

**3GPP TSG\_CN#6**

**NP-99489**

**Nice, France**

**13<sup>th</sup> – 15<sup>th</sup> December 1999**

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**Agenda item:**

**Source: TSG\_N WG2**

**Title: CRs to GSM 03.16, 3G TS 23.016 (Work Item CAMEL Phase 2)**

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**Introduction:**

This document contains 2 CRs on **Work Item CAMEL Phase 2** agreed by **TSG\_N WG2** and forwarded to **TSG\_N Plenary** meeting #6 for approval.

<b>TDoc</b>	<b>Spec</b>	<b>CR</b>	<b>Rev</b>	<b>Ph.</b>	<b>Cat</b>	<b>Old v.</b>	<b>New v.</b>	<b>Subject</b>
N2-99G63	03.16	A039		R98	F	7.1.0	7.2.0	Correction of VLR subscription Data
N2-99K14	23.016	009		R99	A	3.2.1	3.3.0	Correction of VLR subscription Data



## 3 Definitions and abbreviations

### 3.1 Abbreviations

Abbreviations used in this specification are listed in GSM 01.04.

### 3.2 Definitions

Subscriber data to be stored in the HLR, VLR and SGSN are defined in GSM 03.08, GSM 03.71 and in GSM 03.6x, GSM 03.8x and GSM 03.9x-series of technical specifications.

Voice Broadcast Service (VBS), Voice Group Call Service (VGCS) and enhanced Multi Level Precedence and Pre-emption Service (eMLPP) Data related to group call area, cell or dispatcher attributes is only stored in the Group Call Register (GCR) which is linked to each MSC/VLR.

The GCR and it's stored data is out of scope of this specification.

Subscriber related VBS, VGCS and eMLPP Data only concerns entitlement data for these-services and is seen as shared non-GPRS subscriber data.

#### **GPRS and non-GPRS subscriber data:**

The HLR has to download data to the VLR and to the SGSN. In this specification those data sent to the VLR are called non-GPRS subscriber data and those data sent to the SGSN are called GPRS subscriber data.

Whenever the refining identifier non-GPRS or GPRS is missing a common rule is addressed which hold for both kinds of subscriber data.

Subscriber data specific to non-GPRS shall only be sent from the HLR to the VLR. Subscriber data specific to GPRS shall only be sent from the HLR to the SGSN.

Subscriber data common to both non-GPRS and GPRS (regional subscription information) are downloaded from the HLR to both entities.

#### **Shared non-GPRS subscriber data:**

Common subset of subscriber data defined to be stored in both the HLR and VLR. Subscriber data only stored in the HLR is not part of shared subscriber data. Shared subscriber data includes:

BS:	Bearer Service (see GSM 02.02);
TS:	Teleservice (see GSM 02.03);
BSG:	Basic Service Group (see GSM 02.01, GSM 02.04 and GSM 03.11);
EBSG:	Elementary Basic Service Group (see GSM 03.11);
CBSG:	Collective Basic Service Group (see GSM 03.11).
LSA Information:	Localised Service Area Information (see GSM 03.73).

#### **Shared GPRS subscriber data:**

Common subset of subscriber data defined to be stored in both the HLR and SGSN. Subscriber data only stored in the HLR is not part of shared subscriber data. Shared GPRS subscriber data includes:

TS:	Teleservice (see GSM 02.03);
PDP Context	(see GSM 03.60).
LSA Information:	Localised Service Area Information (see GSM 03.73).

**Mandatory data:**

Data required to form a self-consistent set of subscriber data. The context governs whether a specific parameter is mandatory, e.g. the data set for a specific service may be optional, however if data for this service is present, then parameters within this data set may be mandatory.

Mandatory data is defined by the service description (see e.g. GSM 03.6x, GSM 03.8x and GSM 03.9x-series of technical specifications and GSM 03.15, GSM 03.71) and by PLMN defined requirements.

NOTE 1: The above definition is seen from a semantic point of view. Semantically, mandatory parameters may be defined as syntactically optional or mandatory by the protocol.

