

3GPP TSG CN Plenary Meeting #14
Kyoto, JAPAN, 12th-14th December 2001

NP-010613

Source: TSG CN WG4
Title: CRs on R98 Location Service Enhancements
Agenda item: 7.16
Document for: APPROVAL

Introduction:

This document contains 6 CRs on R98 Work Item "LCS", that have been agreed by TSG CN WG4, and are forwarded to TSG CN Plenary meeting #14 for approval.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
09.02	A320		N4-011029	R98	Clarification on LCS parameters in MAP	F	7.9.0
29.002	312		N4-011030	R99	Clarification on LCS parameters in MAP	A	3.10.0
29.002	313		N4-011031	Rel-4	Clarification on LCS parameters in MAP	A	4.5.0
04.30	A003		N4-011098	R98	Specify usage of SS Version Indicator	F	7.2.0
24.030	008		N4-011099	R99	Specify usage of SS Version Indicator	A	3.2.0
24.030	009		N4-011100	Rel-4	Specify usage of SS Version Indicator	A	4.1.0

CHANGE REQUEST

⌘ **04.30 CR A003** ⌘ rev **-** ⌘ Current version: **7.2.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Specify usage of SS Version Indicator
Source:	⌘ CN4
Work item code:	⌘ LCS Date: ⌘ 14/9/2001
Category:	⌘ F (Essential) Release: ⌘ R98
<p style="margin-left: 40px;">Use <u>one</u> of the following categories:</p> <p style="margin-left: 40px;">F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p style="margin-left: 40px;">Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p style="margin-left: 40px;">Use <u>one</u> of the following releases:</p> <p style="margin-left: 40px;">2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change: ⌘ The MO-LR operation may result in triggering the MAP Operation Subscriber_Location_Report which belongs to the application context locationSvcEnquiryContext which is version 3 only. This implies that SS Version indicator 1, indicating SS version 3 or higher, should be sent by the MS/UE in order to allow the MSC selecting the appropriate Application Context.

Indeed quoting from 04.10 section 5.5.1.2.2:

"The relevant stage 3 specification for each service shall state if the operation requires the use of SS version indicator 3 or higher for MS initiated operations.

The SS version indicator is used within the network to define the MAP Application Context used for a specific operation (see GSM 09.02)."

and again in section 5.5.4.1:

"The MSC shall operate and set up contexts according to the version indicated by the MS wherever possible. If the MS signals a higher version than the MSC/VLR is capable of supporting, the MSC/VLR shall attempt to support service at the highest version which is supported. If this is not possible then the communication is rejected."

So if MS signals SS Version 2 then MSC/VLR cannot select AC version 3 for the corresponding MAP operation.

Summary of change: ⌘ Add the statement that SS Version Indicator 1 shall be used

Consequences if not approved: ⌘ A lower SS Version Indicator will forbid the MSC to select AC version 3 causing a failure of the procedure.

Clauses affected:	⌘	5.1.1	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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/3G_Specs/CRs.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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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** ****

5 Mobile initiated location services operations

5.1 Mobile Originated Location Request (MO-LR)

5.1.1 Normal operation

The MS invokes a MO-LR by sending a REGISTER message to the network containing a LCS-MOLR invoke component. SS Version Indicator value 1 or above shall be used.

The receiving network entity shall initiate the handling of location request in the network. The network shall pass the result of the location procedure to the MS by sending a FACILITY message to the MS containing a LCS-MOLR return result component.

.... Text removed for clarity

**** **END OF MODIFICATIONS** ****

CR-Form-v4

CHANGE REQUEST

⌘ **09.02** CR A320 ⌘ rev **-** ⌘ Current version: **7.9.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Clarification on LCS parameters in MAP		
Source:	⌘ CN4		
Work item code:	⌘ LCS	Date:	⌘ 26.09.01
Category:	⌘ F by consensus	Release:	⌘ R98
	<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)

Reason for change:	⌘ To remove ambiguity in ASN.1 comments and to align with stage 2		
Summary of change:	⌘ Clarify use of parameters in LCS-PrivacyClass and ExternalClient		
Consequences if not approved:	⌘ Ambiguity in the ASN.1 comments may lead to incompatible implementations		

Clauses affected:	⌘ 17.7.1		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

