

Source: TSG SA WG2
Title: CRs on 23.240
Agenda Item: 7.2.3

The following Change Requests (CRs) have been approved by TSG SA WG2 and are requested to be approved by TSG SA plenary #21.

Note: the source of all these CRs is now S2, even if the name of the originating company(ies) is still reflected on the cover page of all the attached CRs.

Tdoc #	Title	Spec	CR #	cat	Versi on in	REL	WI	S2 meeting
S2-032675	Rg reference point compliance with Liberty Alliance Project ID-WSF	23.240	001r1	B	6.0.0	6	GUP	S2-33
S2-032676	Introduction of discovery service	23.240	002r1	B	6.0.0	6	GUP	S2-33
S2-032677	Corrections to Rg reference point descriptions	23.240	003r1	F	6.0.0	6	GUP	S2-33
S2-032678	Removal of GMLC as example	23.240	004r1	F	6.0.0	6	GUP	S2-33

CR-Form-v7

CHANGE REQUEST

⌘ **23.240 CR 1** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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 ME Radio Access Network Core Network

Title:	⌘ Rg reference point compliance with Liberty Alliance Project ID-WSF		
Source:	⌘ Nokia		
Work item code:	⌘ GUP	Date:	⌘ 10/07/2003
Category:	⌘ B	Release:	⌘ Rel-6
	Use <u>one</u> 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 <u>one</u> 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 Liberty Alliance Project Identity Web Services Framework (ID-WSF) defined identity service interface and GUP Rg reference point are very close to each other because both are e.g. providing user profile information to third parties and applying SOAP (CN4 working assumption). Thus there is a need to keep GUP Rg and ID-WSF fully aligned, although it is realised that the scope of GUP functionalities is much larger than the one in Liberty Identity Web Services Framework (ID-WSF). It is to be noted that the Liaisonship between Liberty Alliance Project and 3GPP has been created. Liberty ID-WSF Data Service Template contains ready-made specifications that can be utilised also in GUP.
Summary of change:	⌘ It is stated that the Rg reference point shall support interworking to other mechanisms that support parts of the user profile outside the scope of 3GPP with references to the Liberty Identity Web Services Framework Primer and the Liberty ID-WSF Data Service Template.
Consequences if not approved:	⌘ Applications using Liberty Identity Web Services Framework (ID-WSF) may be unable to access GUP interfaces which may lead to double implementation in both ends.

Clauses affected:	⌘ 2, 4.2.4										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X	⌘ 29.240	
Y	N										
X											
	X										
	X										
Other comments:	⌘ Reference [2] is added in another CR. See earlier contribution of Nokia in S2-031986 for more background information.										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

First modified section

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 22.240: "Stage 1 Service Requirement for the 3GPP Generic User Profile (GUP)".

[3] [Liberty Identity Web Services Framework Primer, http://www.projectliberty.org/](http://www.projectliberty.org/)

[4] [Liberty ID-WSF Data Service Template, http://www.projectliberty.org/](http://www.projectliberty.org/)

3 Definitions, symbols and abbreviations

End of first modified section**Second modified section**

4.2.4 Reference Points

Reference Points in the GUP Reference Architecture:

1. Reference point Rg

This reference point shall allow applications to create, read, modify and delete any user profile data using the harmonized access interface. The GUP Server locates the data repositories responsible of the storage of the requested profile component(s) and in case of proxy mode carries out the requested operation on the data. [The reference point Rg shall support interworking to other mechanisms that support parts of the user profile outside the scope of 3GPP e.g. the Liberty Identity Web Services Framework Primer \[3\] and Liberty ID-WSF Data Service Template \[4\].](#)

In the redirect mode, the GUP Server returns the locations of the GUP Data Repositories and the application can then send the requested operations via reference point Rp directly to the corresponding GUP Data Repositories.

The reference point Rg carries user related data, and therefore shall be protected by security mechanisms.

2. Reference point Rp

This reference point shall allow the GUP Server or applications, excluding third party applications, to create, read, modify and delete user profile data using the harmonized access interface. Third party applications and third party GUP data repositories shall be connected to the GUP Server only using the Rg reference point.

The reference point Rp carries user related data, and therefore shall be protected by security mechanisms.

