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## Surveillance Status and Fault Reporting for TS 33.107

Spec: 3GPP TS 33.107v5.3.0

Release: Rel-5

Source: Telcordia Technologies and Federal Bureau of  
Investigation

Document for: Discussion & Action.

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### Summary

The current version of TS 33.107 defines the architecture and functional requirements for an interception system within a Third Generation Mobile Communication System (3GPP MS).

This contribution identifies requirements to meet the needs of the LEAs in areas related with management interface notifications and fault reporting.

The lawful authorization status and fault reporting capabilities provide information related to the status of a lawfully authorized electronic surveillance (e.g., activated, deactivated, modified), as well as fault and alarm information on lawful authorization delivery interface resources. Currently this capability is not described in TS 33.107, but it is described in ES 201 671.

This contribution proposes changes to TS 33.107, version 5.3.0, to address Surveillance Status and Fault Reporting by the intercepting network toward the LEMF. These capabilities are provided in ES 201 671, but not yet in the 3GPP series of specifications for LI. Companion contributions propose compatible changes to TS 33.106 and TS 33.108.

## CHANGE REQUEST

# 33.107 CR CRNum # rev - # Current version: 5.3.0 #

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

<b>Title:</b>	#	Changes to TS 33.106 to support lawful interception management notification capabilities.
<b>Source:</b>	#	Telcordia Technologies and Federal Bureau of Investigation
<b>Work item code:</b>	#	Security
		<b>Date:</b> # 24/09/2002
<b>Category:</b>	#	<b>F</b>
		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (correction)</p> <p><b>A</b> (corresponds to a correction in an earlier release)</p> <p><b>B</b> (addition of feature),</p> <p><b>C</b> (functional modification of feature)</p> <p><b>D</b> (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a>.</p> </div> <div style="width: 45%;"> <p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2)</p> <p>R96 (Release 1996)</p> <p>R97 (Release 1997)</p> <p>R98 (Release 1998)</p> <p>R99 (Release 1999)</p> <p>Rel-4 (Release 4)</p> <p>Rel-5 (Release 5)</p> <p>Rel-6 (Release 6)</p> </div> </div>

<b>Reason for change:</b>	#	<p>Text is being added to the specification to address the need to support lawful interception management notifications towards the LEA for the following cases:</p> <ol style="list-style-type: none"> <li>1)After the activation of lawful interception.</li> <li>2)After the deactivation of lawful interception.</li> <li>3)After modification of an active lawful interception.</li> <li>4)Fault reporting.</li> </ol> <p>This capability will bring the 3GPP Suite of LI specifications in alignment with ES 201 671: "Handover Interface for the lawful interception of telecommunications traffic" is updated to a later revision.</p>
<b>Summary of change:</b>	#	Text is being added to the specification to address the need to support lawful interception management notifications towards the LEA which will bring the 3GPP Suite of LI specifications in alignment with ES 201 671.
<b>Consequences if not approved:</b>	#	Misalignment with ES 201 671.

<b>Clauses affected:</b>	#	5.4								
<b>Other specs affected:</b>	#	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">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      # TS 33.106 and TS 33.108 Test specifications O&M Specifications	Y	N	X					
Y	N									
X										

**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.

## 5.4 LI Notifications towards the LEMF

The HI1 transports various kinds of administrative information from/to the LEA and the organization at the NWO/AP/SvP, which is responsible for LI matters. This interface may be manual or electronic. The HI1 is typically bi-directional and is used to hand over the requests for lawful interception to the NWO/AP/SvP, such as orders for activation, deactivation and modification, and the corresponding notifications, and to send other information to the LEA. As an option, some HI1 related information (e.g., lawful authorization management information, fault reporting) may be delivered to the LEA using the HI2 mechanism. With this option, notification messages are generated and sent via the Delivery Function 2 to the LEMF, in the same way as the Intercept Related Information.

The HI1 related information to be delivered to the LEMF shall report:

- the operational status of a lawful authorization upon detection of the activation, continuation, modification and deactivation of a lawful authorization.
- faults and alarms associated with lawful interception resources such as communication content delivery resource failures (CC link set up failure within the network, CC link failed due to a lack of system resources, General CC link set up failure, LEA is busy, No answer from LEMF, CC link establishment failures due to failure to authenticate [COLP or CUG errors]).

### 5.4.1 Operational Status of Lawful Authorization Notifications

The operational status of a lawful authorization upon detection of the activation, continuation, change and deactivation can be:

- *inactive* – lawful authorization is not being performed. This may be due to: a) interception not yet activated, b) surveillance is activated, but all of the constituent ICEs and INEs are not performing interception or are not accessible.
- *active* – lawful authorization is being *fully* performed. A lawful authorization is being fully performed when all of the constituent ICEs and INEs are performing interception and are accessible. This operational state might be affected by the operational state of the Delivery Function (DF), if the DF is employed in the lawful interception solution.
- *degraded* – lawful authorization is being *partially* performed. A lawful authorization is partially performed when at least one, but not all, of the constituent ICEs or INEs is performing interception and is accessible. This operational state might be affected by the operational state of the DF, if the DF is employed in the lawful interception solution.