17.7.1 Mobile Service data types

.....

```

LCS-PrivacyClass ::= SEQUENCE {
    ss-Code                SS-Code,
    ss-Status              Ext-SS-Status,
    notificationToMSUser   [0] NotificationToMSUser           OPTIONAL,
    -- notificationToMSUser is expected only for
    -- SS-code = callunrelated or SS-code = callrelated
    -- notificationToMSUser may be sent only for SS-codes callrelated
    -- and callunrelated. If not received for SS-codes callrelated and callunrelated,
    -- the default values according to GSM 03.71 shall be assumed.
    externalClientList     [1] ExternalClientList             OPTIONAL,
    -- externalClientList is expected only for SS-code = callunrelated
    -- externalClientList may be sent only for SS-code callunrelated.
    plmnClientList         [2] PLMNClientList                 OPTIONAL,
    -- plmnClientList is expected only for SS-code = plmn operator
    -- plmnClientList may be sent only for SS-code plmnoperator.
    extensionContainer     [3] ExtensionContainer             OPTIONAL,
    -- if segmentation is used, the complete LCS-PrivacyClass shall be sent in one segment
    ... }

```

```

ExternalClientList ::= SEQUENCE SIZE (0..maxNumOfExternalClient) OF
    ExternalClient

```

```

maxNumOfExternalClient INTEGER ::= 5

```

```

PLMNClientList ::= SEQUENCE SIZE (1..maxNumOfPLMNClient) OF
    LCSCClientInternalID

```

```

maxNumOfPLMNClient INTEGER ::= 5

```

```

ExternalClient ::= SEQUENCE {
    clientIdentity          LCSCClientExternalID,
    gmlc-Restriction       [0] GMLC-Restriction              OPTIONAL,
    notificationToMSUser   [1] NotificationToMSUser          OPTIONAL,
    -- If notificationToMSUser is not received, the default value according to
    -- GSM 03.71 shall be assumed.
    extensionContainer     [2] ExtensionContainer             OPTIONAL,
    ... }

```

.....

CHANGE REQUEST

⌘ **24.030 CR 008** ⌘ rev **-** ⌘ Current version: **3.2.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Specify usage of SS Version Indicator		
Source:	⌘ CN4		
Work item code:	⌘ LCS	Date:	⌘ 14/9/2001
Category:	⌘ A	Release:	⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change: ⌘ The MO-LR operation may result in triggering the MAP Operation Subscriber_Location_Report which belongs to the application context locationSvcEnquiryContext which is version 3 only. This implies that SS Version indicator 1, indicating SS version 3 or higher, should be sent by the MS/UE in order to allow the MSC selecting the appropriate Application Context.

Indeed quoting from 24.010 section 5.5.1.2.2:

"The relevant stage 3 specification for each service shall state if the operation requires the use of SS version indicator 3 or higher for MS initiated operations.

The SS version indicator is used within the network to define the MAP Application Context used for a specific operation (see GSM 09.02)."

and again in section 5.5.4.1:

"The MSC shall operate and set up contexts according to the version indicated by the MS wherever possible. If the MS signals a higher version than the MSC/VLR is capable of supporting, the MSC/VLR shall attempt to support service at the highest version which is supported. If this is not possible then the communication is rejected."

So if MS signals SS Version 2 then MSC/VLR cannot select AC version 3 for the corresponding MAP operation.

Summary of change: ⌘ Add the statement that SS Version Indicator 1 shall be used

Consequences if ⌘ A lower SS Version Indicator will forbid the MSC to select AC version 3 causing a

not approved: failure of the procedure.

Clauses affected:	⌘	5.1.1	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘
		<input type="checkbox"/> Test specifications	
		<input type="checkbox"/> O&M Specifications	
Other comments:	⌘		

How to create CRs using this form:

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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** ****

5 Mobile initiated location services operations

5.1 Mobile Originated Location Request (MO-LR)

5.1.1 Normal operation

The MS invokes a MO-LR by sending a REGISTER message to the network containing a LCS-MOLR invoke component. In UMTS, the gpsAssistanceData and deCipherringKeys shall not be used as values of molr-Type parameter. SS Version Indicator value 1 or above shall be used.

The receiving network entity shall initiate the handling of location request in the network. The network shall pass the result of the location procedure to the MS by sending a FACILITY message to the MS containing a LCS-MOLR return result component.