4.2.5 Applications

End of second modified section

CHANGE REQUEST

⌘ **23.240 CR 2** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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 ME Radio Access Network Core Network

Title:	⌘ Introduction of discovery service		
Source:	⌘ Nokia		
Work item code:	⌘ GUP	Date:	⌘ 10/07/2003
Category:	⌘ B	Release:	⌘ Rel-6
	<i>Use <u>one</u> of the following categories:</i> 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 .		<i>Use <u>one</u> of the following releases:</i> 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:	⌘ Third party or UE applications might not have the access reference to the Rg reference point implementation unless a separate discovery function exists. There may be several GUP Servers in practical implementations and service discovery may help in getting the contact to the correct GUP Server. However the use of discovery service in GUP is suggested to be fully optional and possibly not often needed by operator's own applications. Liberty Alliance Project (LAP) has specified a discovery service which can be applied in GUP implementations if needed. LAP now also has an official liaisonship with 3GPP. It is to be noted also that the Liberty ID-WSF Discovery Service address may be got from an application that is "Liberty enabled".
Summary of change:	⌘ Discovery Service Specification out of Liberty Identity Web Services Framework (ID-WSF) is added to references. For single point of access it is mentioned that discovery of the contact reference information may be done according to e.g. Liberty Discovery Service if needed. For GUP Server it is mentioned that it may utilise a discovery service to register its contact reference information. Similarly for applications it is also described how a discovery service may be utilised.
Consequences if not approved:	⌘ GUP has no discovery function for third parties. E.g. 3GPP OSA has such a function. Furthermore the relationship between the Liberty ID-WSF and GUP is left completely open causing some confusion with the parties involved.

Clauses affected:	⌘ 2, 4.1.2, 4.2.1.6, 4.2.5
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Other specs affected:	<input type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other core specifications	<input checked="" type="checkbox"/> 29.240
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	
Other comments:	<input checked="" type="checkbox"/>	See earlier contribution of Nokia in S2-031986 for more background information.		

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

First modified section

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
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[1] 3GPP TS 22.240: "Stage 1 Service Requirement for the 3GPP Generic User Profile (GUP)".

[2] [Liberty Discovery Service Specification, http://www.projectliberty.org/](http://www.projectliberty.org/)

3 Definitions, symbols and abbreviations

End of first modified section**Second modified section**

4.1.2 Single point of access

There exists for each Profile a single point of access, which knows the location of the various components of the Profile. [A discovery service, e.g. Liberty Discovery Service Specification \[2\] may be used to get the contact reference information for this access point if not known by other means.](#)

4.1.3 Authentication of profile access

End of second modified section**Third modified section**

4.2.1.6 Additional functionality

The GUP Server may take part in the charging of the data management operations concerning the profile.

The GUP Server may take part in the rate and/or size limiting of the data operations towards the profile.

[The GUP Server may utilise a discovery service to register its contact reference information.](#)

4.2.2 Repository Access Function (RAF)

End of third modified section

Fourth modified section

4.2.5 Applications

The applications that may apply GUP reference points Rg and Rp may be targeted for different purposes e.g. for value added services or subscription management. Both operator's own applications and third party applications are covered. The latter ones shall apply Rg reference point.

Additionally the applications may utilise a discovery service to discover the contact reference information if not found out by other means. Different policies may be followed in the use of discovery service. It may be used by different applications in different ways: per each operation, occasionally or not at all. Third party applications may need to use discovery as a normal step, but in operator's services it may not be needed at all.

Applications have different authorization rights to the GUP data of different subscribers as agreed between the parties.

4.2.6 Message flow of using GUP

End of fourth modified section

CHANGE REQUEST

⌘ **23.240 CR 3** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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 ME Radio Access Network Core Network

Title:	⌘ Corrections to Rg reference point descriptions		
Source:	⌘ Nokia		
Work item code:	⌘ GUP	Date:	⌘ 09/07/2003
Category:	⌘ F	Release:	⌘ Rel-6
	<i>Use <u>one</u> of the following categories:</i> 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 .		<i>Use <u>one</u> of the following releases:</i> 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 redirect mode of operation of the GUP Server agreed in SA2#32 has not been taken into account in the descriptions of the Rg reference point.
Summary of change:	⌘ It is described how redirection works. Redirection information is provided in the procedure responses. After the redirection instructions have been returned, the procedure is terminated without any other specified results or retained information in the GUP Server. The Redirection data parameter is added to the responses of the following procedures: Create, Delete, Modify, Query and Subscribe. This parameter contains Redirection address and Authorisation assertion. An indicator is added to the Requestor data to show if the application has an ability to handle redirection or even a desire to receive a redirection request. It is also clarified that Invoke identification for Subscribe procedure is returned unless the request is redirected or fails.
Consequences if not approved:	⌘ The redirect mode in Rg reference point does not work at all.