Reporting of the operational status of a lawful authorization shall be accomplished through a combination of event-driven reporting and periodic reporting.

- Event-Driven Reporting

The operational status of a lawful authorization shall be reported when one of the following events are detected:

1. Activation – When a lawful authorization has been initiated and the constituent ICEs and INEs are operationally expected to begin performing interception.
2. Change – When the operational status of an ongoing lawful authorization changes. Possible operational statuses are inactive, active, or degraded.
3. Deactivation – When the performance of a lawful authorization is expected to cease.

- 1       • Periodic Reporting
- 2       The operational status of an ongoing lawful authorization shall be periodically reported. The period of
- 3       reporting shall not be less than an hour nor greater than twenty-four hours, with a default value of one hour.
- 4       The period of reporting shall be settable on a per- lawful authorization basis.

## 5    5.4.2    Faults and Alarms Notifications

6    Faults and alarms associated with lawful interception resources shall be reported. Faults and alarms to be reported  
7    include communication content delivery resource failures (CC link set up failure within the network, CC link failed due  
8    to a lack of system resources, General CC link set up failure, LEA is busy, No answer from LEMF, CC link  
9    establishment failures due to failure to authenticate [e.g., COLP or CUG errors]).

10   The NWO/AP/SvP shall report to the LEMF when the following events occur:

- 11       • When a delivery resource is taken out of service;
- 12       • When the system is unable to restore a delivery resource connection to its in-service state;
- 13       • When interception of communications (IRI or CC) at an ICE or INE is interrupted;
- 14       • When the lawful interception service is disrupted or interrupted (e.g., due to equipment failure) during a lawful
- 15       interception of a subject's communication, but the interception subject's communications are not disrupted.

16

Page: 2

[H1] [Document numbers](#) are allocated by the Working Group Secretary.

Page: 2

[H2] Enter the specification number in this box. For example, 04.08 or 31.102. Do not prefix the number with anything . i.e. do not use "TS", "GSM" or "3GPP" etc.

Page: 2

[H3] Enter the CR number here. This number is allocated by the 3GPP support team. It consists of at least three digits, padded with leading zeros if necessary.

Page: 2

[H4] Enter the revision number of the CR here. If it is the first version, use a "-".

Page: 2

[H5] Enter the version of the specification here. This number is the version of the specification to which the CR will be applied if it is approved. Make sure that the latest version of the specification (of the relevant release) is used when creating the CR. If unsure what the latest version is, go to <http://www.3gpp.org/specs/specs.htm>.

Page: 2

[H6] For help on how to fill out a field, place the mouse pointer over the special symbol closest to the field in question.

Page: 2

[H7] Mark one or more of the boxes with an X.

Page: 2

[H8] SIM / USIM / ISIM applications.

Page: 2

[H9] Enter a concise description of the subject matter of the CR. It should be no longer than one line. Do not use redundant information such as "Change Request number xxx to 3GPP TS xx.xxx".

Page: 2

[H10] Enter the source of the CR. This is either (a) one or several companies or, (b) if a (sub)working group has already reviewed and agreed the CR, then list the group as the source.

Page: 2

[H11] Enter the acronym for the work item which is applicable to the change. This field is mandatory for category F, B & C CRs for release 4 and later. A list of work item acronyms can be found in the 3GPP work plan. See [http://www.3gpp.org/ftp/information/work\\_plan/](http://www.3gpp.org/ftp/information/work_plan/) . The list is also included in a MS Excel file included in the zip file containing the CR cover sheet template.

Page: 2

[H12] Enter the date on which the CR was last revised. Format to be interpretable by English version of MS Windows ® applications, e.g. 19/02/2002.

Page: 2

[H13] Enter a single letter corresponding to the most appropriate category listed below. For more detailed help on interpreting these categories, see the Technical Report [21.900](#) "TSG working methods".

Page: 2

[H14] Enter a single release code from the list below.

Page: 2

[H15] Enter text which explains why the change is necessary.

Page: 2

[H16] Enter text which describes the most important components of the change. i.e. How the change is made.

Page: 2

[H17] Enter here the consequences if this CR was to be rejected. It is necessary to complete this section only if the CR is of category "F" (i.e. correction).

Page: 2

[H18] Enter the number of each clause which contains changes.

Page: 2

[H19] Tick "yes" box if any other specifications are affected by this change. Else tick "no". You MUST fill in one or the other.

Page: 2

[H20] List here the specifications which are affected or the CRs which are linked.

Page: 3

[H21] Enter any other information which may be needed by the group being requested to approve the CR. This could include special conditions for it's approval which are not listed anywhere else above.

Page: 3

[H22] This is an example of pop-up text.