.... Text removed for clarity

**** **END OF MODIFICATIONS** ****

CHANGE REQUEST

⌘ **24.030 CR 009** ⌘ rev **-** ⌘ Current version: **4.1.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Specify usage of SS Version Indicator		
Source:	⌘ CN4		
Work item code:	⌘ LCS	Date:	⌘ 14/9/2001
Category:	⌘ A	Release:	⌘ REL-4
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change: ⌘ The MO-LR operation may result in triggering the MAP Operation Subscriber_Location_Report which belongs to the application context locationSvcEnquiryContext which is version 3 only. This implies that SS Version indicator 1, indicating SS version 3 or higher, should be sent by the MS/UE in order to allow the MSC selecting the appropriate Application Context.

Indeed quoting from 24.010 section 5.5.1.2.2:

"The relevant stage 3 specification for each service shall state if the operation requires the use of SS version indicator 3 or higher for MS initiated operations.

The SS version indicator is used within the network to define the MAP Application Context used for a specific operation (see GSM 09.02)."

and again in section 5.5.4.1:

"The MSC shall operate and set up contexts according to the version indicated by the MS wherever possible. If the MS signals a higher version than the MSC/VLR is capable of supporting, the MSC/VLR shall attempt to support service at the highest version which is supported. If this is not possible then the communication is rejected."

So if MS signals SS Version 2 then MSC/VLR cannot select AC version 3 for the corresponding MAP operation.

Summary of change: ⌘ Add the statement that SS Version Indicator 1 shall be used for MO-LR

Consequences if ⌘ A lower SS Version Indicator will forbid the MSC to select AC version 3 causing a

not approved: failure of the procedure.

Clauses affected:	⌘	5.1.1		
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘	
		<input type="checkbox"/> Test specifications		
		<input type="checkbox"/> O&M Specifications		
Other comments:	⌘			

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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** ****

5 Mobile initiated location services operations

5.1 Mobile Originated Location Request (MO-LR)

5.1.1 Normal operation

The MS invokes a MO-LR by sending a REGISTER message to the network containing a LCS-MOLR invoke component. In UMTS, the gpsAssistanceData and deCipherringKeys shall not be used as values of molr-Type parameter. SS Version Indicator value 1 or above shall be used.

The receiving network entity shall initiate the handling of location request in the network. The network shall pass the result of the location procedure to the MS by sending a FACILITY message to the MS containing a LCS-MOLR return result component.

.... Text removed for clarity

**** **END OF MODIFICATIONS** ****

CR-Form-v4

CHANGE REQUEST

⌘ **29.002 CR 312** ⌘ rev **-** ⌘ Current version: **3.10.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Clarification on LCS parameters in MAP		
Source:	⌘ CN4		
Work item code:	⌘ LCS	Date:	⌘ 26.09.01
Category:	⌘ A	Release:	⌘ R99
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)		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)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.			

Reason for change:	⌘ To remove ambiguity in ASN.1 comments and to align with stage 2		
Summary of change:	⌘ Clarify use of parameters in LCS-PrivacyClass and ExternalClient		
Consequences if not approved:	⌘ Ambiguity in the ASN.1 comments may lead to incompatible implementations		

Clauses affected:	⌘ 17.7.1		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

17.7.1 Mobile Service data types

.....

```

LCS-PrivacyClass ::= SEQUENCE {
    ss-Code                SS-Code,
    ss-Status              Ext-SS-Status,
    notificationToMSUser  [0] NotificationToMSUser    OPTIONAL,
    -- notificationToMSUser is expected only for
    -- SS-code = callunrelated or SS-code = callrelated
    -- notificationToMSUser may be sent only for SS-codes callrelated
    -- and callunrelated. If not received for SS-codes callrelated and callunrelated,
    -- the default values according to GSM 03.71 and 3G TS 23.171 shall be assumed.
    externalClientList    [1] ExternalClientList      OPTIONAL,
    -- externalClientList is expected only for SS-code = callunrelated
    -- externalClientList may be sent only for SS-code callunrelated.
    plmnClientList        [2] PLMNClientList          OPTIONAL,
    -- plmnClientList is expected only for SS-code = plmn operator
    -- plmnClientList may be sent only for SS-code plmnoperator.
    extensionContainer    [3] ExtensionContainer      OPTIONAL,
    -- if segmentation is used, the complete LCS-PrivacyClass shall be sent in one segment
    ... }

