TSGS#22(04) 0095

Source: **SA1**

Title: **CR to 22.240 on GUP UE Requirements (Rel-6)**

Document for: **Approval**

Agenda Item: **7.1.3**

Meeting	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SA1 Doc
SP-23	SP-040095	22.240	005	-	Rel-6	F	GUP UE Requirements	6.2.0	6.3.0	S1-040202

CR-Form-v7

CHANGE REQUEST

⌘ **22.240** **CR** **005** ⌘**rev** **-** ⌘ Current version: **6.2.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [X] ME [X] Radio Access Network [ ] Core Network [X]

Title:	⌘	GUP UE Requirements
Source:	⌘	SA1 (Lucent Technologies)
Work item code:	⌘	GUP ***Date:*** ⌘ 12/01/2004
Category:	⌘	**F** ***Release:*** ⌘ Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The assumption is that a data store is "always available". However, with a UE, it is normal operation for the UE to not be connected to the network. The changes proposed in this CR cover the aspect of the UE that was not covered in CR4 (SP-030707), which clarified the synchronization model.
Summary of change:	⌘	Applications shall be able to access data irrespective of the connectivity status of the UE
Consequences if not approved:	⌘	The synchronisation model is not clear and this could result in network based applications not being able to access the UE data store unless the UE is carrier connected.

Clauses affected:	⌘	6.2			
Other specs affected:	⌘	**Y**	**N**	Other core specifications	⌘
				Test specifications	
				O&M Specifications	
Other comments:	⌘				

6 General Requirements

This clause includes different general technical requirements which are not from the perspective of a particular stakeholder.

6.1 Network Requirements

These requirements are collected from the point of view of technical Network infrastructure and Elements:

- The GUP data shall be accessed by standardised GUP interfaces and protocols which use the generic GUP data model to carry the user profile.
- The GUP Interface shall be independent of the structure and semantics of the data.
- The GUP access mechanism shall support accessing of the whole profile data or a selected part of it.
- The GUP access mechanism shall include read, create, modify and delete access. GUP shall provide these access mechanisms to read, create, modify, and delete data of GUP components.

Note: This does not include installation and modification of the structure of GUP components at a specified data store, nor does it imply management of GUP data stores of GUP component instances.

- The GUP data shall be transferred in a standardised way.
- The GUP interface shall include a standardised way for access control.
- The GUP interface shall enforce the subscriber privacy.
- The GUP interface shall enforce the user privacy.
- The GUP shall not cause significant additional load or delays to the network functions and elements.

6.2 UE Requirements

This subclause includes different UE specific requirements for the 3GPP GUP.

- GUP shall provide mechanisms to describe GUP data in the UE (e.g. terminal capabilities, user preferences, etc).
- GUP shall provide mechanisms to access (create, read, modify or delete) GUP data in the UE.
- Network based applications should have “read” access to UE based GUP components, irrespective of the connection status of the UE.
- Irrespective of the connectivity status of the UE, GUP data stores in the UE shall follow the data consistency, synchronisation and access control requirements.
- It shall be possible to back up GUP data to the home network or VASP network and to restore it to a UE, however the mechanism used is outside the scope of GUP.

6.3 General Service Requirements

This subclause includes different Service aspects and requirements for the 3GPP Generic User Profile. The following general requirements from the point of view of different Service Applications apply:

- It shall be possible for an application to retrieve the whole user profile or selected parts of it in one transaction.
- There shall be effective means to retrieve individual GUP data elements with acceptable delay for real-time services.

One typical use case for the latter requirement is a call control application that would take advantage of subscriber’s preferences or charging related information.

Third party applications may take advantage of the features specified e.g. for Open Service Access (see 3GPP TS 22.127 [3]) to access GUP data.

The description of GUP data shall be easily extensible for new, proprietary uses without any problems caused for the existing or standard applications.

6.4 Management Requirements

This subclause includes different technical Management aspects for the 3GPP Generic User Profile based on the needs of e.g. Self-Service Management, Subscription Management, Service Management, UE Management, Network Element Management, Network Management and Customer Relationship Management.
In 3G networks it is expected that user profile data is not only distributed over different network elements but belongs to different administrative domains. These administrative domains may be closed against external access. However, in order to enable a seamless service experience for the user a controlled transparency to exchange user profile data is needed.
There exist two main cases to be addressed:
Domain borders in the home network:
Already in the network of the subscriber's home network operator there may exist different domains. Potential examples are application of 3rd party value added service providers which are loosely coupled with the network provider, e.g. their applications run under the brand of the network operator but their data are stored and maintained apart from the network operator's entities.
Domain borders between different network operators:
This is the well-known roaming scenario where a user is served by another network than his home one. Roaming is already addressed by mobile networks but in the case of 3G networks there is an important additional requirement: The assumed frequent changes of applications induces a need to handle frequent changes of data sources/consumers.
The user profile data access architecture shall enable the transparent and flexible usage of the user profile data. It shall provide transparent access to distributed data fulfilling the needs of the different roles described above. Furthermore, the architecture shall address the fact that parts of the user profile data are potentially located in different administrative domains. Possible means are negotiation capabilities and proxy functionality at the domain borders.
Management of GUP data components:
Making a particular data store available for GUP is not in the scope of GUP and needs to be administered by other means.
The administration (installation and modification) of the structure of GUP components at a specified data store is not in the scope of GUP and needs to be administered by other means.

6.5 Synchronization Requirements

To avoid unnecessary duplicated data storage an application should be able to access parts of the user's GUP data.
The following requirements are applicable to the synchronization model:

1. GUP shall offer a mechanism to define *synchronized copies*, i.e. instances that are kept synchronized with the master instance.

2. GUP shall offer a mechanism to define *working copies*, i.e. instances that do not require any synchronization.

3. GUP shall make sure that synchronized copies do not conflict with the access right of the corresponding GUP components. For example, if the access rights to some parts of the GUP component change such that the data consumer no longer has access rights, then those parts of the GUP component would no longer be synchronised.

6.6 Data Description Requirements

The Generic User Profile is a generic, extensible profile data collection with mechanisms to e.g. create, retrieve, delete and modify the data. GUP shall define a standardised way of data description. This allows for a standardised access and handling of these data, not excluding the possibility of proprietary extensions.

Only part of the data contents are standardised within 3GPP specifications, whereas application specific data is outside the scope of the 3GPP standardisation. This specification does not mandate any 3GPP service specific data to be part of the 3GPP Generic User Profile. However the common data types shall be specified to facilitate the separate work on the service specific definitions (e.g. for the user profile in HSS).
The common data shall contain data types for at least:

- Private IDs (IMSI and IMS Private User Identity)
- Public IDs (MSISDN and SIP URL)
- Other address types, that are supported by 3GPP (e.g. e-mail)
- Service identifications
- Generic privacy control data
- Date and time
- Service Subscription state (e.g. "active", "not subscribed", "dormant" ...)