3GPP TSG-T (Terminals) Meeting #24
Seoul, Korea
2 - 4 June, 2004

TP-040093

Agenda Item: 5.2.3

Source: T2

Title: Change Request on GUP

Document for: Approval

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Spec	CR	Rev	Rel	Subject	Cat	Vers-Current	Vers-New	Doc-2nd-Level	Workitem
23.241	001	-	Rel-6	Correction of naming of structural main parts	F	6.0.0	6.1.0	T2-040197	GUP

CR-Form-v7

CHANGE REQUEST

| ⌘ | **23.241** CR **001** | ⌘**rev** | **-** | ⌘ | 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 **X**

Title: ⌘	Correction of naming of structural main parts	
Source: ⌘	T2 (T-Mobile)	
Work item code: ⌘	GUP	***Date:*** ⌘ 07/04/2004
Category: ⌘ **F**		***Release:*** ⌘ Rel-6

Use one of the following categories:	*Use one 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	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	Avoid inconsistency in naming of structural parts of a profile and profile component
Summary of change: ⌘	Change of "attribute" to "Data Element" in the description of structural main parts in clause 5.
Consequences if not approved: ⌘	Inconsistency in the use of terms in clauses 3, 5, 7 and 8 and possible misinterpretations as "attribute" has a different meaning in the context of XML as it is used here.

Clauses affected: ⌘	3, 5

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
		X	Test specifications	
		X	O&M Specifications	

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.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

The terms "GUP" and "Profile" are synonymous within the present document.

3GPP Generic User Profile (GUP): collection of user related data which affects the way in which an individual user experiences services and which may be accessed in a standardized manner as described in this specification. The Generic User Profile is defined using the W3C XML recommendation [1].

Profile Instance: physical representation of a Profile, and is a collection of Profile Component Instances. For every user there is exactly one Profile Instance which is regarded as the Master. Additional copies containing the same data are allowed.

Profile Component (logical): A Profile Component is logically a part of the Generic User Profile. A Profile Component is instantiated and thus has an associated Profile Component Instance.

Profile Component Instance (physical): physical representation of a Profile Component. To one Profile Component (logical) corresponds one Profile Component Instance which is regarded as the Master and one or more component instance copies, i.e. physical copies. Component instances may be located in the Home Network, in the Value Added Service Provider Environment and/or the User Equipment.

Profile Data Element: indivisible unit of Generic User Profile information.

GUP Information Model: method describing how to define data structure, the way data elements are defined and the relationship to each other. The Information Model is describing the concept of Generic User Profile.

Data Description Method (DDM): method describing how to define the data contained in the Generic User Profile. The description is defined using the W3 XML Schemas recommendations [5] and [6].

Master Instance: among the instances (physical) associated with a Profile or Profile Component (logical), one of them is tagged with the role of "master instance". The master instance is responsible for the correct value of the corresponding Profile component.

Identity: permanent Identifier used to identify one Instance of a data entity in 3GPP TS 23.241. An Identity exists at the level of a Profile and a Profile Component. An Identity includes a representation of the User Identity within its structure.

User Identity: is the means to uniquely identify a User (such as an IMSI).

Datatype Definition Method (DtDM): method describing how to define the new datatypes contained in the Generic User Profile, including an initial set of built-in datatypes.

Data Payload: is the useful data in Profile and Profile Components. It consists of a number of ~~Attributes~~ Data Elements carrying the data values.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

DDM	Data Description Method
DE	Data Element
DtDM	Datatype Definition Method
GUP	Generic User Profile
PC	Profile Component

5 Structure of Profiles

5.1 Introduction

This clause further defines parts of the Information Model (see 3GPP TS 23.240 [11]) which are relevant to Profiles (or Generic User Profiles) and Profile Components.

It describes the concepts used to model the GUP data and the relationships between those concepts and defines characteristics of all Profile Component types. It is used in the design and implementation of generic functions using, maintaining and managing GUP data. Properties specific to a Profile Component type are described using the DDM and DtDM.

Important issues described as illustrations and examples only, include different types of Generic User Profile usage and storage distribution.

5.1.1 Profile

A Profile or Generic User Profile is the collection of Profile Components. At least one Profile Component shall be mandatory in a Profile. A Profile is instantiated and thus has an associated Profile Instance. The Profile implements the functional definition of Profile according to GUP Stage 1 (3GPP TS 22.240 [10]. But there may be Profiles or Profile Components that are not related to a certain user, e.g. see P4 in figure 5.1.1-1.