```

```

ExternalClientList ::= SEQUENCE SIZE (0..maxNumOfExternalClient) OF
    ExternalClient

```

```

maxNumOfExternalClient INTEGER ::= 5

```

```

PLMNClientList ::= SEQUENCE SIZE (1..maxNumOfPLMNClient) OF
    LCSCClientInternalID

```

```

maxNumOfPLMNClient INTEGER ::= 5

```

```

ExternalClient ::= SEQUENCE {
    clientIdentity        LCSCClientExternalID,
    gmlc-Restriction     [0] GMLC-Restriction        OPTIONAL,
    notificationToMSUser [1] NotificationToMSUser    OPTIONAL,
    -- If notificationToMSUser is not received, the default value according to
    -- GSM 03.71 and 3G TS 23.171 shall be assumed.
    extensionContainer    [2] ExtensionContainer      OPTIONAL,
    ... }

```

.....

CR-Form-v4

CHANGE REQUEST

⌘ **29.002 CR 313** ⌘ rev **-** ⌘ Current version: **4.5.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Clarification on LCS parameters in MAP		
Source:	⌘ CN4		
Work item code:	⌘ LCS1	Date:	⌘ 26.09.01
Category:	⌘ A	Release:	⌘ Rel-4
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change:	⌘ To remove ambiguity in ASN.1 comments and to align with stage 2		
Summary of change:	⌘ Clarify use of parameters in LCS-PrivacyClass and ExternalClient		
Consequences if not approved:	⌘ Ambiguity in the ASN.1 comments may lead to incompatible implementations		

Clauses affected:	⌘ 17.7.1		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

17.7.1 Mobile Service data types

.....

```

LCS-PrivacyClass ::= SEQUENCE {
    ss-Code                SS-Code,
    ss-Status              Ext-SS-Status,
    notificationToMSUser  [0] NotificationToMSUser          OPTIONAL,
    notificationToMSUser is expected only for
    SS-code = callunrelated or SS-code = callrelated
    notificationToMSUser may be sent only for SS-codes callrelated
    and callunrelated. If not received for SS-codes callrelated and callunrelated,
    the default values according to 3G TS 23.271 shall be assumed.
    externalClientList    [1] ExternalClientList          OPTIONAL,
    externalClientList and ext-externalClientList are expected only for
    SS-code = callunrelated or SS-code = callrelated
    externalClientList may be sent only for SS-code callunrelated to a
    visited node that does not support LCS Release 4 or later versions.
    externalClientList may be sent only for SS-codes callunrelated and
    callrelated to a visited node that supports LCS Release 4 or later versions.
    plmnClientList        [2] PLMNClientList              OPTIONAL,
    plmnClientList is expected only for SS-code = plmn operator
    plmnClientList may be sent only for SS-code plmnoperator.
    extensionContainer    [3] ExtensionContainer          OPTIONAL,
    ...,
    ext-externalClientList [4] Ext-ExternalClientList    OPTIONAL
    Ext-externalClientList may be sent only if is present when the visited node supports
    LCS
    Release 4 or
    later versions, the user did specifyies more than 5 clients,
    and White Book SCCP is used.

    if segmentation is used, the complete LCS-PrivacyClass shall be sent in one segment
}
    
```

```

ExternalClientList ::= SEQUENCE SIZE (0..maxNumOfExternalClient) OF
    ExternalClient
    
```

```

maxNumOfExternalClient INTEGER ::= 5
    
```

```

PLMNClientList ::= SEQUENCE SIZE (1..maxNumOfPLMNClient) OF
    LCSCClientInternalID
    
```

```

maxNumOfPLMNClient INTEGER ::= 5
    
```

```

Ext-ExternalClientList ::= SEQUENCE SIZE (1..maxNumOfExt-ExternalClient) OF
    ExternalClient
    
```

```

maxNumOfExt-ExternalClient INTEGER ::= 35
    
```

```

ExternalClient ::= SEQUENCE {
    clientIdentity        LCSCClientExternalID,
    gmlc-Restriction     [0] GMLC-Restriction          OPTIONAL,
    notificationToMSUser [1] NotificationToMSUser      OPTIONAL,
    If notificationToMSUser is not received, the default value according to
    3G TS 23.271 shall be assumed.
    extensionContainer    [2] ExtensionContainer        OPTIONAL,
    ... }
    
```

.....