
Source: SA5 (Telecom Management)
Title: Rel-6 CR 32.140 Update the use cases in Subscription Management
Document for: Decision
Agenda Item: 7.5.3

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Doc-2nd-Level	Workitem
SP-040110	32.140	003	-	Rel-6	Update the use cases in SuM	F	6.1.0	S5-042155	SuM

CHANGE REQUEST

⌘ **32.140 CR 003** ⌘ rev - ⌘ Current version: **6.1.0** ⌘

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:	⌘ Update the use cases in SuM		
Source:	⌘ SA5 (istvan.aba@t-mobile.at)		
Work item code:	⌘ SuM	Date:	⌘ 27/02/2004
Category:	⌘ F	Release:	⌘ Rel-6
	<i>Use one 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 one 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:	⌘ To update SuM with the results of use case analysis conducted within SA5 SWGA		
Summary of change:	⌘ Remove process documentation regarding use cases, add a reference to TR 32.803 which documents the Use case method. Update Definitions section. Update the use cases in annex B which now use the TR 32.803 technique.		
Consequences if not approved:	⌘ Inclusion of methods documentation which is not appropriate to a TS, Missing definitions, Inclusion of use case which does not align with any existing industry standard notation or method e.g. UML., Ambiguity in the interpretation of Subscription Management		

Clauses affected:	⌘ References section 2 to add TR 32.803 Definitions section 3.1 modified and sorted Use case methods section 5.3 Example Use cases Annex B These are new use cases in annex B, B1 to B12						
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;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘ Other core specifications ⌘ ⌘ Test specifications ⌘ ⌘ O&M Specifications ⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘ Refer to New Rel-6 TR 32.803-100 in S5-042154 which documents the use case technique.						

How to create CRs using this form:

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*.

NOTE: The present document may contain references to pre-Release-5 specifications. These references shall be taken to refer to the Release-6 version where that version exists.

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 23.002: "Network architecture (Release 5)".
- [3] GB910 Telecom Operations Map v 2.1 (TeleManagement Forum).
- [4] MWIF MTR-002 (Annex A): "Architecture requirements".
- [5] ebXML Transport Routing and Packaging Overview and Requirements 26th May 2000 v0-96.
- [6] 3GPP TS 32.101: "Telecommunication management; Principles and high level requirements".
- [7] 3GPP TS 23.008: "Organisation of subscriber data".
- [8] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".
- [9] 3GPP TR 22.121: "Service aspects; The Virtual Home Environment; Stage 1".
- [10] 3GPP TS 29.198-3: "Open Service Access (OSA); Application Programming Interface (API); Part 3: Framework".
- [11] 3GPP TS 22.240: "Service requirements for 3GPP Generic User Profile (GUP); Stage 1".
- [12] 3GPP TS 23.240: "3GPP generic user profile requirements; Stage 2; Architecture
- [13] 3GPP TS 23.241: "3GPP Generic User Profile (GUP) requirements; Stage 2; Data description framework".
- [14] 3GPP TS 24.241: "3GPP Generic User Profile (GUP) requirements; Stage 3; Access; Common objects".
- [15] 3GPP TS 22.041: "Operator Determined Call Barring".
- [16] 3GPP TS 23.015: "Technical realisation of Operator Determined Barring (ODB)".
- [17] 3GPP TS 32.102: "Telecommunication management; Architecture".

Start of change in Clause 2

[18] 3GPP TR 32.803+ : "Process Guide: Use Cases in UML".

End of Change in Clause 2

Start of Change in Clause 3.1

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply:

actor: entity, party, person or organization playing one or more Roles

Integration Reference Point (IRP): See 3GPP TS 32.102 [17].

Network Operator: See 3GPP TR 21.905 [1].

organization: 'legal entity' that may perform one or more 'business roles' when interacting with other Organizations

PLMN Operator: See 3GPP TR 21.905 [1].