Figure 5.1.1-1 shows an example of Generic User Profile as a collection of Profile Components.
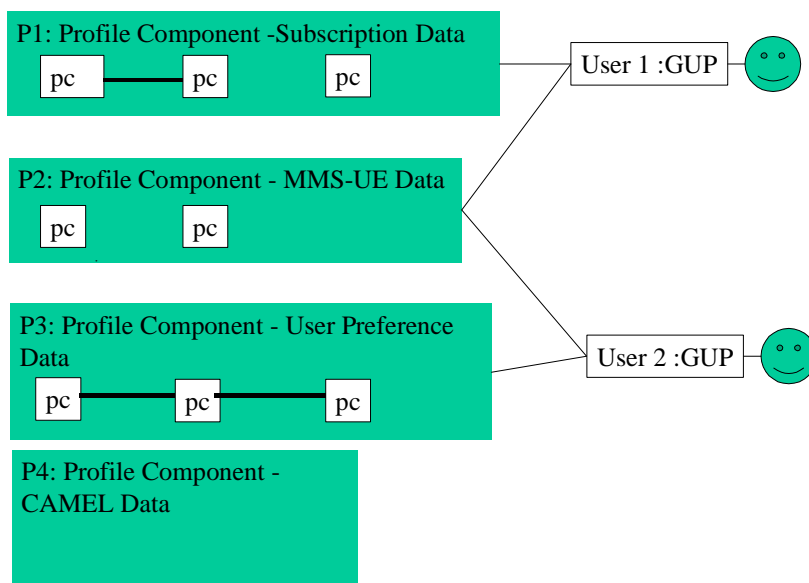
NOTE: pc: Profile Component. Connection lines indicate examples of hierarchical relationships.

Figure 5.1.1-1: An example of Generic User Profile as a collection of Profile Components

Figure 5.1.1-2 shows the structure of the Profile and the relationship between the main parts. The main parts in this Figure are described in the clauses immediately following. Figure 5.1.1-2 shows the generic structure, and it is not essential that all elements be present in all implementations of the structure.
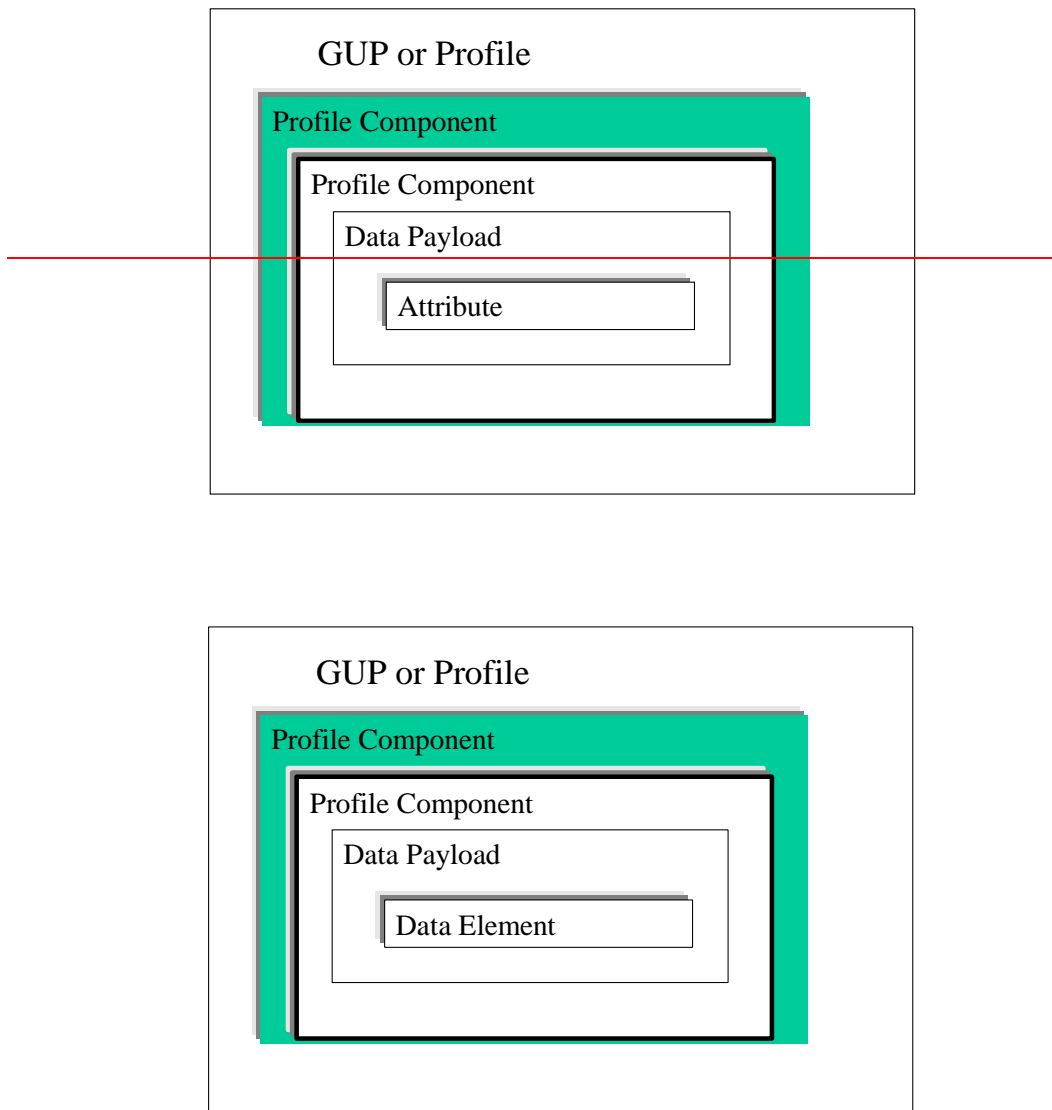
```
+-------------------------------------------------+
|                GUP or Profile                   |
|   +-----------------------------------------+   |
|   | Profile Component                       |   |
|   |   +---------------------------------+   |   |
|   |   | Profile Component               |   |   |
|   |   |   +-------------------------+   |   |   |
|   |   |   | Data Payload            |   |   |   |
|   |   |   |   +-----------------+   |   |   |   |
|   |   |   |   | Attribute       |   |   |   |   |
|   |   |   |   +-----------------+   |   |   |   |
|   |   |   +-------------------------+   |   |   |
|   |   +---------------------------------+   |   |
|   +-----------------------------------------+   |
+-------------------------------------------------+
```

```
+-------------------------------------------------+
|                GUP or Profile                   |
|   +-----------------------------------------+   |
|   | Profile Component                       |   |
|   |   +---------------------------------+   |   |
|   |   | Profile Component               |   |   |
|   |   |   +-------------------------+   |   |   |
|   |   |   | Data Payload            |   |   |   |
|   |   |   |   +-----------------+   |   |   |   |
|   |   |   |   | Data Element    |   |   |   |   |
|   |   |   |   +-----------------+   |   |   |   |
|   |   |   +-------------------------+   |   |   |
|   |   +---------------------------------+   |   |
|   +-----------------------------------------+   |
+-------------------------------------------------+
```

