

Source: SA1
Title: CR to 22.071 on Introducing notification based on current location of target UE (Rel 7)
Document for: Approval
Agenda Item: 7.1.3

Meeti ng	SA Doc	TS No.	CR No	Re v	Rel	Cat	Subject	Vers Curren t	Vers New	SA1 Doc
SP-28	SP-050221	22.071	073	-	Rel-7	C	Introducing notification based on current location of target UE	7.1.0	7.2.0	S1-050531

CHANGE REQUEST

⌘ **22.071 CR 073** ⌘ rev **-** ⌘ Current version: **7.1.0** ⌘

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:	⌘ Introducing notification based on current location of target UE
Source:	⌘ SA1 (Orange SA, LG Electronics)
Work item code:	⌘ LCS3
Date:	⌘ 31/03/2005
Category:	⌘ C
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 .	
Release:	⌘ Rel-7
Use <u>one</u> of the following releases:	
Ph2 (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)	
Rel-7 (Release 7)	

Reason for change:	⌘ Users demand different privacy policies to be applied depending on the current location of UE. In other words, a User may want notification of the positioning attempt based on the current location of target UE. For example, at home a User would allow the positioning of his/her UE, however, at the office, a User may want notification of the request. Under these conditions, an application that is granted conditional reporting authorization must notify and obtain reporting authorization from the User of target UE after performing positioning but prior to reporting the location of target UE. Thus the User of the target UE shall be given an opportunity to accept or reject the positioning attempt only when the user is at chosen locations(s) that are specified in the users privacy profile. In these circumstances, the User will have to be located first and an additional privacy checking, on his/her location will be performed. This additional privacy check may result in the user being notified before his location is sent to the requesting entity.
Summary of change:	⌘ The notification based on current location of target UE is introduced.
Consequences if not approved:	⌘ Users will not be able to take advantage of the improved privacy mechanism provided by notification based on current location.

Clauses affected:	⌘ 4.8 & 6.4.3								
Other specs affected:	⌘ <table><tr><td>Y</td><td>N</td></tr><tr><td>X</td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> Other core specifications	Y	N	X					
Y	N								
X									
	⌘ TS 23.271								
	Test specifications								
	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.

<< First Modified Clause >>

4.8 Privacy

Specific local, national, and regional privacy regulations must be complied with, and multiple layers of permissions may be required.

Location information must always be available to the network service provider.

Means shall be provided for the UE subscriber to control privacy for value added services.

The user shall be able to change the setting of the Privacy exception list at any time.

Unless required by local regulatory requirements, or overridden by the target UE User, the target UE may be positioned only if allowed in the UE subscription profile. In general, for valued added location services, the target UE being positioned should be afforded the maximum possible privacy, and should not be positioned unless the positioning attempt is explicitly authorized. In the absence of specific permission to position the target UE, the target UE should not be positioned.

It may also be possible for a target UE to authorize positioning attempts after the target UE is notified of a positioning request and the target UE grants permission for positioning. It shall also be possible to make the notification conditional on the current location of the target UE. In this case the notification shall be performed after the target UE is positioned but before reporting the location of target UE to LCS Client. This notification condition (notification with privacy verification) shall be specified in the Target UE Subscription Profile. (See the subsequent "target subscriber notification" section of this document for charging and billing aspects.) The operator shall be able to determine the location of the target UE (e.g. for lawful interception or emergency call).

The privacy of an inanimate asset for an embedded target UE may be completely defined by the UE subscriber.

Additionally, specific privacy exceptions may exist for compliance with mandated location based services (such as for emergency services or lawful intercept) which are required by national or local regulatory requirements.

For Value Added Services, the following is applicable:

The Target UE Subscriber shall be able to restrict access to the Location Information (permanently or on a per attempt basis). The LCS Client access shall be restricted unless otherwise stated in the Target UE Subscription Profile. The home network shall have the capability of defining the default circumstances in which the Target UE's Location Information is allowed to be provided - as required by various administrations and/or network requirements.

The privacy check shall be performed in the Home Environment of the target UE subscriber. This makes it possible for operators to ensure the privacy of their own subscribers i.e. the privacy settings that are used for privacy checks are always up to date and as specified by the Home Environment of the target UE subscriber. It shall be possible for privacy check to take into account Home Environment specific information such as time of day, subscriber location. It shall be possible to ensure that privacy checks are performed according to the latest information as available in the Home Environment.

It shall be possible for location services to support conditional positioning. Under these conditions, an application that is granted conditional positioning authorization must notify and obtain positioning authorization from the user of the target UE prior to performing the positioning process. Thus the user of the target UE shall be able to accept or reject the positioning attempt.

