Technical Specification Group Services and System Aspects ***TSGS#18(02)0684***
Meeting #18, New Orleans, USA, 9 - 12 December 2002

Source: **TSG-SA WG4**

Title: **Work Item Description: Enhanced TFO (eTFO)**

Document for: **Approval**

Agenda Item: **7.4.3**

TSG System Aspects #4 ***SA#4(02)0675***
Meeting #24, Redmond, USA, 11-15 November 2002

Work Item Description

Title:
Enhanced TFO (eTFO)

This WI intends to bring enhancements to the TFO standard in order to enable transmission saving on packet networks crossed by the voice communication. This is a bearer independent WI. It will be possible to run this protocol with ATM, TDM or IP and any topology of networks mixing them.

1 3GPP Work Area

	Radio Access
X	Core Network
	Services

2 Linked work items

Transcoder Free Operation, OoBTC Solution, Speech Transcoder Location and Control at the UMTS PLMN Border, Enable Bearer Independent CS architecture, Tandem Free aspects for 3G and between 2G and 3G, Tandem Free AMR

3 Justification

The TFO standard was originally designed for TDM networks and requires a 64 kbit/s PCM signal in between TRAU/TCs independently of the transport network. However, it is advantageous in case of packet networks to relay speech frames only, without generating G.711 PCM, to achieve bandwidth saving.

The enhanced TFO protocol (eTFO) will be compatible with the existing TFO specifications and it will be possible to save transmission bandwidth in case of calls between 3G / 3G and 3G / 2G.

Similarly to TFO, the eTFO will apply once the call has been established and so won't have impact on the call set-up time.

4 Objective

The objective is to define an enhanced TFO protocol that is independent of the bearer used. Application of this protocol to ATM transport will be first addressed, followed by IP.

5 Service Aspects

eTFO applies to the CS domain voice calls.

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

Lawful interception will be properly addressed.

9 Impacts

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

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

New specifications						
Spec No.	Title	Prime rsp. WG	2nd ary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
TS 28.063	eTFO protocol	SA4		TSG SA#19 March '03	TSG-SA#20 June '03	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
TS 29.415	X	Core Network Nb Interface UP protocol	TSG CN #20 - June '03	A TFO signalling field must be added
TS 29.414	X	Core Network data transport and Transport Signaling	TSG CN #20 - June '03	For IP transport
TS 29.232	X	Media Gateway Controller (MGC) – Media Gateway (MGW) interface	TSG CN #20 - June '03	New messages may be required in the TFO package
TS 22.053	X	Tandem Free Operation (TFO), Service Description, Stage 1	TSG SA #20 – June '03	Changes to stage 1 to introduce the eTFO specific requirements
TS 23.053	X	Tandem Free Operation (TFO), Service Description, Stage 2	TSG SA #20 – June '03	Changes to stage 2 to make TFO codec and bearer independent
TS 23.153	X	Out of Band Transcoder Control, Stage 2	TSG CN #20 - June '03	Coordination of OoBTC & eTFO
TS 28.062	X	Tandem Free Operation (TFO), Service Description, Stage 3	TSG SA#20 – June '03	Interworking between TFO & eTFO

11 Work item rapporteur

Andrew Harrison, Nortel Networks

12 **Work item leadership**

TSG SA4

13 **Supporting Companies**

AWS, Nortel Networks, Rogers Wireless, Vodafone, Ericsson

14 **Classification of the WI (if known)**

X	Feature (go to 14a)
	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)