Figure 5.1.1-2: Structural relation between main parts

5.1.2   Profile Instance

A Profile is instantiated and thus a Profile has an associated Profile Instance. A Profile Instance keeps together logically related Profile Component Instances (data), which are possibly distributed in several storage nodes.

A **Profile** Instance contains one or more **Profile Component** Instances each containing the **Data Payload**.

5.2   Structure of Profile Component and Profile Component Instance

5.2.1   Profile Component

A Profile Component is the collection of Data Elements (Data Payloads). A Profile Component is instantiated and thus has an associated Profile Component Instance. The Profile Component Instance may be the independent unit for creation, deletion, storage, and access control. However, deletion shall be permissible only according to the rules in Section 8.

An individual service may make use of a number of Profile Components (i.e. a subset) from the Profile.

A Profile Component will contain one or more other Profile Components. Profile Components may be nested in a hierarchical manner. Profile Components may contain Data Element Groups which may contain other Data Element Groups, and which contain Data Elements.

A Profile Component is defined at a Logical level, thus it has a Logical relationship to a Profile Component defined within it. A Profile Component Instance has a relationship to the Profile Component from which it is instantiated.

5.2.2   Profile Component Instance

A Profile Component Instance is coupled to the Profile Instance or another Profile Component Instance. Several Profile Component Instances are grouped into a Profile Instance or another Profile Component Instance.

5.2.2.1   Data Payload

A Data Payload is the Profile data contained in a Profile Component Instance. A Data Payload carries the data values, e.g. MMS terminal capability information regarding supported media types and media formats. A Data Payload contains one or several ~~Attributes~~Data Elements.

5.2.2.2   ~~Attribute~~Data Element

A~~n~~ ~~Attribute~~ Data Element carries the individual Profile value (content). One or more ~~Attributes~~ Data Elements are carried in a Data Payload.

## 5.3   Structure of Profile Description and Profile Component Description

5.3.1   Profile Description

Every Profile has an associated Profile Description. A Profile Description describes the Profile type, semantic, payloads, and properties.