It shall be possible for location services to support conditional reporting if the target UE is within specified geographical areas. Under these conditions, an application that is granted conditional positioning authorization must notify and obtain positioning authorization from the user of the target UE after the positioning process is preformed but before reporting the location of the target UE to the LCS Client

The default treatment, which is applicable in the absence of a response from the Target UE, shall be specified in the Target UE Subscription Profile. Thus for some location services the default treatment may be to accept the positioning request, whereas for other location services the default treatment may be to reject the positioning attempt.

However, considering that in general, users shall be afforded the maximum possible privacy, and shall not be positioned unless the target subscriber authorizes the requesting location application to perform positioning, the default condition shall normally be to deny the positioning attempt.

For PLMN operator services, the target UE subscriber may be able to restrict access to location information used to enhance or support particular types of service. The LCS client access shall be restricted unless stated otherwise in the Target UE subscription profile. The target UE user shall not be notified of any authorized location attempt.

For Emergency Services (where required by local regulatory requirements) Target UEs making an emergency call may be positioned regardless of the privacy attribute value of the subscriber associated with the Target UE (or ME) making the call.

For Lawful Interception Services (where required by local regulatory requirements), target UEs may be positioned under all circumstances required by local regulatory requirements. The target UE user shall not be notified of any location attempt.

All location requests (LRs) shall be done with a privacy check except for the following:

- LRs relating to lawful interception
- LRs related to emergency calls
- LRs from the serving network related to anonymous tracking for statistical and O&M purposes
- LRs from the home network as requested by the home network operator for its own internal purposes. The home network operator should not use the UE location information, which was obtained from the visited network without privacy checks, for value added services or to forward such location information to any third party (except for the cases of lawful interception or emergency calls).

<< Next Modified Clause >>

6.4.3 Privacy Exception List

To support privacy, the LCS Server shall enable each Target UE Subscriber to subscribe to a “privacy exception list” containing the LCS Client identifiers, the service identifiers, classes of LCS Clients, the target subscriber notification setting (with/without notification) and the default treatment, which is applicable in the absence of a response from the Target UE for each LCS Client and service identifiers.

The privacy exception list shall support a minimum of 20 clients. For each client the privacy exception list shall support a minimum of 10 services. The maximum number of clients and services shall be determined by implementation constraints.

If the target subscriber notification is set as “notification with verification”, each positioning request from the LCS Client or the service shall be notified to the target UE before positioning. If the target subscriber notification is set as “notification with verification based on current location”, positioning requests from the LCS Client or the service shall be notified to the target UE after positioning is performed if the current location of the target UE is within the areas specified to require notification. The treatment for location request from the LCS Client or service, which is not registered in the privacy exception list, shall also be specified in the privacy exception list. An empty privacy exception list shall signify an intent to withhold location from all LCS Clients.

The classes that can be included are as follows.

- Universal Class: location services may be provided to all LCS Clients;
- Call/session-related Class: location services may be provided to any value added LCS clients or a particular value added LCS client or a particular service or particular group of value added LCS Clients – where each LCS Client, service or group of LCS Clients is identified by a unique international identification, e.g. E.164 - that currently has a temporary association with the Target UE in the form of an established voice, data call or PS session originated by the Target UE. For each identified LCS Client, service or group of LCS Clients, one of the following geographical restrictions shall apply:
 - a) Location request allowed from an LCS Client or service served by identified PLMN only;

- b) Location request allowed from an LCS Client or service served in the home country only;
- c) Location request allowed from any LCS Client or service;
- Call/session-unrelated Class; location services may be provided to a particular value added LCS Client or a particular service or particular group of value added LCS Clients – where each LCS Client, service or group of LCS Clients is identified by a unique international identification, e.g. E.164. For each identified LCS Client, service or group of LCS Clients, one of the following geographical restrictions shall apply:
 - a) Location request allowed from an LCS Client or service served by identified PLMN only;
 - b) Location request allowed from an LCS Client or service served in the home country only;
 - c) Location request allowed from any LCS Client or service;
- PLMN Operator Class – location services may be provided by particular types of LCS clients supported within the HPLMN or VPLMN. The following types of clients are distinguished (see note):
 - a) Clients broadcasting location related information to the UEs in a particular geographic area – e.g. on weather, traffic, hotels, restaurants;
 - b) O&M client (e.g. an Operations System) in the HPLMN
 - c) O&M client (e.g. an Operations System) in the VPLMN
 - d) Clients recording anonymous location information (i.e. without any UE identifiers) – e.g. for traffic engineering and statistical purposes
 - e) Clients enhancing or supporting any supplementary service, IN service, bearer service or teleservice subscribed to by the target UE subscriber.

NOTE: The definitions of the various PLMN operator categories may be supplemented by more precise language in contractual agreements both between UE subscribers and their home service providers and between individual network operators with inter-PLMN roaming agreements. Such classification of the PLMN operator categories is outside the scope of this specification.