Reseller Service Provider: Actor that resells Services provided and defined technically by another service provider. The reseller may re-brand the Service or offer a modified tariff package to its customers.

retailer: organization that sells 3GPP User Equipment and Services to retail customers

role: defined by a set of properties or attributes that describe the capabilities of an entity that can be performed on behalf of other Role(s)
An activity performed by an Actor. Each Actor can play many Roles.

service: See 3GPP TR 21.905 [1].

Service Profile (Sprof): A service specific subscription profile component.

Service Provider (SP): See 3GPP TR 21.905 [1].

Service Integrator: organization that takes a set of services from other providers and derives an end-to-end set of services
It has responsibility for the end to end service QoS to the Customer.

Subscriber: See 3GPP TR 21.905 [1].

Subscriber Profile: The set of data managed and stored by Subscription Management for a subscriber for the management of associated users and subscribed services and the limits relative to their use.

subscription: See 3GPP TR 21.905 [1].

Subscribed Services Profile: Contains identifications of subscribed services, their status and reference to service preferences; this is a component of the subscriber profile.

Subscription management: set of capabilities that allow Operators, Service Providers, and indirectly subscribers, to provision, control, monitor the Subscription Profile

Subscription Profile: The set of data managed and stored by network domains and subsystems for the operation and execution of the services provided to a specific user associated with a subscriber.

End of Change in Clause 3.1

5.3 Use Case Method

Change in Clause 5.3

~~5.3.1 Subscription Management Task Characteristics~~

~~During the development of use cases tasks and activities are identified. It is emphasized that different tasks have different needs i.e. they are not equal in all aspects of performance requirements, execution sequence priority scheduling which may be assumed.~~

~~5.3.2 Objectives~~

~~To apply use cases to analysis of real network scenarios and so define requirements and solution architectures, and ensure due consideration is given to task categorization.~~

~~The means that tasks shall be considered with respect to the following aspects:~~

- ~~—Performance requirements and categorization as real time, near real time, and non real time.~~
- ~~—Execution sequence.~~
- ~~—Priority.~~

~~5.3.3 Task Categorization Guideline~~

~~Tasks and activities are categorized as being one of "Pre condition", "Action", "Data Prep", and "Post Condition" categories.~~

~~"Pre condition" tasks~~

~~These tasks are not time critical but must be completed and ready prior to the subscriber, application/service, or user equipment launches a service request.~~

~~"Action" tasks~~

~~Some of these activities are time critical tasks (which have to be performed in near real time) necessary to fulfill each Service Request, and have to be consistently performed irrespective of which entity initiates the request~~

~~"Data Prep" tasks~~

~~These are the activities that take place in the network related to updating, synchronizing, and distributing subscription profile data.~~

~~"Post condition" tasks~~

~~These are not time critical activities the follow up activities and have to be completed, after the subscriber, application, or the UE service request has been completed.~~

~~[Use cases are developed using the techniques defined in TR32.803](#)+: ["Process Guide; Use Cases in UML \[18\]](#).~~

~~An illustrative [set of use cases](#) using the method can be found in annex [B](#).~~

End of Change in Clause 5.3

Annex B (informative): Example Use Case

There are an expanding number of services that 3G can offer. The network and infrastructure resources that are needed to support the new services are complex, and require a systematic technique to consider the many factors involved.

Use cases provide an iterative analysis technique helpful in determining market potential, business transactions, and the user interactions, etc.

When a use case has been developed (i.e. become stable), possible network solution(s) may be developed.

It is anticipated that future complex services will require a systematic analysis method to evaluate the network impacts.

There is a desire to migrate away from developing a solution for each service opportunity on an individual case-by-case basis, and to deploy a consistent approach in order that the network architecture solution may be used to provide many different service needs.