**Optional data:**

Data which is defined as subscriber data, but which is not required to form a self-consistent set of subscriber data; the context governs whether a specific parameter is optional.

Optional data is data which is defined by the service description (see e.g. GSM 03.6x, GSM 03.8x and GSM 03.9x-series of technical specifications and GSM 03.15, GSM 03.71) or by PLMN defined requirements but is not defined as mandatory data.

NOTE 2: The above definition is seen from a semantic point of view. Semantically optional parameters are always defined as syntactically optional by the protocol.

**Missing data:**

Data which is mandatory in a given context but is not received nor is valid data available locally.

Unexpected data:

Data which is received and cannot be further processed. This may be either:

- optional data not required in a given context; or
- optional or mandatory data, required in this context but received with an unexpected value.

**Overlapping data:**

Two different cases of overlapping within subscriber data are possible:

- two or more parameters are to be stored at the same address in the data structure (see subclause 4.4);
- two or more BSGs within a BSG list include or are identical with one and the same EBSG.

The following **groups of non-GPRS subscriber information** are defined:

- subscriber information (Group A):
  - International Mobile Subscriber Identity (IMSI);
  - basic Mobile Station International ISDN Number (MSISDN);
  - category;
  - subscriber status,
  - LMU identifier
- basic service information (Group B):
  - Bearer Service list;
  - Teleservice list.

NOTE 3: VBS and VGCS entitlement data are subsumed under Teleservices

- Supplementary Service (SS) information (Group C):
  - forwarding information;
  - call barring information;
  - Closed User Group (CUG) information;
  - eMLPP data;
  - SS Data;
- Operator Determined Barring (ODB) information (Group D):
  - ODB Data for non-GPRS services;
- roaming restriction information (Group E):
  - roaming restriction due to unsupported feature;
- regional subscription information (Group F):
  - regional subscription data.
- VBS/VGCS subscription information (Group G):
  - VBS subscription data;
  - VGCS subscription data.
- CAMEL subscription information (Group H):
  - Originating CAMEL Subscription Information (O-CSI);
  - Supplementary Service CAMEL Subscription Information (SS-CSI);
  - Translation Information Flag CAMEL Subscription Information (TIF-CSI).
- LSA Information (Group I):
  - LSA data.
- Location Services (LCS) information (Group X)
  - HPLMN GMLC List
  - LCS Privacy Exception List

The following **groups of GPRS subscriber information** are defined:

- subscriber information (Group P1):
  - International Mobile Subscriber Identity (IMSI);
  - basic Mobile Station International ISDN Number (MSISDN);
  - subscriber status;
- basic service information (Group P2):
  - Teleservice list.
- Operator Determined Barring (ODB) information (Group P3):
  - ODB Data for GPRS services;
- roaming restriction information (Group P4):
  - roaming restriction in SGSN due to unsupported feature;
- regional subscription information (Group P5):

- regional subscription data.
- GPRS subscription information (Group P6):
  - GPRS subscription data.
- LSA Information (Group P7):
  - LSA data.

## CHANGE REQUEST

**23.016 CR 009**

Current Version: 3.0.0

For submission to: **CN#06**      for approval       strategic   
 for information       non-strategic

**Proposed change affects:**      (U)SIM       ME       UTRAN / Radio       Core Network

**Source:**      TSG N2      **Date:**      18-11-1999

**Subject:**      Correction of VLR subscription Data

**Work item:**      CAMEL Phase 2

<b>Category:</b>	F Correction	<input type="checkbox"/>	<b>Release:</b>	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input checked="" type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
				Release 00	<input type="checkbox"/>

**Reason for change:**      In sect. 3.2, the list of CAMEL data sent from HLR to VLR (group H) is not complete.  
 SS-CSI and TIF-CSI are also sent to the VLR, so these elements shall be added to this list.

**Clauses affected:**      3.2

<b>Other specs affected:</b>	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	
	Other GSM core specifications	<input type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

**Other comments:**      03.16 V7.1.0 (N2-99G63) contains the error correction for GSM Ts 03.16 V7.1.0 (GSM R98).

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