Clauses affected:	⌘ 4.3, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.8.1, 4.3.8.2 (new subclause)										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table> Other core specifications Test specifications O&M Specifications	Y	N	X			X		X	⌘ 29.240	
Y	N										
X											
	X										
	X										
Other comments:	⌘ Note when implementing the changes that the table numbering needs to be										

updated after the modified section also in subclause 4.4.

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4.3 Rg reference point procedures

This subclause defines the procedures applied in the Rg reference point between the applications and the GUP Server. This reference point supports also third party profile access. Rg can be used e.g. to create the whole user profile or some components in it, to read any piece of data in the profile or to modify those. There are means to authorise all requests and protect the user's privacy in all operations. Rg is applied to control the data stored in the different GUP components as per users.

There are the following procedures:

- Create
- Delete
- Modify
- Query
- Subscribe
- Unsubscribe
- Notify

Instead of proxying the requests (or handling them by itself) the GUP Server may also apply the redirect mode of operation for applications that support redirect mode, which implies that the GUP Server responds to the request with the redirection information such as redirection address and authorisation assertions. Redirection can be made with Create, Delete, Modify, Query and Subscribe procedures.

4.3.1 Create procedure

Create procedure is used by the application to create a new user profile or new components to an existing profile. The procedure is always related to a single subscriber identity which is given in the request. Additionally the Create procedure shall carry the component types and the data to be created to each component. At least one component shall be provided. Creation of the first component implies profile creation. The component type identifies what data are concerned i.e. not just the data typing. It is presumed that the profile data structure is already known by the both parties. No new type of data can be defined by this procedure, only the data contents are provided. Furthermore the application shall provide the necessary data for authentication and authorization of this create function (e.g. credentials, assertions and identifications).

The outcome of the procedure shall be provided in a separate response message. If the requestor data indicated that the application is able to receive redirect instructions, the GUP server may decide to return redirect instructions based on policies set by the operator in the GUP server. After this response the procedure is terminated without any other specified results or retained information in the GUP Server.

Table 4.1: Request data of Create procedure

Parameter	Description	Use
Subscriber Identity	Specifies the user identity with its type (e.g. SIP URI public ID).	Mandatory
Component data	Specifies which components are addressed and provides the data for those. There may be several Component data elements corresponding to several created components. At least one element must be present. See the table below for the more detailed contents.	Mandatory
Requestor data	Specifies the data related to the requestor. These data may be used as input in the authentication and authorization process. E.g. end user and application identification, credentials or privacy policy information.	Optional

Table 4.2: Contents of Component data parameter

Parameter	Description	Use
Component type	Specifies the type of the created component. The Component type identifies the applied component data definitions.	Mandatory
Data	Specifies the GUP component data according to the specified Component type.	Mandatory

Table 4.3: Response data of Create procedure

Parameter	Description	Use
Redirection data	Specifies the redirection instructions and assertions.	Optional
Status	Indicates whether: 1. The procedure was carried out successfully. 2. The request was redirected, or 3. A failure was detected, the procedure was carried out successfully or whether some failure was detected. For the proxy mode 1 or 3 can be indicated. For the redirect mode 2 or 3 can be indicated. The possible errors are failure is described in sufficient detail.	Mandatory (like the response itself)

4.3.2 Delete procedure

Delete procedure is used by the application to remove a profile or selected GUP components from the repository. The attached subscriber identity and the component type are specified. If no component type is provided, the whole user profile identified by the Subscriber identity will be deleted. The application shall provide the necessary data for authentication and authorization purposes (e.g. credentials, assertions and identifications).