Start of Change in Clause Annex B

B.1 Use case for subscribing to service

Priority	Objective Action
PreCondition (Off-line)	<p>A subscriber (a user or a list of users) wants a mobile phone(s) that works from the beginning, including all its services (e.g. subscription, SMS, GPRS, MMS, MMS Value Added Services (VAS))</p> <p>Access Diversity Different user have accesses from a number of networks and network types</p> <p>Device Diversity Different user have different user terminals (UE) and user terminal types that have different methods of configuration and a widely varying capabilities</p> <p>Multi-Vendor Environment Operators using multiple vendors' equipment and have problem with proprietary interfaces and the need to support different access, configuration methods etc in parallel</p> <p>New Services and Configurations Operators have problem to introduce new subscription and services without complicated user configurations in a secure manner</p> <p>Self Care Operators have problem to create customer self care centre applications (e.g. SuM)</p> <p>VASP Interface Virtual Network Operators, VASPs, and content providers etc requiring standardised interfaces amongst them</p> <p>Contract & Setting No settings or commercial relationships are made between the subscriber and Network Operator.</p> <p>SuM Profile DDM The data description is standardized and can be shared (used) by many applications without manual mapping between different data formats of the same information</p>

Priority	Objective Action
Action (On-Line)	<p>Service-Reg. An one-line service registration or customer care centre sets up a subscriber service registration</p> <p>SUM PROFILE DDM The user preferences for subscription and services are established</p> <p>SUM PROFILE Access The operator (service or value added services provider) use a standardised SUM PROFILE mechanism to create, access, and manage user-related data in different entities</p> <p>SUM PROFILE Store One master SUM PROFILE (per subscription) is created</p> <p>SUM PROFILE Logging One associated master Subscription Profile is created and historical logged for the new subscriber (a user or a list of users)</p> <p>SUM PROFILE Component Update New Subscription Profile components containing the working subscription parameters are created.</p> <p>Common Object New "Common Objects" are created of common SUM PROFILE and Subscription Management components</p> <p>SUM PROFILE Key An alias (public user identity) is created as a key to access user profile information</p> <p>SUM PROFILE Download SUM PROFILE and Subscription Profile content is downloaded over the air, via local link or similar to the terminal (using WAP UAProf, SyncML Device Management etc)</p> <p>SUM PROFILE Store The SUM PROFILE and Subscription Profile are stored in the home network environment and additionally storage can be extended to the UE.</p> <p>SUM PROFILE Replicate/Distribute The subscription components may (based on rules, and local privacy regulations) be replicated and distributed across several administrative domains</p> <p>SUM PROFILE Backup A backup of the SUM PROFILE and Subscription Profile may be created</p>
Data-Prep Off-Line	<p>SuM Profile Preparation</p> <p>SUM PROFILE DDM The collection of subscriber related data in the user profile (described by DDM) includes general subscriber (a user or a list of users) information (e.g. Name, bill info, users). The collection of user related data in the user profile (described by DDM) includes general user (a user or a list of users) information (e.g. Name, address, age, sex, ID), privacy and billing policy.</p>
Post Condition (Off-Line)	<p>Post Condition The user experience that the terminal is ready to use for calls and SMS without major user complicated configuration. The user can check their subscription configuration. The new subscriber (a user or a list of users) may be addressed. The new Public User Identity is set to the user. Note that a user may have several Public User IDs. The subscription is ready to including other services (e.g. GPRS, MMS, MMS VAS). The access to subscription components is permitted in a authorized and secure manner</p>