A Profile is described in one Profile Description. A Profile Description describes zero or more Profiles.

A Profile Description consists of Profile Component Descriptions which consist of other Profile Component Descriptions, in an analogous manner to a Profile consisting of Profile Component and a Profile Component consisting of other Profile Components.

A **Profile Description** is the definition of a **Profile Type**, which is the class or type of Profile Instances. The common properties of a number of Profile Instances are described by a Profile Type. This relationship is shown in figure 5.3.1-1.
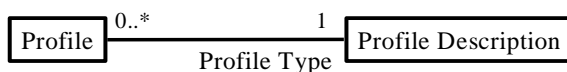
Figure 5.3.1-1: Profile Description

The purpose of a Profile is to keep together logically related data, which are potentially distributed in several storage nodes.

The definition of a Profile Type is kept together in a Profile Description.

A Profile Description contains:

- **Semantics:** defines the meaning of the Profile.

- **Profile Type:** defines the Type of the Profile.

- **Payload Datatype:** is a reference to a Composite Datatype that describes the content of the Profile's Data Payload.

- **Profile Property reference:** is referencing a Common Properties containing data controlling the usage and handling of the Profile.

The Property contains information that defines the rules, which control the usage and handling of Profiles.

Examples of property information are:

- Dynamics, change rate of:

  - Component creation/deletion.

  - Data value.

- Ownership.

- Access rights for different users:

  - No access, read, write access.

  - Right to create, delete.

Figures 5.3.1-2 and 5.3.1-3 show this relationship in UML diagram form. Profile Component Identities and Profile Identities are described in the next clause.
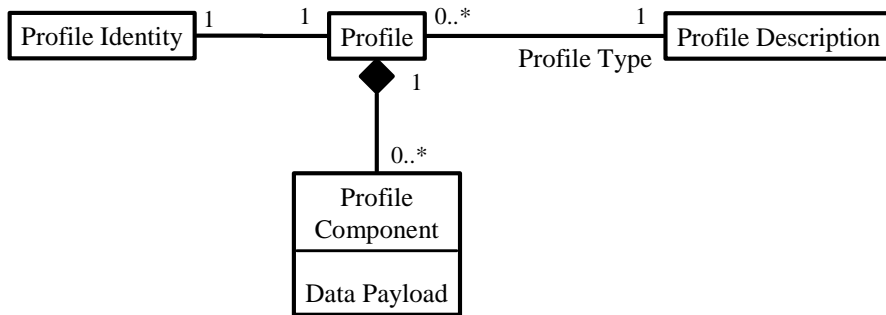

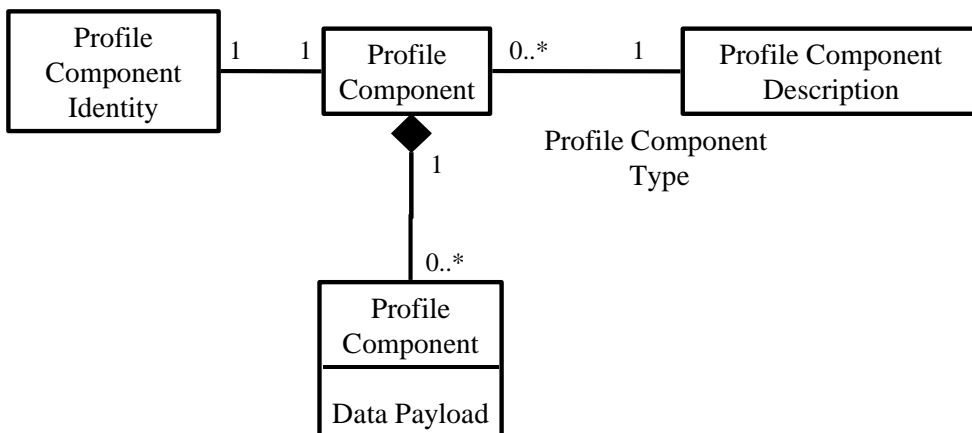**Figure 5.3.1-2: UML-diagram, Profile Description**

Figure 5.3.1-3: UML-diagram, Profile Component Description

5.3.2 Profile Component Description

Every Profile Component has an associated Profile Component Description. A Profile Component Description describes the Profile Component type, semantic, payloads, and properties.

A Profile Component Description contains:

- **Semantics:** defines the meaning of the Profile Component.

- **Profile Component Type:** defines the Type of the Profile Component.

- **Payload Datatype:** is a reference to a Composite Datatype that describes the content of the Profile Component's Data Payload.

- **Component Property reference:** is referencing a Common Properties containing data controlling the usage and handling of the Profile Component.