The outcome of the procedure shall be provided in a separate response message. [If the requestor data indicated that the application is able to receive redirect instructions, the GUP server may decide to return redirect instructions based on policies set by the operator in the GUP server. After this response the procedure is terminated without any other specified results or retained information in the GUP Server.](#)

Table 4.4: Request data of Delete procedure

Parameter	Description	Use
Subscriber identity	Specifies the user identity with its type (e.g. SIP URI public ID).	Mandatory
Component types	Specifies the types of the components.	Optional
Requestor data	Specifies the data related to the requestor. These data may be used as input in the authentication and authorization process. E.g. end user and application identification, credentials or privacy policy information.	Optional

Table 4.5: Response data of Delete procedure

Parameter	Description	Use
Redirection data	Specifies the redirection instructions and assertions.	Optional
Status	Indicates whether: 1. The procedure was carried out successfully, 2. The request was redirected, or 3. A failure was detected.the procedure was carried out successfully or whether some failure was detected. For the proxy mode 1 or 3 can be indicated. For the redirect mode 2 or 3 can be indicated. The possible errors are failure is described in sufficient detail.	Mandatory (like the response itself)

4.3.3 Modify procedure

Modify procedure is used by the application to change the data in the GUP components. Also adding and deleting data is possible by Modify procedure, but it cannot create a new component. The modified data are identified by the user identity and the data reference. The modification may concern the whole component or any lower level piece of data referenced in the procedure invocation. The contents for the entire referenced data shall be provided. Several individual changes to different components can be made with one procedure invocation. It must be noted that if modification of one component fails, the other changes cannot always be rolled back (implementation specific feature). However the response data shall specify which modifications were not accomplished. It is also possible to add more similar type of data elements to an existing array type of element. The requestor shall provide the necessary data for authentication and authorization purposes (e.g. credentials, assertions and identifications).

The outcome of the procedure shall be provided in a separate response message. [If the requestor data indicated that the application is able to receive redirect instructions, the GUP server may decide to return redirect instructions based on policies set by the operator in the GUP server. After this response the procedure is terminated without any other specified results or retained information in the GUP Server.](#)

Table 4.6: Request data of Modify procedure

Parameter	Description	Use
Subscriber identity	Specifies the user identity with its type (e.g. SIP URI public ID).	Mandatory
Modification data	Specifies which data are addressed and how those are changed. There may be several Modification data items corresponding to several individual modifications. These modifications may concern the same or different components. See the table below for the contents of one modification.	Mandatory
Requestor data	Specifies the data related to the requestor. These data may be used as input in the authentication and authorization process. E.g. end user and application identification, credentials or privacy policy information.	Optional

Table 4.7: Contents of Modification data parameter

Parameter	Description	Use
Data reference	Specifies which data are modified or expanded. The reference identifies both the component type and the possible deeper level data reference. The reference must be unique in a way that it refers only to one data item.	Mandatory
New data	Specifies the data to be stored in the GUP component. It is expected that all the data elements in the referenced data structure are given.	Mandatory
Overwrite indication	Specifies if the data are added to the existing data or replaces those. Default action is "insert".	Optional

Table 4.8: Response data of Modify procedure

Parameter	Description	Use
Redirection data	Specifies the redirection instructions and assertions.	Optional
Status	Indicates whether: 1. The procedure was carried out successfully, 2. The request was redirected, or 3. A failure was detected.the procedure was carried out successfully or whether some failure was detected. For the proxy mode 1 or 3 can be indicated. For the redirect mode 2 or 3 can be indicated. The possible errors are failure is described in sufficient detail.	Mandatory (like the response itself)

4.3.4 Query procedure

Query procedure is used by the application to retrieve the data in the user profile or its specific components. The queried data are identified by the user identity and the data reference. The data retrieval may concern the whole profile, component or any parts of a component as referenced in the invocation. The requestor shall provide the necessary data for authentication and authorization purposes (e.g. credentials, assertions and identifications).

The retrieved data shall be provided in a separate response message. [If the requestor data indicated that the application is able to receive redirect instructions, the GUP server may decide to return redirect instructions based on policies set by the operator in the GUP server. After this response the procedure is terminated without any other specified results or retained information in the GUP Server.](#)

Table 4.9: Request data of Query procedure

Parameter	Description	Use
Subscriber identity	Specifies the user identity with its type (e.g. SIP URI public ID).	Mandatory
Data references	Specifies which data are read. The data reference identifies the component type and the deeper level reference (if the whole component is not meant to be read). Multiple references may be given. It is also possible to refer to the profile root which implies that the whole profile data are queried.	Mandatory
Requestor data	Specifies the data related to the requestor. These data may be used as input in the authentication and authorization process. E.g. end user and application identification, credentials or privacy policy information.	Optional