B1 Create a subscription for a new subscriber

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use case</u>
<u>Goal</u>	To fulfil a subscription for a new subscriber with one or more users in order to allow the users access to the subscribed services. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Service Provider Network Operator	
<u>Assumptions</u>	(a) Subscriber credit worthiness has been determined by other systems, techniques and mechanisms which are outside the subscription management system boundary. (b) Levels of trust for subscribers and users have been determined by other systems, techniques and mechanisms outside of the subscription management system boundary (c) The Contract contains the number of users and the set of services these may use. (d) For each user the services she/he may use are also defined out of the above mentioned set of subscribed services.	
<u>Pre conditions</u>	(a)The services that can be offered by the network have been defined. (b) Sufficient resources are available to support the anticipated take up of services by users.	
<u>Begins when</u>	A subscriber has signed a new contract with the service provider	
<u>Step 1</u>	Create the subscriber profile and populate it with the set of services subscribed to the subscriber including subscriber specific settings and preferences for the subscribed services. Associated information element(s): Subscriber Profile, Subscribed Services Profile	
<u>Step 2</u>	For each user create a subscription profile using the Add User use case Associated information element(s): Subscription Profile	Add User
<u>Step 3</u>	For each user modify her/his subscription profile to fulfil the services in the network using the Modify User use case. Associated information element(s): SubscriptionProfile, Service Profile	Modify User
<u>Ends when</u>	The network allows the users to use their subscribed services OR an error condition has been encountered.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The network allows the users to use their subscribed service. A subscriber profile has been created and populated with the set of subscribed services. The subscription profiles for each user have been created and populated with data necessary for the usage of their subscribed services. Associated information element(s): Subscriber Profile, Subscribed Services Profile, Subscription Profile, Service Profile	
<u>Traceability</u>	Requirements: (a) Each type of services offered requires the ability to uniquely identify it. (b) To support self care it will be necessary to be able to correlate services references in a subscription, to the subscription profiles in the network. (c) It will be necessary to be able to audit the capabilities in a subscription against the subscription profile(s) in the network elements.	

B2 Modify Subscription

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>></u> <u>Related use case</u>
<u>Goal</u>	To modify the services and related terms and conditions which apply to a particular subscription. This is expected to result from contract re-negotiation, where the resulting changes need to be applied to the affected users within the network. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider	
<u>Assumptions</u>	The Contract changes are known and may be any variation of: <ul style="list-style-type: none"> - removal of users, - addition of new users, - removal of services subscribed, - newly subscribed services, - modified subscribed services The subscriber is still credit and trust worthy. (The checks for this are performed outside of SUM, but SuM needs to have access to this kind of information)	
<u>Pre conditions</u>	(a)The services that can be offered by the network have been defined. (b) Sufficient resources are available to support the anticipated take up of services by users. (c) The Subscriber already exists in the network (d) Users to be modified or deleted already exist in the network	
<u>Begins when</u>	The contractual details have been modified	
<u>Step 1</u>	Modify the list of subscribed services in the subscriber profile including subscriber specific settings for the subscribed services. Associated information element(s): Subscriber Profile, Subscribed Services Profile	
<u>Step 2</u>	For each user no longer part of this subscription remove her/his subscription profile by utilizing the Use Case Delete User Associated information element(s): Subscription Profile	Delete User
<u>Step 3</u>	For each new user create a subscription profile using the Add User use case Associated information element(s): Subscription Profile	Add User
<u>Step 4</u>	For each new user add their subscribed services to her/his subscription profile using the Modify User use case. Associated information element(s): Subscription Profile, Service Profile	Modify User
<u>Step 5</u>	For each already existing user subject to subscription and service changes modify her/his subscription profile to fulfil the services in the network using the Modify User use case. Associated information element(s): Subscription Profile, Service Profile	Modify User
<u>Ends when</u>	The network allows the users to use their subscribed services within the contract limits OR an error condition has been encountered.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	Services in the contract align with services in the subscriber profile and the subscription profiles. Number of users in the contract aligns with the number of users in the network under this subscription. Associated information element(s): Subscriber Profile, Subscribed Services Profile, Subscription Profile, Service Profile	

<u>Traceability</u>	Requirements: <u>(a) Each type of services offered requires the ability to uniquely identify it.</u> <u>(b) To support self care it will be necessary to be able to correlate services references in a subscription, to the subscription profiles in the network.</u> <u>(c) It will be necessary to be able to audit the capabilities in a subscription against the subscription profile(s) in the network elements</u>	
----------------------------	---	--

