

CHANGE REQUEST

⌘ **33.107 CR xxx** ⌘ rev **-** ⌘ Current version: **3.1.0** ⌘

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:	⌘ Correction of Location information parameters in interception event records		
Source:	⌘ SA WG3 LI		
Work item code:	⌘ Security	Date:	⌘ 25.01.2001
Category:	⌘ F	Release:	⌘ R99
	<i>Use <u>one</u> of the following categories:</i> F (essential 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 <u>one</u> 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 correct the location information required in interception for the information available at the 3G MSC, rather than the GSM MSC.
Summary of change:	⌘ Replacement of Cell ID and location area code by Location information available at the 3G MSC.
Consequences if not approved:	⌘ No delivery of location information to the interception agency

Clauses affected:	⌘ 6.3.2, 6.3.3, 6.3.4	
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.

6.3.2 Structure of the events

The information sent to DF2 is triggered by up to eight different call related and non-call related events. Details are described in following subclause. The events for interception are configurable (if they are sent to DF2) in the 3G MSC and can be suppressed in the DF2. The events are listed as follows:

Call Related Events:

- Call Establishment
- Answer
- Supplementary Service
- Handover
- Release

Non Call Related Events:

- SMS
- Location Update
- Subscriber Controlled Input

Table 1 below shows the set of information that is used to generate the events. The events transmit the information from the 3G MSC to DF2. This set of information can be extended in the 3G MSC, if this is necessary in a specific country. DF2 can extend this information if this is necessary in a specific country e.g. a unique number for each surveillance warrant.

Table 1: Information Elements for Circuit Event records

Observed MSISDN Target Identifier with the MSISDN of the target subscriber (monitored subscriber).
Observed IMSI Target Identifier with the IMSI of the target subscriber (monitored subscriber).
Observed IMEI Target Identifier with the IMEI of the target subscriber (monitored subscriber), It shall be checked for each call over the radio interface
event type Description which type of event is delivered: Establishment, Answer, Supplementary service, Handover, Release, SMS, Location update, Subscriber controlled input
event date Date of the event generation in the 3G MSC
event time Time of the event generation in the 3G MSC
dialled number Dialled phone number before digit modification, IN-modification etc.
Connected number Number of the answering party
other party address Directory number of the other party for MOC Calling party for MTC
call direction Information if the monitored subscriber is calling or called e.g. MOC/MTC or originating/ terminating In or/out
Correlation number Unique number for each call sent to the DF, to help the LEA, to have a correlation between each Call and the IRI
cell id Cell number of the target; for the location information
Location Information area code Location-area-code of the target defines the Location Area in a PLMN <u>Location information is the service area identity and/or location area identity that is present at the 3G MSC at the time of event record production.</u>
basic service Information about Tele service or bearer service.
Supplementary service Supplementary services used by the target e.g. CF, CW, ECT
Forwarded to number Forwarded to number at CF
call release reason Call release reason of the target call
SMS Message The SMS content with header which is sent with the SMS-service
Redirecting number The number which invokes the call forwarding towards the target. This is provided if available.
SCI Non call related Subscriber Controlled Input (SCI) which the 3G MSC receives from the ME

6.3.3 Call Related events

6.3.3.1 Call establishment

For call establishment a call establishment-event is generated. This event is generated at the beginning of a call when the 3G MSC attempts to reach the subscriber. This information will be delivered to the DF2 if available:

Observed MSISDN
Observed IMSI
Observed IMEI
event type
event date
event time
dialled number
other party address
call direction
Correlation number
Redirecting number
cell id
Location area code information
basic service
Supplementary service

6.3.3.2 Answer

If the called party answers, an answer- event is generated. This information will be delivered to the DF2 if available:

Observed MSISDN
Observed IMSI
Observed IMEI
event type
event date
event time
dialled number
other party address
Connected party
call direction
Correlation number
Redirecting number
cell id
Location area code information
basic service
Supplementary service

6.3.3.3 Supplementary Services

For supplementary services events are generated with the information which supplementary service is used e.g. Call Forwarding (CF), Call Waiting (CW), Explicit Call Transfer (ECT), Multi Party (MPTY), Call Hold and information correlated to the service like the forwarded to number. This information will be delivered to the DF2 if available:

Observed MSISDN
Observed IMSI
Observed IMEI
event type
event date
event time
dialled number
other party address
call direction
Correlation number
cell id
Location area code information
basic service
Supplementary service
Forwarded to number

6.3.3.4 Handover

For each handover that is realised at the 3G MSC due to a target Cell ID change in target location information, a handover-event with the information about the new location information cell ID is generated. This information will be delivered to the DF2 if available:

Observed MSISDN
Observed IMSI
Observed IMEI
event type
event date
event time
Correlation number
cell id
Location area code information

6.3.3.5 Release

For the release or failed attempt of a target call, a release event with the following information is generated. This information will be delivered to the DF2 if available:

Observed MSISDN
Observed IMSI
Observed IMEI
event type
event date
event time
dialled number
other party address
call direction
Correlation number
cell id
Location area code information
basic service
call release reason

6.3.4 Non Call Related events

6.3.4.1 SMS

For MO-SMS the event is generated in the 3G MSC, when the SMSC successfully receives the SMS; for MT-SMS the event is generated in the 3G MSC when the target receives the message. This information will be delivered to the DF2 if available:

Observed MSISDN
Observed IMSI
event type
event date
event time
cell id
Location area code information
SMS Message

6.3.4.2 Location update

For location updates a Location update-event is generated, with the new location (~~location area~~)-information. This information will be delivered to the DF2 if available:

Observed MSISDN
observed IMSI
event type
event date
event time
cell id
location area code information

6.3.4.3 Subscriber Controlled Input (SCI)

SCI includes subscriber initiated changes in service activation and deactivation. SCI does not include any information available in the CC. For subscriber controlled inputs - a SCI-event is generated with information about the SCI. This information will be delivered to the DF2 if available:

observed MSISDN
observed IMSI
event type
event date
event time
cell id
location area code location information
SCI