Table 4.10: Response data of Query procedure

Parameter	Description	Use
Data	Contains the retrieved data as indicated by the Data references.	Mandatory
Redirection data	Specifies the redirection instructions and assertions.	Optional
Status	Indicates whether: 1. The procedure was carried out successfully, 2. The request was redirected, or 3. A failure was detected.the procedure was carried out successfully or whether some failure was detected. For the proxy mode 1 or 3 can be indicated. For the redirect mode 2 or 3 can be indicated. The possible errors are failure is described in sufficient detail.	Mandatory

4.3.5 Subscribe procedure

Subscribe procedure is used by the application to request notifications about changes in the GUP component data. The subscribed data are identified by the user identity and the data reference. Furthermore the application can identify which elements are to be monitored for changes if it is not interested in all changes. Data synchronization can be performed by

Subscribe and Notify procedures. The GUP Server returns the identification of the subscription request to provide means for the application to link the notifications of Notify procedure to the related subscribe requests.

A filtering data parameter is defined to facilitate performance optimization. This may be left partly vendor/operator specific. The requestor shall provide the necessary data for authentication and authorization purposes (e.g. credentials, assertions and identifications).

The outcome of the procedure shall be provided in a separate response message. If the requestor data indicated that the application is able to receive redirect instructions, the GUP server may decide to return redirect instructions based on policies set by the operator in the GUP server. After this response the procedure is terminated without any other specified results or retained information in the GUP Server.

Table 4.11: Request data of Subscribe procedure

Parameter	Description	Use
Subscriber identity	Specifies the user identity with its type (e.g. SIP URI public ID).	Mandatory
Data references	Specifies which data are monitored for changes. The reference identifies both the component type and the possible deeper level data reference. Multiple references may be given. Any change within the referenced data structure causes a notification to be sent. If the parameter is absent, all modifications are notified.	Optional
Requestor data	Specifies the data related to the requestor. These data may be used as input in the authentication and authorization process. E.g. end user and application identification, credentials or privacy policy information.	Optional
Filter data	Specifies additional conditions for sending notifications to optimise the performance e.g. when immediate synchronization is not required. The parameter specifies also whether the initial data values are requested to be reported.	Optional

Table 4.12: Response data of Subscribe procedure

Parameter	Description	Use
Invoke identification	Contains the invoke identification assigned by the GUP Server for this request.	Mandatory (<u>unless the request is redirected or fails</u>)
<u>Redirection data</u>	<u>Specifies the redirection instructions and assertions.</u>	<u>Optional</u>
Status	Indicates whether: <u>1. The procedure was carried out successfully,</u> <u>2. The request was redirected, or</u> <u>3. A failure was detected.</u> the procedure was carried out successfully or whether some failure was detected. <u>For the proxy mode 1 or 3 can be indicated. For the redirect mode 2 or 3 can be indicated.</u> The possible errors are <u>failure is</u> described in sufficient detail.	Mandatory (like the response itself)

4.3.6 Unsubscribe procedure

Unsubscribe procedure is used by the application to cancel one or several existing subscriptions. The outcome of the procedure shall be provided in a separate response message.

Table 4.13: Request data of Unsubscribe procedure

Parameter	Description	Use
Invoke identifications	Specifies one or several invoke identifications assigned by the GUP Server for the subscriptions.	Mandatory

Table 4.14: Response data of Unsubscribe procedure

Parameter	Description	Use
Status	Indicates whether the procedure was carried out successfully or whether some failure was detected. The possible errors are described in sufficient detail.	Mandatory (like the response itself)

4.3.7 Notify procedure

Notify procedure is invoked by the GUP Server when the data which was identified in Subscribe procedure changes or when the invoked Subscribe procedure requested sending of all the initial values of the referenced data. The procedure identifies the changed data and provides the new values.

The outcome of the procedure shall be provided in a separate response message.

Table 4.15: Request data of Notify procedure

Parameter	Description	Use
Invoke identification	Specifies the invoke identification assigned by the GUP Server for this subscription.	Mandatory
Notified data	Specifies which data are reported together with the data itself. Multiple pieces of data may be provided.	Mandatory

Table 4.16: Response data of Notify procedure (optional)

Parameter	Description	Use
Status	Indicates whether the procedure was carried out successfully or whether some failure was detected. The possible errors are described in sufficient detail.	Mandatory (however the whole response is optional)

4.3.8 Common information definitions

The information elements that are applied in several procedures of Rg reference point are described in this subclause.

