3GPP TSG_CN **Tdoc NP-000507**
Plenary Meeting #9, Oahu, Hawaii
20th – 22nd September 2000

3GPP TSG-CN4 (TrFO/TFO work shop#2) T-doc. N4-000531
Helsinki, Finland
18th July 2000

Title: **Work Item Description: Out of band Transcoder Control**

Source: **N4**

Purpose: **Approval**

This contribution proposes the Work Item Description for Out of band Transcoder Control. This Work Item description is made on the basis of the latest WI description of the Out of band Transcoder Control (N2-99A59) for R99.

Work Item Description

Out of Band Transcoder Control

1 3GPP Work Area

(X)	Radio Access
X	Core Network
X	Services

2 Linked work items

Service Modification without pre-notification

Bearer-independent circuit-switched core network

Transcoder placement at the edge of the core network

TFO for UMTS

3 Justification

Initially, this WI had been started for R99. However, a significant amount of open issues remained at the CN-Plenary #7 and the WI had been postponed to R00. Therefore this WI is newly created as the R00 WI and all remaining issues identified in R99 need to be resolved.

4 Objective

- The number of transcoders to be installed in the core network can be minimised.
- The bandwidth to be provided in the core network may be reduced by TrFO or transcoder at the core network edge for both MS to MS calls and for MS from/to wireline calls.

5 Service Aspects

The service aspects for Transcoder Control are as follows:

- The negotiation and control procedures for Transcoder Control should be applicable to the transport layer for ATM or IP.
- Transcoder Control should not preclude support of other network access types i.e. it should not be restricted on MS-to-MS calls only (also e.g. MS from/to wireline calls shall be supported).
- The negotiation and control procedures for Transcoder Control should not cause a significant delay in establishing a through connection. Nor should they cause a significant delay when modifying the communication mode between TrFO/TFO mode and normal mode (e.g. in support of services such as Multiparty Call).
- The originating MS may transmit a list of preferred codec types to the core network.
- The terminating MS may indicate a list of preferred codec types to the core network and then core network selects one codec type that could be used for both terminating MS and originating MS.
- The transcoder free connection should be possible even if the transcoder is located in the edge of PLMN.
- If the transcoder free connection needs to be connected to the TFO (Tandem Free Operation) connection, the compressed speech coding being used should be

maintained all through the connection as much as possible (Cascading connection for the purpose of TFO/ TrFO harmonisation.)

- If TrFO procedures result in the insertion of a transcoder, TFO (Tandem Free Operation) procedures may be performed to further transport compressed speech.
- Lawful interception issues with TrFO situations should be studied.

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

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

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
23.153	Out of Band Transcoder Control - Stage 2	CN4	-	TSG-CN#7	TSG-CN#10	

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
24.008		Out-of-Band Transcoder Control requires the capability to indicate preferable transcoder types from the MT to the network and vice versa employing Call Control messages as a means of transport.	TSG CN#10	
26.103		The parameter for BICC protocol may need to be adjusted. (Ex. OID)	TSG SA#10	

11 Work item rapporteurs

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12 Work item leadership

TSG-CN4

13 Supporting Companies

NEC, NTT DoCoMo, FUJITSU limited, NTC, NTT Commware, Ericsson and Siemens

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

14b The WI is a Building Block: parent Feature

Transcoder-Free Operation (TrFO)

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