3GPP Document **NP-99130**
Technical Specification Group Core Networks

Meeting #3, Yokohama, 21-23 April 1999

Source: ETSI STC SMG1

Title: Deletion terminal reference model

Document for: Decision

Attention: Agenda item 5

CN is invited to endorse these CRs to be passed to SMG#29 for approval.

ETSI STC SMG1 meeting # 63 (99/1)
Edinburgh, Scotland 8th - 9th March 1999

SMG1 (99)094
Agenda 5.5.2

CHANGE REQUEST No : *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: 02.01 Version 6.0.0

Submitted to SMG *list plenary meeting or STC here ↑* | for approval | 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 [X] Network [X]

Work item:

Source: Nokia **Date:** 3.3.1999

Subject: Deletion terminal reference model

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

F	Correction	
A	Corresponds to a correction in an earlier release	
B	Addition of feature	
C	Functional modification of feature	X
D	Editorial modification	

Release:

Phase 2	
Release 96	
Release 97	
Release 98	
Release 99	X
UMTS	

Reason for change: Terminal reference model has been deleted, because it's outdated.

Clauses affected: 2, 3, 5, A

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

<--------- double-click here for help and instructions on how to create a CR.

A service provision by a network operator (e.g. an Administration or an RPOA) to a subscriber of a GSM PLMN may cover the whole or only part of the means required to fully support the service. The operational and commercial features associated with the provision of the service are included in the service concept.
The service classification and description which follow are independent of different possible arrangements for the ownership and provision to the customer of the means required to support a service.

1.2 The attribute method of characterization of telecommunication services

This characterization is made by using a set of attributes. A telecommunication service attribute is a specific characteristic of that service whole values distinguish it from other telecommunication services. Particular values are assigned to each attribute when a given telecommunication service is described and defined.
A list of definitions of attributes and values used for bearer services and teleservices is contained in, respectively, annex A and annex B.

2 Description of telecommunication services by the attribute method

2.1 General

Telecommunication services are described by attributes which define service characteristics as they apply at a given reference point where the customer accesses the service. The description of a telecommunication service by the method of attributes is composed of:

- technical attributes as seen by the customer, and;
- other attributes associated with the service provision, e.g. operational and commercial attributes.

2.2 Bearer services and teleservices

Telecommunication services are divided in two broad categories:

- bearer services, which are telecommunication services providing the capability of transmission of signals between access points ~~(called user-network interfaces in ISDN)~~;

- teleservices, which are telecommunication services providing the complete capability, including terminal equipment functions, for communication between users according to protocols established by agreement between network operators.

3 Customer access to telecommunication services supported by a GSM PLMN

3.1 Reference configuration and access points

Considering the reference configuration defined in Specification GSM 04.02, customers can access various telecommunication services at different access points. Figure 2 shows an example of these access points. The reference configuration shows the MS to consist of mobile termination and terminal equipment.
Figure 2 takes into account that service provision by the network operator to a customer accessing a GSM PLMN may cover the whole or part of the means required to fully support the service.

Figure 2: Example of customer access to services supported by a GSM PLMN

MS: Mobile Station

MT: Mobile Termination: supports function specific to management of the radio interface (Um) and adapting information flows at Um to those required by terminal functions at access points 1 or 2. For further descriptions of functions and types (e.g. MTO, MT1 and MT2) see GSM 04.02.

TE: Terminal Equipment: supports man-machine (access point 3) to the user and may support a physical interface at access point 1 or 2.

TE1: TE presenting an ISDN interface.

TE2: TE presenting a non-ISDN (e.g. a CCITT V or X series) interface [84,85].

TA: ISDN Terminal Adapting functions: may be used to adapt between access points 1 and 2.

Um: Radio interface.

3.2 Access points and telecommunication services

The definition of the access points introduced in Figure 2/GSM 02.01 are as follows:

1) at access point 1 and 2, bearer services may be accessed;

2) at access point 3 (user to terminal interface), teleservices are accessed - note that the teleservice concept includes the terminal capabilities.

3.3 Terminal equipment

It should be noted that a Terminal Equipment (TE) may consist of one or more pieces of equipment and may include the following entities:

- telephone set;
- customer terminals, e.g. Data Terminal Equipments, Teletex terminals;
- customer systems.

NOTE: The whole mobile station, customer terminals and systems may be privately owned or provided by network operators.

All terminal equipment accessing a GSM PLMN interface at one of the access points defined in section 3.2 must meet the specifications of the protocols at that interface for all the layers that are included in the definition of the telecommunication service used.

For some telecommunication services, the service definition also covers some terminal functions and characteristics in addition to those specified by the protocols at the interface.

5.3 Teleservices supported by a GSM PLMN

Teleservices provide the full capacity for communication by means of terminals and network functions and possibly functions provided by dedicated centres.

A teleservice supported by a GSM PLMN should use only one (or a small number of) bearer capability recommended by GSM. Examples of teleservices are telephony, Teletex, Videotex and access to message handling systems.

Teleservices are characterized by a set of low layer attributes, a set of high layer attributes and operational and commercial attributes.

Low layer attributes are those used to characterize the bearer capability (see subclause 5.2). High layer attributes are used in Specification GSM 02.03 to describe high layer (i.e. layer 4-7) information transfer related characteristics. They refer to functions and protocols of layers 4-7 in the CCITT Recommendation X.200 framework which are concerned with the transfer, storage and processing of user messages (provided by a subscriber's terminal, a retrieval centre or a network service centre).

Therefore, not all attributes can be applied directly at the user to terminal interface ~~(access point 3)~~ as they represent two kinds of features, the bearer capability and the terminal features, that are not directly perceived by the user.

A teleservice provides the user with the possibility of gaining access to various forms of applications (or teleservice APPLICATIONS) covering for example:

- teleservice application involving two terminals providing compatible or identical teleservice attributes at an access point in a GSM PLMN and an access point in a terminating network;

- teleservice application involving a terminal at one access point in a GSM PLMN and a system providing high layer functions (e.g. speech storage system, message handling system) located either within the GSM PLMN or in a terminating network.

A.2 Attributes describing the access at the mobile station

A.2.1 Signalling access

This attribute characterized the protocol on the signalling channel at a given access point or reference point ~~(access point 1 or 2 at the MS in figure 2/GSM 02.01)~~.

Values:

- manual;
- appropriate V-series protocol;
- appropriate X-series protocol;
- I-series stack of signalling protocols.

A.2.2 Information access

A.2.2.1 Rate

This attribute describes either the bit rate (circuit mode including transparent access to a PSPDN) or throughput (packet mode) used to transfer the user information at a given access point or reference point (access point 1 or 2 at the MS in figure 2/GSM 02.01).

Values:

- appropriate bit rate;
- appropriate throughput.

A.2.2.2 Interface

This attribute describes the interface according to the protocol used to transfer user information at a given access point or reference point ~~(access point 1 or 2 at the MS in figure 2/GSM 02.01)~~.

Values:

- appropriate V-series DTE/DCE interface;
- appropriate X-series interface;
- S interface;
- analogue 4-Wire interface.