4.3.8.1 Requestor data

The Requestor data contain the information that the sender of the request provides in order to facilitate the authentication and authorization functions. The access control and user privacy functions work based on these data. Also an unspecified Additional info parameter is defined to carry data e.g. for monitoring or accounting purposes. All the elements are optional. However at least one shall be present if the parameter is applied.

Table 4.17: Requestor data

Element	Description	Use
Subscriber identification	Specifies the end user being served.	Optional
Application identification	Specifies the application being served. The GUP Server has to link the Application identification to the actual sender of the request by the appropriate means taking into account the applied security measures and domains.	Optional
Credentials	Contains authentication information.	Optional
Authorization assertion	Contains the assertion for authorization. The nature of the assertion must be for one time use to prevent replay and cut-and-paste attacks. E.g. digest or signature mechanisms may be applied.	Optional
Privacy policy	Information about the applied privacy policy.	Optional
Redirection indications	Specifies if the application being served is able to handle returned redirect requests or if it specifically desires to apply the redirect mode. However the GUP Server decides which mode is used. If the parameter is missing, it is presumed that no such capability exists with the application.	Optional
Additional info	Additional unspecified information related to the requestor or request.	Optional

4.3.8.2 Redirection data

[The Redirection data is returned to the requester if redirection is called for. These data contain the address where the request is to be redirected to and the authorisation assertions optionally provided by the GUP Server, which may this way carry out at least part of the authorisation on behalf of the RAF \(or Data Repository\). The RAF \(or the GUP Data Repository\) takes the final decision whether the authorisation is accepted or not.](#)

Table 4.xx: Redirection data

Element	Description	Use
Redirection address	Specifies the address (e.g. URI) where the request is to be redirected.	Optional
Authorisation assertion	Contains the assertion for authorisation. This may be placed in the Requestor data item in the subsequent requests over Rp reference point.	Optional

4.3.9 Error handling and common error types

The basic principle in error handling is that all errors in carrying out the procedures lead to complete abortion of the requested operation. However if e.g. multiple modifications with separate data references are made with one procedure invocation, it is possible that part of these are completed even if some would fail. The procedure error responses identify the error type together with more detailed information about the cause of the error.

The common error types which can be applied to all procedures contain:

Table 4.18: Common error types

Error	Description
Invalid operation	The operation is invalid or unsupported.
Invalid parameter	The given parameter of the operation is invalid.
Unauthorized operation	There was no authority for the requested operation.
Data unavailable	The requested data were not available.
Unexpected error	An unexpected error condition was met.

CHANGE REQUEST

23.240 CR 4 # rev 1 # Current version: 6.0.0

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# ME Radio Access Network Core Network

Title:	# Removal of GMLC as example		
Source:	# Siemens		
Work item code:	# GUP	Date:	# 09/07/2003
Category:	# F	Release:	# Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# The GMLC may have no Rg, Rp interface within the Rel-6 timeframe; the interface GMLC to PPR is specified as Lpp in Rel-6 – therefore the GMLC should be eliminated as example from the “example of mapping the GUP reference architecture”
Summary of change:	# The GMLC is removed from the GUP reference architecture mapping example
Consequences if not approved:	# The mapping functions of LCS architecture to GUP remains unclear

Clauses affected:	# 4.2								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X
Y	N								
#	X								
#	X								
#	X								
Other comments:	#								

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

***** Modified Section *****

4.2 GUP functional entities

The GUP reference architecture as shown in Figure 4.1 consists of:

- GUP Server;
- Repository Access Function (RAF);
- GUP Data Repositories;
- Rg and Rp reference points;
- Applications.

