Technical Specification Group Services and System Aspects **TSGS#20(03)0252**
Meeting #20, Hämeenlinna, Finland, 09-12 June 2003

Source:	**SA1**
Title:	**CRs to 22.071 on various subjects (Rel-6)**
Document for:	**Approval**
Agenda Item:	**7.1.3**

CR-Form-v7

CHANGE REQUEST

| ⌘ | **22.071** CR **050** | ⌘ **rev** | **-** | ⌘ Current version: | **6.3.0** | ⌘ |

*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: ⌘	Introduction of codeword generation by network or UE	
Source: ⌘	Huawei, China Mobile	
Work item code: ⌘	LCS	**Date:** ⌘ 9/04/2003
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: ⌘	In the current specification, the Target UE user shall offer the codeword of each Requestor/LCS client to the LCS server, in this case he has to memorize and manage all the codewords to avoid repetition when he wants to generate a new one to another Requestor/LCS client. If the Target UE user has quite a few Requestors/LCS clients, he cannot manage the codewords conveniently. On the other hand, the procedure of the codeword distribution is not efficiently.
Summary of change: ⌘	The optional codeword generation by the network or UE is introduced.
Consequences if not approved: ⌘	The codeword generation shall be perfomed still by Target UE user, he still has to memorize all the cordword that he had generated and the relationship of the codewords and the requestores/LCS clients.

Clauses affected: ⌘	6.4.2

	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.

6.4.2 Codeword

It shall be possible for a Requestor and an LCS client to request location information by indicating a Codeword associated with the Target UE user. The codeword shall be either checked by the Target UE/user or by the LCS server in the home network. In the former case, the codeword supplied by the requestor and forwarded by the LCS client with the request shall be forwarded to the TargetUE/user for verification and acceptance. In the latter case, the codeword shall be registered with the LCS server by the Target UE user (or subscriber) in advance. Optionally, the UE and/or network may have the capability to generate and/or distribute codewords. The generation of codewords and the distribution of those codewords are out of scope of this specification. A comparision of the codeword sent by the Requestor and the registered codeword shall be performed. A location request shall only be accepted if this comparision is successful. In the case where the Target UE/user does not check the codeword, the codeword need not be sent to the Target UE/user. In the case where the codeword is checked by the Target UE/user, the Target UE subscriber need not register the codeword in advance.

The other privacy settings should also be checked even when the codeword has been checked.

The Target UE Subscriber may register multiple codewords for multiple requestors. Once the codeword has been set and properly distributed, the Target UE user would be protected against location requests from third parties, which do not know the appropriate codeword.

It should be possible for a Target UE subscriber to enable and disable codeword checking for each of the LCS Clients.

The codeword is applicable to the value added services only.

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CHANGE REQUEST

⌘   **22.071** CR **051**   ⌘**rev**   **-**   ⌘   Current version: **6.3.0** ⌘

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Proposed change affects: UICC apps⌘ ☐   ME ☐   Radio Access Network ☐   Core Network **X**

Title: ⌘	LCS in IMS
Source: ⌘	NOKIA
Work item code: ⌘	LCS ***Date:*** ⌘ 26/03/2003
Category: ⌘	**B** ***Release:*** ⌘ Rel-6

Use one of the following categories:
   F *(correction)*
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  R99   *(Release 1999)*
  Rel-4 *(Release 4)*
  Rel-5 *(Release 5)*
  Rel-6 *(Release 6)*

Reason for change: ⌘	LCS have already been recognized as a part of IMS – to enable this the LCS Client should be able to target the UE also by using a SIP URL.
Summary of change: ⌘	Reference to SIP URL is added to the list of supported identification methods of a target UE. Also, two typos were fixed: MISISDN -> MSISDN and UEISDN -> MSISDN.
Consequences if not approved: ⌘	IMS SIP URLs cannot be used to identify the target UE and therefore LCS for IMS cannot be supported fully.

Clauses affected: ⌘	6.1 6.2

	Y	N			
Other specs affected: ⌘	X		Other core specifications	⌘	23.271
			Test specifications		
			O&M Specifications		

Other comments: ⌘	

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*** FIRST MODIFIED SECTION ***

6   Service Provision

6.1   Identification of a Target UE

For value added services, the following is applicable:

The LCS client shall identify a target UE using the ~~UEISDN~~MSISDN or SIP URL.

The LCS Client shall be able to identify the target UE using IP addressing.