B3 Delete Subscription

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use case</u>
<u>Goal</u>	Remove the Subscriber and all users contained in the contract Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider	
<u>Assumptions</u>	There is a way of confirming that a user is to be removed from using network services. This is to ensure compliance with any country or region specific legislation regarding access to such things as emergency calls.	
<u>Pre conditions</u>	(a) The Subscriber exists in the network (b) Users to be deleted exist in the network	
<u>Begins when</u>	A subscription expires or has been terminated.	
<u>Step 1</u>	Remove each user contained within the subscription using the Delete User use case. Associated information element(s): Subscription Profile, Service Profile	Delete User
<u>Step 2</u>	Delete the subscriber profile Associated information element(s): Subscriber Profile, Subscribed Services Profile	
<u>Ends when</u>	The subscriber's subscriber profile and subscription profiles have been removed from the network elements in this operators network.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The users who were contained in the contract are no longer able to use services in this network. Trace Logs, and contractual references are not automatically removed in case of any legal issues that require closure. Only subscription profile data, which would enable access to services, are removed. Associated information element(s): Subscriber Profile, Subscribed Services Profile, Subscription Profile, Service Profile	
<u>Traceability</u>		

B4 Get Subscription Details

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use</u>
<u>Goal</u>	Get subscription details on number of users and their subscribed services stored in the network. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider Subscriber	
<u>Assumptions</u>	The information provided for Network Operator is broader than for Subscriber	
<u>Pre conditions</u>	(a) The Subscriber already exists in the network	
<u>Begins when</u>	Network Operator, Service Provider or Subscriber request information on subscription stored in the network elements	
<u>Step 1</u>	Get information contained in Subscriber's subscriber profile Associated information element(s): Subscriber Profile, Subscribed Services Profile	
<u>Step 2</u>	For each user contained within the subscription get the information contained in her/his subscription profile using the use case 'Get User Details' Associated information element(s): Subscription Profile, Service Profile	<u>Get User Details</u>
<u>Ends when</u>	The subscriber's subscriber profile and subscription profiles have been read from the network elements in this operator's network OR an error condition has been encountered.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The details contained in the contract and stored in network elements are unchanged. The subscriber's subscriber profile and subscription profiles details are provided to the requestor. Associated information element(s): Subscriber Profile, Subscribed Services Profile, Subscription Profile, Service Profile	
<u>Traceability</u>		

B5 Add User - Create a Subscription Profile for a User

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use case</u>
<u>Goal</u>	To add a new user associated with a subscription to the network. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Service Provider Network Operator Subscriber	
<u>Assumptions</u>	(a) The services that can be offered by the network have been defined. (b) Sufficient resources are available to support the delivery of services to users. (c) The Contract contains the set of services the user may use.	
<u>Pre conditions</u>	(a) The Subscriber already exists in the network	
<u>Begins when</u>	A subscriber has signed a new contract with the service provider or has extended an existing contract with additional user(s).	
<u>Step 1</u>	Create the user's subscription profile and populate it with the set of identifications and other data common to services. Associated information element(s): Subscription Profile	
<u>Ends when</u>	The user is known in the network. OR an error condition has been encountered.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The network holds the subscription profile for the user. Associated information element(s): Subscription Profile	
<u>Traceability</u>		

