3GPP TSG CN Plenary Meeting #13   **NP-010477**
Beijing, China, 19th‑21st September 2001

Source:	**Ericsson, Nokia, Siemens, Vodafone**
Title:	**WID for Introduction of AMR-WB speech service in 3GPP Standards Release 5**
Agenda item:	**9.6**
Document for:	**APPROVAL**

WID over page.

Work Item Description

Title

Introduction of AMR-WB speech service in 3GPP Standards Release 5

1   **3GPP Work Area**

X?	Radio Access (Geran ?)	
X	Core Network	
X	Services	

2   **Linked work items**

SA4
GERAN
Search to be conducted and linked WI list added.

3   **Justification**

Unlike narrow band codecs, the AMR-WB codec's 7kHz audio bandwidth reproduces a wide range of human speech frequencies and offers the opportunity for manufacturers and operators to introduce superior quality voice services. It has been demonstrated that the AMR-WB codec can also encode and decode music to acceptable listening standards thus allowing the codec to be used for other audio applications. Whilst TSG SA4 have completed much of the codec specification work, there are several critical core and access network inter-working aspects that must be specified.

This WI is initiated to co-ordinate the standardisation tasks within TSG CN required to provide a complete solution for the introduction of a mobile the service wWideband speech service.AMR.

4   **Objective**

To complete the standardisation tasks within the affected working groups for 3GPP Release 5, specifically:

??   End to end bandwidth support for AMR-WB;
??   Codec selection and GSM-UTRAN interworking;
??   TFO and TrFO signalling;
??   AMR-WB and narrrowband interworking;
??   Radio Access Bearer optimisation;
??   Radio Access Bearer renegotiation (impact at least on 23.018)
??   Interworking with fixed broadband networks;
??   Tones and announcements;
??   Billing, accounting and call detail record aspects;
??   WB Conferencing and WB Voice Group calls;
??   Adaptation of subscriber data in HLR/VLR;
??   Legal interception.

The detailed AMR-WB time plan is documented in the 3GPP Work Plan.

Task	Planned Start	Planned Finish
Work Item Revision	Sep/2001	Sep/2001
Work Item Approval		Sep/2001
Drafting and discussion, updates of specifications	Oct/2001	Feb/2002
Submission to TSG CN and SA for approval		Mar/2002
Possible remaining corrections and clarifications		Jun/2002

5 Service Aspects

The AMR wideband codec has been specified for use in GSM, GERAN and UTRAN. Stage 1 service requirements to complement existing AMR specifications need to be defined. AMR WB service shall be supported by the Ue/Me and the UMTS Core Network.

Out Of Band Transcoder Control procedures shall support AMR WB and be able to interract with Narrowband Services/existing legacy narrowband hardware. The solution shall be developed in a backward and forward compatible manner - i.e. AMR WB end to end service can be achieved and also handover and service fallback to narrowband systems.

TFO support for AMR WB shall be supported to allow inband codec negotiation, especially to allow end to end AMR WB between GSM accesses and UMTS to GSM accesses.

Furthermore it needs to elaborated how charging shall be applied, i.e. subscription based or on a per call / per codec (change) /per ??? basis.

6 MMI-Aspects

User selection of wideband speech services and USIM subscription aspects needs to be studied in SA1. *None/Text*

7 Charging Aspects

Billing, accounting and call detail record aspects need to be studied in SA5 depending on the general charging requirements as specified by SA1. Wideband should be charged above narrowband rate ?

8 Security Aspects

Legal interception requirements. *None/Text*

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes		X	X	X	
No	X				
Don't know	X		X (Geran?)		

10   Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#		Comments
24.008		DTAP codec type				Possible impact if AMR-WB uses codepoints in Bearer Characteristics IE
26.103		AMR-WB in codec list				Addition of AMR-WB coding, for Nc interface & Iu interface protocols
23.153		Introduction of AMR-WB for TrFO				AMR-WB service interactions
28.062		Introduction of AMR-WB for TFO				TFO protocol updates
23.018		Basic Call Handling				AMR-WB call handling and MSC, HLR, VLR functional requirements

11   Work item raporteurs

John Watson (Vodafone) (name of physical person)

12   Work item leadership

CN WG4

13   Supporting Companies

Ericsson, Nokia, Siemens, Vodafone

14   Classification of the WI (if known)

	Feature (go to 14a)	
X	Building Block (go to 14b)	
	Work Task (go to 14c)	

14a   The WI is a Feature: List of building blocks under this feature

(list of Work Items identified as building blocks)

14b   The WI is a Building Block: parent Feature

(one Work Item identified as a feature)

14c   The WI is a Work Task: parent Building Block

(one Work Item identified as a building block)