For PLMN operator services, the LCS client may identify a target UE using any of the following:

> M~~I~~SISDN
>
> SIP URL
>
> IMSI

An identifier internal to the PLMN

For emergency services (where required by local regulatory requirements), the LCS client may identify a target UE using any one of the following:

> MSISDN
>
> SIP URL
>
> IMSI
>
> NA-ESRK + (optionally) IMEI

It shall be possible for the target mobile's user to hide her true identity from the requestor and the LCS client and replace it with an alias. The alias shall be a unique identification that has a one-to-one relationship to the true identity of the subscriber and may be permanent or temporary. The target mobile user shall be able to know her own alias so that she can pass the alias to the LCS client, e.g. when invoking a location-based service.

6.2   Location Information Provided to the LCS Client

For value added services, the following is applicable:

The LCS Server shall provide, on request, the current or most recent Location Information (if available) of the Target UE or, if positioning fails, an error indication plus optional reason for the failure.

For PLMN operator services (where allowed by local regulatory requirements and restrictions on UE privacy), Location Information for a particular target UE may be provided to a PLMN operator LCS client either on request or on the occurrence of an event in the LCS server that has been defined to equate to such a request.

For emergency services (where required by local regulatory requirements), the geographic location may be provided to an emergency services LCS Client either without any request from the client at certain points in an emergency services call (e.g. following receipt of the emergency call request, when the call is answered, when the call is released) or following an explicit request from the client. The former type of provision is referred to as a "push" while the latter is known as a "pull". In the case of a "pull", the emergency service LCS Client shall identify the Target UE as defined in section 6.1. Table 3 shows the information that may be provided to the client for either a "push" or a "pull".

Table 3: Location related information provided to an emergency services LCS Client

Type of Access	Information Items
Push	Current Geographic Location (if available) MSISDN SIP URL IMSI IMEI NA-ESRK NA-ESRD State of emergency call – unanswered, answered, released (note 1)
Pull	Geographic location (note 2), either: Current location initial location at start of emergency call

NOTE 1: indication of call release means that any NA-ESRK will no longer identify the calling UE subscriber

NOTE 2: which type of location is required will be indicated by the LCS Client

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CHANGE REQUEST

| ⌘ | **22.071** CR **052** | ⌘**rev** | **-** | ⌘ | Current version: | **6.3.0** | ⌘ |

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Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Clarification of requirement regarding 'Query, Cancel of activated location requests for the Target UE'
Source: ⌘	LCS SWG
Work item code: ⌘	LCS **Date:** ⌘ 10/4/2003
Category: ⌘ **F**	**Release:** ⌘ Rel-6

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Rel-5   (Release 5)
Rel-6   (Release 6)

Reason for change: ⌘	The requirement regarding 'Query, Cancel of activated location requests for the Target UE' is no longer considered to be an essential requirement.
Summary of change:⌘	Requirement regarding 'Query, Cancel of activated location requests for the Target UE' is changed to optional.
Consequences if not approved: ⌘	This requirement has benefits in some case, It's unnecessary to mandate this requirement.

Clauses affected: ⌘	

	Y	N		
Other specs affected: ⌘	X		Other core specifications ⌘	TS23.271
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

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4.15   Periodic Location Reporting

Periodic location reporting is the act of the LCS Server initiating multiple position locations spread over a period of time.

The periodic reporting function is generally applicable for asset management services and exists as several variants, each applicable to different value added services:

· Location reporting only within predetermined period	e.g. commercial asset tracking and, subject to provision of privacy, manpower planning.
· Periodic location reporting within specified period and reporting triggered by a specific event	e.g. high value asset security, stolen vehicle monitoring, home zone charging.
· Periodic location reporting triggered by a specific event	e.g. 24hr depot management, transit passenger information systems

Periodic location determination and reporting increases network traffic. However, scheduling the periods of location monitoring and reporting will reduce this. Finally, event-based logic provided by the network operator that monitors the asset (location and status) and only reports events that meet conditions agreed with the application may reduce network traffic further without reducing the QoS.

If this event-based or time-based decision process is the responsibility of the application and not the network operator then all of the above services can be regarded as periodic location reporting.

For value added services, and PLMN operator services, support of periodic location reporting may be provided by the PLMN.

When an LCS client activates Periodic Location Reporting, the LCS server shall be able to inform the target Ms of this activation according to the Privacy Exception List.

Optionally, Iit should may be possible for the target UE at any time to query the LCS server about any valid requests activated for that target UE, and/or cancel the request.

When a request is cancelled by the target UE, the LCS server shall inform the LCS client of this cancellation.

It should be possible for more than one LCS client to activate requests for the same target UE.

For Emergency Services (where required by local regulatory requirements), there is no requirement for the PLMN to support periodic location reporting.