Technical Specification Group Services and System Aspects   ***TSGS#14(01)0672***
Meeting #14, Kyoto, Japan, 17-20 December 2001

Source:	**SA1**
Title:	**CR to 22.003 Rel-5 on Clarification of requirements for support of codecs**
Document for:	**Approval**
Agenda Item:	**7.1.3**

Doc-1st-Level	Spec	CR	Rev	Phase	Cat	Subject	Vers	Vers New	Doc-2nd-Level
SP-010672	22.003	008		Rel-5	C	Clarification of requirements for support of codecs	4.2.0	5.0.0	1290

CR-Form-v4

CHANGE REQUEST

| ⌘ | **22.003** CR | **008** | ⌘ ev | **-** | ⌘ | Current version: | **4.2.0** | ⌘ |

*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 **X** Radio Access Network **X** Core Network **X**

Title: ⌘	Modifications to requirements concerning speech codec support

Source: ⌘	SA1

Work item code: ⌘	AMR		**Date:** ⌘	9.11.2001

Category: ⌘	**C**	**Release:** ⌘	REL-5

Use <u>one</u> 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 <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: ⌘	Due to introduction of Iu mode of operation to GERAN it is required to clarify speech codec support from that perspective.

Summary of change: ⌘	It is proposed to have FR as mandatory codec in A/GB mode of operation and AMR in Iu mode of operation. Other codecs would remain optional.

Consequences if not approved: ⌘	Unclear requirements.

Clauses affected: ⌘	A.1.1

Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications	

Other comments: ⌘	CR was originated due to incoming LS from GERAN.

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://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

A.1.1   Telephony

Teleservice 11, Telephony						
A T T R I B U T E S	1. HLC	1.1 Type or user information			speech	
		1.2 Layer 4 protocol functions			-	
		1.3 Layer 5 protocol functions			-	
		1.4 Layer 6 protocol functions			-	
		1.5 Layer 7 protocol functions			-	
	2. LLC Inform transfer	2.1 Inform transfer	2.1.1 Information transfer capability		speech (digital representation)	
			2.1.2 Information transfer mode		circuit	
			2.1.3 Information transfer rate		not applicable	
			2.1.4 Structure		not applicable	
			2.1.5 Establishment of connection		demand MO MT	
			2.1.6 Communication configuration		point-to-point	
			2.1.7 Symmetry		bidirectional symmetry	
		2.2 Access at UE	2.2.1 Signalling access		manual	
			2.2.2 Information access (TS 22.001)	rate interface	full rate/half rate	
		2.3 Inter- working	2.3.1 Visible network type		PSTN/ISDN/ -PLMN	
			2.3.2 National/Internat. interworking		international/national	
			2.3.3 Interface of TE to terminating		2 wire, analogue	4 wire S (B+B+D)	ME
	3. Gen	3.1 Supplementary service provided			TS 22.004	
		3.2 Quality of service				

Comments:

This service provides the transmission of speech information and audible signalling tones of the PSTN/ISDN. In the PLMN and the fixed network processing technique appropriate for speech such as analogue transmission, echo cancellation and low bit rate voice encoding may be used. Hence, bit integrity is not assured.

1) Transparency for telephone signalling tones is provided.

2) Transparency for voice band facsimile signals is not mandatory. (Appropriate bearer services see TS 22.002 [3].)

3) Transparency for end to end speech encryption is not mandatory. If a user needs to apply this technique an appropriate bearer service (TS 22.002 [3]) can be used.

4) Transmission of DTMF is provided in the mobile to fixed direction (e.g. for controlling voice mail boxes) during any time of an established call.

5) In A/Gb mode of operation (GERAN) speech teleservices may be provided using the Full Rate (full rate, version 1), Enhanced Full Rate (full rate, version 2), Half Rate (half rate, version 1), Adaptive Multirate (AMR) or Wideband Adaptive Multirate (AMR-WB) speech codecs. The default speech codec to provide speech service across the GERANin this case- is Full Rate.

6) UTRAN In Iu mode of operation (UTRAN and GERAN) speech teleservices may be provided using the Adaptive Multirate (AMR) or Wideband Adaptive Multirate (AMR-WB) speech codecs. The default speech codec to provide speech service across the UTRANin this case is AMR.