The Component Property contains information that defines the rules, which control the usage and handling of Profile Components.

Examples of property information are:

- Dynamics, change rate of:

  - Component creation/deletion.

  - Data value.

- Ownership.

- Access rights for different users:

  - No access, read, write access.

  - Right to create, delete.

Figure 5.3.2-1 describes the Relationship between a Profile Component and its associated Profile Component Description.

Profile Component

- Profile
  - Profile Component
    - Profile Component
      - Data Payload
        - Attribute

Profile Component Description

- Profile Description
  - Profile Component Description
    - Profile Component Description
      - Composite Datatype
        - Attribute : Datatype

Profile Component

- Profile
  - Profile Component
    - Profile Component
      - Data Payload
        - Data Element

Profile Component Description

- Profile Description
  - Profile Component Description
    - Profile Component Description
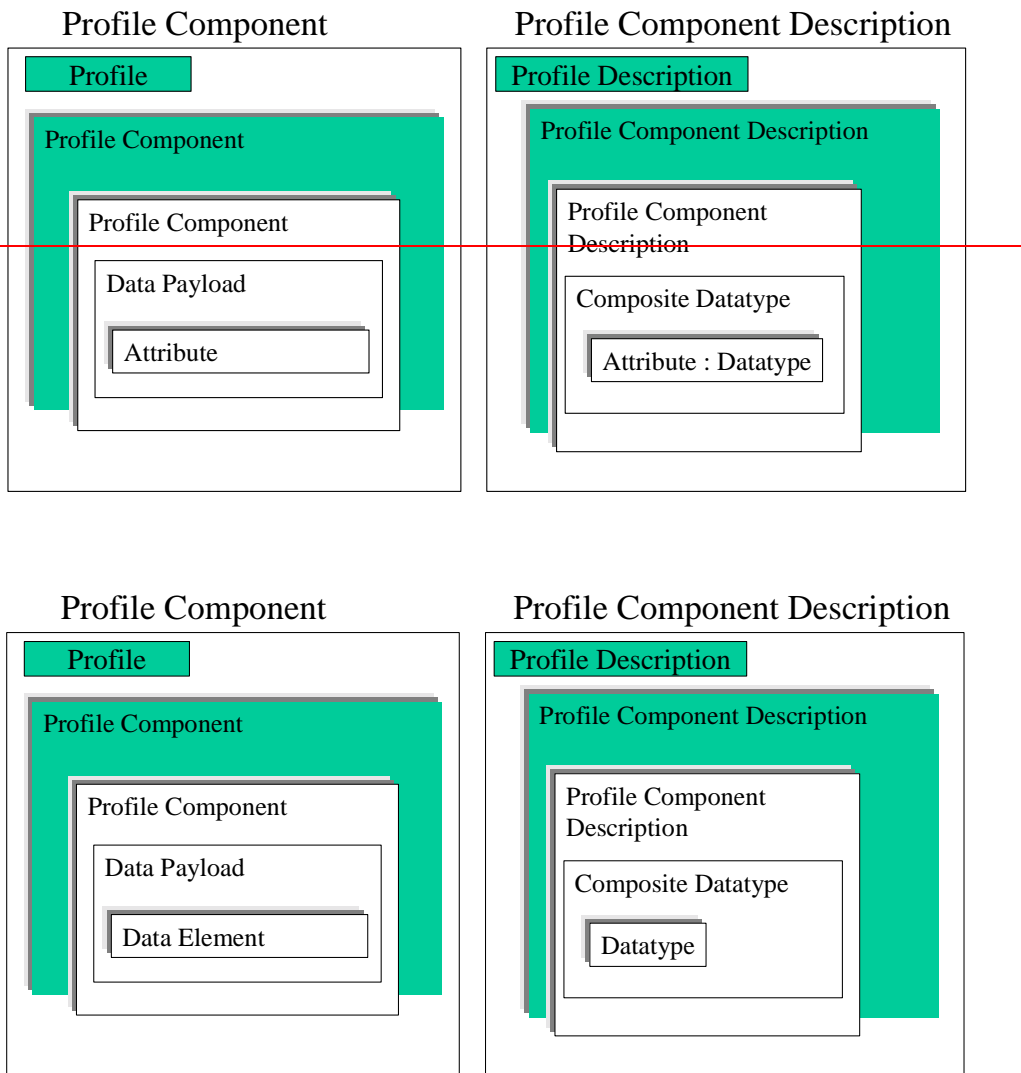   - Composite Datatype
        - Datatype

Figure 5.3.2-1: Relationship between Profile Component and Profile Component Description