B6 Modify User

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>></u> <u>Related use case</u>
<u>Goal</u>	To modify the set of identifications and/or the services and related settings and preferences which apply to a particular user. This is expected to result either from a new contract or from contract re-negotiation, where the resulting changes need to be applied to the affected users within the network. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider Subscriber	
<u>Assumptions</u>	The Contract changes are known and may be any variation of: <ul style="list-style-type: none"> - <u>Change of user's set of identifications,</u> - <u>removal of services subscribed,</u> - <u>newly subscribed services,</u> - <u>modified service settings and preferences</u> 	
<u>Pre conditions</u>	(a) <u>The user already exists in the network</u>	
<u>Begins when</u>	<u>The user has been newly added to the network</u> <u>or</u> <u>the contractual details concerning a user or the services subscribed for him have changed (which may be both additions and/or withdrawals)</u>	
<u>Step 1</u>	<u>IF the user's set of identifications and other data common to services are to be modified align her/his subscription profile.</u> <u>Associated information element(s): Subscription Profile</u>	
<u>Step 2</u>	<u>IF the user has access to services which are no longer part of the contract, then delete them from the user's Subscription Profile using the Use Case Delete Service</u> <u>Associated information element(s): Subscription Profile, Service Profile</u>	<u>Delete Service</u>
<u>Step 3</u>	<u>Modify the existing subscription profile to fulfil the subscribed services in the network using the Add Service use case.</u> <u>Associated information element(s): Subscription Profile, Service Profile</u>	<u>Add Service</u>
<u>Step 4</u>	<u>Modify existing service profiles in the user's subscription profile to fulfil the services in the network using the Modify Service use case.</u> <u>Associated information element(s): Subscription Profile, Service Profile</u>	<u>Modify Service</u>
<u>Ends when</u>	<u>The network allows the user to use his subscribed services within the contract limits.</u> <u>OR</u> <u>an error condition has been encountered.</u>	
<u>Exceptions</u>	<u>Any of the steps of this use case fails</u>	
<u>Post Conditions</u>	<u>Services in the contract align with services in the subscription profile.</u> <u>Associated information element(s): Subscription Profile, Service Profile</u>	
<u>Traceability</u>		

B7 Delete User

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use case</u>
<u>Goal</u>	Remove a user contained in the contract Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider Subscriber	
<u>Assumptions</u>	There is a way of confirming that a user is to be removed from using network services. This is to ensure compliance with any country or region specific legislation regarding access to such things as emergency calls.	
<u>Pre conditions</u>	(a) The user already exists in the network	
<u>Begins when</u>	A subscription expires or the number of users contained in the subscription is reduced	
<u>Step 1</u>	Remove the user that is no longer contained within the subscription by deleting his subscription profile. Associated information element(s): Subscription Profile, Service Profile	
<u>Ends when</u>	The user's subscription profile has been removed from the network elements in this operators network.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The user who was removed from the subscription is no longer able to use services in this network. Trace Logs, and contractual references are not automatically removed in case of any legal issues that require closure. Only subscription profile data which would enable access to services are removed. Associated information element(s): Subscription Profile, Service Profile	
<u>Traceability</u>		

B8 Get User Details

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use</u>
<u>Goal</u>	Get details for the user contained in the subscription and stored in the network Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider Subscriber User	
<u>Assumptions</u>	The information provided for Network Operator is broader than for Subscriber, which might still be broader than that for the user.	
<u>Pre conditions</u>	(a) The user already exists in the network	
<u>Begins when</u>	Network Operator, Subscriber or User request information on User stored in the network elements	
<u>Step 1</u>	Get the information contained in the subscription profile for the user Associated information element(s): Subscription Profile, Service Profile	
<u>Ends when</u>	The user's subscription profile has been read from the network elements in this operator's network.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The details contained in the contract and stored in network elements are unchanged Associated information element(s): Subscription Profile, Service Profile	
<u>Traceability</u>		

B9 Add Service

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use case</u>
<u>Goal</u>	To fulfill a subscription for a new subscriber or subscription extension for an existing subscriber with one or more users or a service has been added to the contract for the user in order to allow the user access to a service. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Service Provider Network Operator Subscriber	
<u>Assumptions</u>	(a)The services that can be offered by the network have been defined. (b) Sufficient resources are available to support the delivery of services to users. (c) The Contract contains the set of services the user may use.	
<u>Pre conditions</u>	(a)The user already exists in the network (b) The user has no access to the service	
<u>Begins when</u>	A subscriber has signed a new contract with the service provider or has extended an existing contract with additional user(s) or has extended the services the existing user may use.	
<u>Step 1</u>	Within the user's subscription profile create the service profile and populate it with the set of preferences and settings subscribed. Associated information element(s): Subscription Profile, Service Profile	
<u>Ends when</u>	The user can use the service in the network. OR an error condition has been encountered.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The network holds the extended subscription profile for the user. Associated information element(s): Subscription Profile, Service Profile	
<u>Traceability</u>		