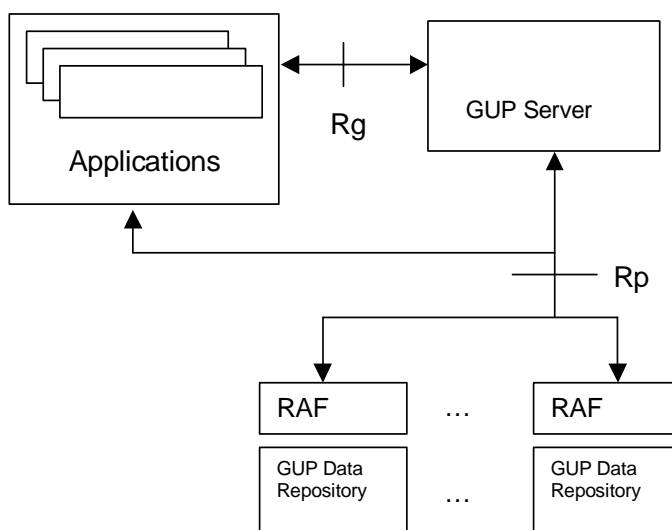


Figure 4.1: GUP reference architecture

An example of mapping the GUP reference architecture to current infrastructure environment is shown in Figure 4.2.

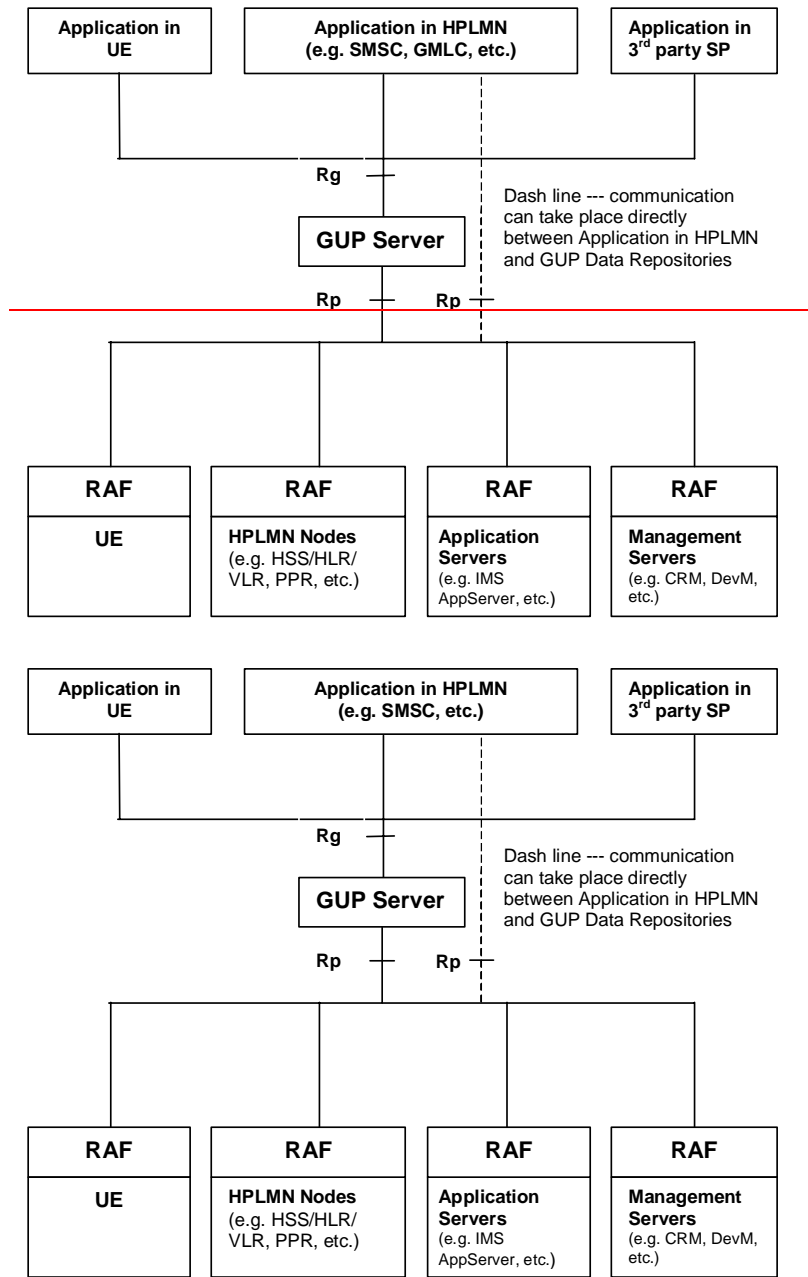


Figure 4.2: An example of mapping the GUP reference architecture to current infrastructure environment