1	R99	AMR interface to lu	F	3.1.0	S4	by correspondence, in the week following TSG-S4#14	S4-000699R2

CHANGE REQUEST

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

26.102 CR 005 rev1 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: **SA#10**
list expected approval meeting # here ↑

for approval
for information

strategic (for SMG use only)
non-strategic

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from

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

Source: TSG-SA WG4 **Date:** 11 Dec. 2000

Subject: AMR interface to lu

Work item: AMR

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

Reason for change:

1) The current introductory text of the RAB section is somehow incorrect. The correction is editorial since it does not impact the functional part of the specification.

2) Clarification of section on initialisation regarding PDU type. Editor's notes are removed. A reference is added to 25.415. The change is not functional since PDU type 0 was indicated as mandatory in the first place.

Clauses affected: 5; 6.1.1

Other specs affected:	Other 3G core specifications <input type="checkbox"/> Other GSM core specifications <input type="checkbox"/> MS test specifications <input type="checkbox"/> BSS test specifications <input type="checkbox"/> O&M specifications <input type="checkbox"/>	→ List of CRs: → List of CRs: → List of CRs: → List of CRs: → List of CRs:	
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Other comments:



help.doc

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5 RAB aspects

During the RAB Assignment procedure initiated by the CN to establish the RAB for AMR, the RAB parameters are defined. The AMR RAB is established with one or more RAB co-ordinated sub flows with predefined sizes and QoS parameters. In this way, each ~~RAB sub-Flow Combination Transport Format Combination between sub flows~~ corresponds to one AMR frame type. On the Iu interface, these RAB parameters define the corresponding parameters regarding the transport of AMR frames.

Some of the QoS parameters in the RAB assignment procedure are determined from the Bearer Capability Information Element used at call set up. These QoS parameters as defined in [3], can be set as follows:

Table 5-1: Example of mapping of BC IE into QoS parameters for UMTS AMR

RAB service attribute	RAB service attribute value			Comments
Traffic Class	Conversational			
RAB Asymmetry Indicator	Symmetric, bidirectional			Symmetric RABs are used for uplink and downlink
Maximum bit rate	12.2 / 10.2 / 7.95 / 7.4 / 6.7 / 5.9 / 5.15 / 4.75 kbit/s			This value depends on the highest mode rate in the RFCS
Guaranteed bit rate	12.2 / 10.2 / 7.95 / 7.4 / 6.7 / 5.9 / 5.15 / 4.75 kbit/s			One of the values is chosen, depending on the lowest rate controllable SDU format (note 2)
Delivery Order	Yes			(note 1)
Maximum SDU size	244 / 204 / 159 / 148 / 134 / 118 / 103 / 95 bits			Maximum size of payload field in IU UP, according to the highest mode rate in the RFCS
Traffic Handling Priority	Not applicable			Parameter not applicable for the conversational traffic class. (note 1)
Source statistics descriptor	Speech			(note 1)
SDU Parameters	RAB subflow 1 (Class A bits)	RAB subflow 2 (Class B bits)	RAB subflow 3 (Class C bits)	The number of SDU, their number of RAB subflow and their relative subflow size is subject to operator tuning (note 3)
SDU error ratio	$7 * 10^{-3}$	-	-	(note 3)
Residual bit error ratio	10^{-6}	10^{-3}	$5 * 10^{-3}$	(note 3 – applicable for every subflow)
Delivery of erroneous SDUs	yes	-	-	Class A bits are delivered with error indication; Class B and C bits are delivered without any error indication.
SDU format information 1-9				(note 4)
Subflow SDU size 1-9	(note 5)	(note 5)	(note 5)	
SDU format information 10				(note 4)
Subflow SDU size 10	0	0	0	(note 6)
NOTE 1: These parameters apply to all UMTS speech codec types.				
NOTE 2: The guaranteed bit rate depends on the periodicity and the lowest rate controllable SDU size.				
NOTE 3: These parameters are subject to operator tuning.				
NOTE 4: SDU format information has to be specified for each AMR core frame type (i.e. with speech bits and comfort noise bits) included in the RFCS as defined in [2].				
NOTE 5: The subflow SDU size corresponding to an AMR core frame type indicates the number of bits in the class A, class B and class C fields.				
NOTE 6: SDU size = 0 is needed for Initial Time Alignment.				

The conversational traffic class shall be used for the speech service, which is identified by the ITC parameter of the bearer capability information element in the SETUP message. This shall apply for all UMTS speech codec types. The parameters traffic class, transfer delay, traffic handling priority and source statistics descriptor shall be the same for all speech codec types applicable for UMTS.

6 Iu Interface User Plane (RAN)

The data structure exchanged on the Iu interface are symmetrical, i.e. the structure of the uplink data frames is identical to that of the downlink data frames. This facilitates Tandem Free Operation and Transcoder Free Operation.

6.1 Frame structure on the Iu UP transport protocol

6.1.1 Initialisation

At the initialisation of the SMpSDU mode of operation, several parameters are set by the CN. The initialisation procedure is described in [TS 25.415](#) [1].

- RFCS:

In the case of AMR, the RFCS corresponds to the Active Codec Set (ACS) authorised in the communication. Annex A of [1] gives an illustration of the usage of RFCI for AMR speech RAB. RFCS used in downlink may differ from that in uplink.

- Delivery of erroneous SDUs:

This parameter shall be set to YES. Erroneous speech frames may be used to assist the error concealment procedures. Therefore, according to [1], PDU type 0 (containing a payload CRC) shall be used for transport of AMR data.

~~{Editor's note: — This might need to be specified in another specifications} PDU type.~~

~~The PDU type 0 shall be used for the transport of AMR data.~~

~~{Editor's note: — This might need to be specified in another specifications}.~~

6.1.2 Time Alignment Procedure

TC should adjust timing of speech data transmission according to time alignment frame sent by RNC.

TC should get into Initial Time Alignment state immediately after Iu initialisation. At Initial Time Alignment state, TC shall send Iu userplane PDU type 0 frame with SDU size = 0 to RNC until speech data transmission starts.

Time alignment procedure shall be dismissed in case of TFO.