B10 Modify Service

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>></u> <u>Related use case</u>
<u>Goal</u>	To modify the set of settings and preferences which apply to a service for a particular user. This is expected to result from contract re negotiation, where the resulting changes need to be applied to the affected users within the network or subscriber or user initiated changes. Performance: Near real time	
<u>Actor(s) and Role(s)</u>	<u>Network Operator</u> <u>Service Provider</u> <u>Subscriber</u> <u>User</u>	
<u>Assumptions</u>	The Contract changes are known and may be any variation of: <ul style="list-style-type: none"> • <u>Change of user's preferences</u> • <u>Change of user's service related settings</u> 	
<u>Pre conditions</u>	(a) <u>The user already exists in the network</u> (b) <u>The user has access to the service</u>	
<u>Begins when</u>	<u>The contractual details have been modified</u> <u>or a decision for settings and preferences changes has been taken</u>	
<u>Step 1</u>	<u>Within the user's subscription profile modify the existing service profile to change the service preferences and settings in the network</u> <u>Associated information element(s): Subscription Profile, Service Profile</u>	
<u>Ends when</u>	<u>The network allows the user to use his subscribed services within the contract limits.</u> <u>The updated set of settings and preferences are now operative.</u> <u>OR</u> <u>an error condition has been encountered.</u>	
<u>Exceptions</u>	<u>Any of the steps of this use case fails</u>	
<u>Post Conditions</u>	<u>The service settings and preferences defined and agreed in the contract or wanted by the user now align with service settings and preferences in the service profile.</u> <u>Associated information element(s): Subscription Profile, Service Profile</u>	
<u>Traceability</u>		

B11 Delete Service

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use case</u>
<u>Goal</u>	Remove a service contained in the contract for one user Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Subscriber	
<u>Assumptions</u>	There is a way of confirming that a user is to be denied access to certain network services. This is to ensure compliance with any country or region specific legislation regarding access to such things as emergency calls.	
<u>Pre conditions</u>	(a)The user already exists in the network (b) The user has access to the service	
<u>Begins when</u>	A subscription expires or Subscriber credit worthiness or trust have been lost or existing user(s) are deleted from the contract or a service is deleted from the contract for all or only for one user	
<u>Step 1</u>	In the user's subscription profile delete the existing service profile to inhibit access to the service in the network Associated information element(s): Subscription Profile, Service Profile	
<u>Ends when</u>	The user's subscription profile has been removed from the network elements in this operators network.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Condition</u>	The user who was contained in the contract is no longer able to use services in this network. Trace Logs, and contractual references are not automatically removed in case of any legal issues that require closure. Only subscription profile data which would enable access to services are removed. Associated information element(s): Subscription Profile, Service Profile	
<u>Traceability</u>		

B12 Get Service Details

<u>Use Case Stage</u>	<u>Evolution / Specification</u>	<u><<Uses>> Related use</u>
<u>Goal</u>	Get details (settings and preferences) of the user's access to a service stored in the network Performance: Near real time	
<u>Actor(s) and Role(s)</u>	Network Operator Service Provider Subscriber User	
<u>Assumptions</u>	The information provided for Network Operator is broader than for Subscriber, which might still be broader than that for the user.	
<u>Pre conditions</u>	(a)The user already exists in the network (b) The user has access to the service	
<u>Begins when</u>	Network Operator, Subscriber or User request information on service settings and preferences stored in the network	
<u>Step 1</u>	Get the information contained in the service profile within the user's subscription profile Associated information element(s): Subscription Profile, Service Profile	
<u>Ends when</u>	The service profile within the user's subscription profile has been read from the network elements in this operator's network.	
<u>Exceptions</u>	Any of the steps of this use case fails	
<u>Post Conditions</u>	The details contained in the contract and stored in network elements are unchanged Associated information element(s): Subscription Profile, Service Profile	
<u>Traceability</u>		

End of Change in Clause Annex B