Technical Specification Group Services and System Aspects
Meeting #5, Kyongju, Korea, 11-13 October 1999

TSGS#5(99)354

Source:	**TSG-S4 Codec Working Group**
Title:	**Common WI description for the Wideband Codec**
Document for:	**Approval**
Agenda Item:	**5.4.3**

The following Wideband Codec Work Item description was approved by the Joint SMG11#11Bis/S4#6 meeting. It replaces the corresponding SMG11 and S4 Work Items.

It is proposed to SMG and TSG-SA for approval.

References:

[1]:   Adaptive Multi-Rate Wideband (AMR-WB) Feasibility Study Report Version 1.0.0; Tdoc. SMG P-99-429; SMG#29: June 23-25, 1999, Miami, FL-USA

[2]:   Proposed TSG-S4 Work Items; Tdoc. TSG-SA SP-99060, TSG-SA#2: March 2-4, 1999, Fort-Lauderdale, FL-USA

Work Item Title: **Codec for Wideband Telephony Service**
Common SMG11/TSG-S4 Work Item Description

TSG-SA Work Area

	Services
	Architecture
	Security
X	Codec
	Network Management

SMG Work Area

	G-UMTS Radio Access
X	GSM Radio Access
	Core Network
	Services

Linked Work Items

GSM Adaptive Multi-Rate Speech Codec (GSM AMR)

TSG-SA WG4 Work Item 2: Codec for Low-bitrate Video Telephony Service

TSG-SA WG4 Work Item 3: QoS for speech and multimedia codec

TSG-SA WG4 Work Item 4: 3G Audio-Visual Terminal Characteristics

Justification

Existing narrow-band speech codecs achieve good performance for narrow-band speech (audio bandwidth limited to 3.4 kHz). The introduction of a wideband speech service (audio bandwidth extended to 7 kHz) would provide improved voice quality especially in terms of increased voice naturalness. Wideband coding would bring speech quality exceeding that of (narrowband) wireline quality to 3G and GSM systems. There is a growing market interest in a wideband speech service among future 3G and existing 2G operators. The wideband codec could be included into AMR as a new optional wideband mode (or modes).

Intended Output of the Work Item

Set of technical specifications of Speech Codec(s) for Wideband Telephony Service

Impact on other Technical Specifications and Technical Reports

Affects:	USIM	ME	NW	Others
Yes		X	X	
No	X			
Don't know				

Technical Scope, including the field of application of the intended output

Definition of the Performance Requirements and Design Constraints for the Selection of a Wideband Codec or set of Wideband Codecs for wideband applications in 3G/UMTS and Phase 2+ GSM Systems, including EDGE.

Selection of the Wideband Codec or set of Wideband Codecs

Performance Characterization in 3G and GSM Radio Access

Schedule of Tasks to be Performed

Approval of WI:	TSG SA #2 (March 99) and SMG#29
Performance Requirements:	October 99
Design Constraints:	October 99
Selection Tests:	June to September 2000
Codec Selection:	October 2000
Wideband Codec Specifications approval	with Release 2000
Wideband Codec Characterization:	(tbd)

New Specifications & Technical Reports						
Spec. No.	Title	Prime resp.	2ndary resp.	Presented for information at	Approved at	Comments
26.xxx	Wideband Speech Codec General Description	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec ANSI C-Code	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Test Sequences	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Speech Transcoding Functions	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Error Concealment of lost frames	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Source Controlled Bit-Rate Operation	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Voice Activity Detector	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Frame Structure	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd
26.xxx	Wideband Speech Codec Performances Characterization	TSG-S4 SMG11		TSG SA#x	TSG-SA#y	Editor: tbd

Affected existing specifications				
Spec. No.	CR	Subject	Approved at TSG#	Comments

Supporting Individual Members

BT, Deutsche Telekom AG, Ericsson, France Telecom, Mannesmann Mobilfunk, NEC Corporation, Nortel Networks, Nokia, Siemens

Work Item Rapporteur(s)

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Responsible STC and TSG WG

Joint primary responsibility of SMG11 and TSG-S4

Secondary responsibility of: SMG1, SMG2, SMG3, SMG12, TSG-S1, S2, R1, R2, R3, N1, N2