CHANGE REQUEST No : **Axxx** *Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.*

Technical Specification GSM / UMTS: 22.00 Version 2.0.0

Submitted to SMG *list plenary meeting or STC here ↑* | for approval **X** | for information | without presentation ("non-strategic") | with presentation ("strategic")

PT SMG CR cover form. Filename: crf26_3.doc

Proposed change affects: *(at least one should be marked with an X)* SIM ( ) ME ( ) Network (X)

Work item: GSM evolved core network requirements to 3GPP from TTC

Source: NIPPON TELECOMMUNICATIONS CONSULTING CO.,LTD. **Date:** 12 Feb., 1999

Subject: Addition of the description for "Account for user traffic and signalling traffic"

Category: *(one category and one release only shall be marked with an X)*

F	Correction		**Release:**	Phase 2
A	Corresponds to a correction in an earlier release			Release 96
B	Addition of feature	X		Release 97
C	Functional modification of feature			Release 98
D	Editorial modification			Release 99
				UMTS X

Reason for change: The description of "account for user traffic and signalling traffic" is nothing in core network requirements. This requirement is supported in TTC. It is required to support the traffic monitoring and measurement in phase 1 UMTS core network.

Clauses affected: 8 UMTS Core Network

Other specs affected:

Other releases of same spec		→ List of CRs:
Other core specifications		→ List of CRs:
MS test specifications / TBRs		→ List of CRs:
BSS test specifications		→ List of CRs:
O&M specifications		→ List of CRs:

Other comments:

help.doc

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8 UMTS Core Network

NOTE 1: The term performance refers in this clause to the resource level usage and reliability of the UMTS

core network.

NOTE 2: SMG1 does not use the (circuit switched) notion of call to define UMTS phase 1 core network

capabilities. If SMG12 decides to use this notion to fulfil SMG1 requirements, it shall be noted that

it is not required for phase 1 UMTS core networks to support calls with multiple connections.

Multiple connections for a single mobile could be realised through several calls.

In the first phase of UMTS, the UMTS core network capabilities are a superset of the phase 2+ release 99 GSM core

network capabilities. The additional requirements for the phase 1 UMTS core network are the following :

1) The phase 1 UMTS core network shall support circuit switched data service capability of at least 64 kbit/s per user. *This shall not limit the user from choosing lower data rates.*

2) The phase 1 UMTS core network shall support packet switched data service capabilities of at least 2 Mbit/s peak bit rate per user. *This shall not limit the user from choosing lower data rates.*

3) The phase 1 UMTS core network shall enable set-up, re-negotiation and clearing of connections with a range of traffic and performance characteristics. It shall be possible to apply traffic policing (e.g. connection admission control, flow control, usage parameter control...) on a connection during its set-up and lifetime.

4) The phase 1 UMTS core network shall support a range of traffic and performance characteristics for connectionless traffic.

5) The range of traffic and performance characteristics that shall be supported by the phase 1 UMTS core network for connection oriented and connectionless traffic shall be at least those of GPRS phase 2+ release 99. This means that the support of the full set of bearer services defined in TS 22.05 section 5.2 to 5.4 is not required for the phase 1 UMTS core network.

6) Point to multipoint communication configurations as defined in TS 22.05 shall be supported by the phase 1 UMTS core network.

7) The phase 1 UMTS core network shall allow one mobile termination to handle more than one bearer service simultaneously and to have bearer services of different connection modes. It is nevertheless expected that the terminal and network capabilities will put some limitations on the number of bearer services that can be handled simultaneously. It shall be possible for each connection to have independent traffic and performance characteristics. It shall be possible for each connectionless message to have independent traffic and performance characteristics.

8) In order to facilitate the development of new applications, it shall be possible to address applications to/from a phase 1 UMTS mobile termination in connection oriented and connectionless traffic modes (e.g. the notion of Internet port).

9) Operator specific services based on the VHE concept shall be provided by the phase 1 UMTS core network. This functionality could be provided through available toolkits (such as CAMEL, MExE, WAP and SIM Toolkit).

10) If UMTS authentication is invoked while a user has services active, the authentication shall not degrade the user services.

11) The phase 1 UMTS core network shall support the generation of standardised charging records based upon parameters such as the dialled number, call duration, traffic (volume, bit rate) and perceived Quality of Service provided to the user.

12) The phase 1 UMTS core network shall support on-line billing. Billing of 3rd party value added services with the concept of one-stop-billing shall be supported by the phase 1 UMTS core network through standardised procedures.

13) The phase 1 UMTS core network shall support both bilateral and (possibly via 3rd party) automatic roaming procedures to UMTS networks with improved security as defined by SMG10.

14) The phase 1 UMTS core network shall support interworking with PSTN, N-ISDN, GSM, X.25 and IP networks with their respective numbering schemes.

15) It shall be possible for the standardised classes of phase 1 UMTS mobile terminals supporting the GSM BSS and UTRAN radio interfaces to roam in GSM networks and receive GSM services.

16) Standardised protocols shall be defined for the operation, administration and maintenance of the UMTS phase 1 core network in cooperation with ETSI TMN.

17) The USIM requirements defined for later releases of UMTS should be taken into account in the design of the phase 1 UMTS core network.

18) The phase 1 UMTS core network shall support the account for traffic monitoring and measurement for congestion control.