Technical Specification Group Services and System Aspects ***TSGS#18(02)0689***
Meeting #18, New Orleans, USA, 9 - 12 December 2002

Source: **TSG-SA WG4**

Title: CR to TS 26.102 - Correction of RAB parameter assignment for AMR (Release 5)

Document for: **Approval**

Agenda Item: **7.4.3**

The following CR, agreed at the TSG-SA WG4 meeting #23, is presented to TSG SA #18 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Vers	WG	Meeting	S4 doc
26.102	012	2	Rel-5	Correction of RAB parameter assignment for AMR	F	5.0.0	S4	TSG-SA WG4#23	S4-020624

3GPP TSG-SA4 Meeting #23
Montreal, Canada, 30 Sept. – 04 Oct. 2002

Tdoc ⌘S4-020624

CR-Form-v7

CHANGE REQUEST

⌘ **26.102** **CR** **012** ⌘ **rev** **2** ⌘ Current version: **5.0.0** ⌘

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

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction of RAB parameter assignment for AMR
Source:	⌘	TSG SA WG4
Work item code:	⌘	AMR
Date:	⌘	10/12/2002
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	No signaling exists in order to activate uplink SCR. Furthermore, the network is not mandated to allocate the appropriate RABs in order to enable the UE to enable the uplink SCR operation (transmission of SID frames…). Three alternatives may be adopted: - to define new signaling - or leave the activation free to the UE - or to always activate the uplink SCR The first alternative is not retained. For the second and third alternatives, the allocated RABs must enable the uplink SCR operation..
Summary of change:	⌘	It is now stated that RAB parameters shall be set so that the SCR operation may always be possible.
Consequences if not approved:	⌘	If the uplink SCR is activated and the RAB do not support the corresponding AMR frames types (SID frames…) then the system will not work.

Clauses affected:	⌘	5

Other specs affected:	⌘	Y	N		⌘	
		X		Other core specifications		TS 26.093, TS 26.103
			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	

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 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 sub-flow 1 (Class A bits)	RAB sub-flow 2 (Class B bits)	RAB sub-flow 3 (Class C bits)	The number of SDU, their number of RAB sub-flow and their relative sub-flow 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 sub-flow)
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)
Sub-flow SDU size 1-9	(note 5)	(note 5)	(note 5)	

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 sub-flow SDU size corresponding to an AMR core frame type indicates the number of bits in the class A, class B and class C fields. The assigned SDU sizes shall be set so that the SCR operation is always possible.

The RAB parameters shall be set so that the SCR operation is always possible.

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.