CR-Form-v3

CHANGE REQUEST

⌘   **33.107** CR **005**   ⌘ 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: ⌘	Missing location related information in Packet Data Event Records
Source: ⌘	SA WG3 LI
Work item code: ⌘ Security	***Date:*** ⌘ 05.06.2001
Category: ⌘ **F**	***Release:*** ⌘ R99

Use *one* of the following categories:
    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.

Use *one* 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)*

Reason for change: ⌘	CGI was deleted in a previous CR (S3LI01_020) which has rendered RAC by itself useless in the packet data related events.
Summary of change: ⌘	Include Service Area Identity (SAI) in the packet data related event records, which together with RAC can be used as location information.
Consequences if not approved: ⌘	The location information (RAC) being delivered to the Law Enforcement Monitoring Function is useless.

Clauses affected: ⌘	3.2, 7.3.2, 7.4

Other specs affected: ⌘	☐ Other core specifications ⌘	
	☐ 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/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.

3   Definitions, symbols and abbreviations

3.1   Definitions

For the purposes of the present document, the following terms and definitions apply.

Network Based Interception: Interception that is invoked at a network access point regardless of Target Identity.

Subject Based Interception: Interception that is invoked using a specific Target Identity

Target Identity: A technical identity that uniquely identifies a target of interception. One target may have one or several identities.

Interception Area: is a subset of the network service area comprised of a set of cells which defines a geographical zone.

Location Dependent Interception: is interception of a target mobile within a network service area that is restricted to one or several Interception Areas (IA).

3.2   Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GMS	3rd Generation Mobile Communication System
3G GGSN	3rd Generation Gateway GPRS Support Node
3G GSN	3rd Generation GPRS Support Node (GGSN/SGSN)
3G MSC	3rd Generation Mobile Switching Center
3G SGSN	3rd Generation Serving GPRS Support Node
3G UMSC	3rd Generation Unified Mobile Switching Centre
ADMF	Administration Function
CC	Content of Communication
~~CGI~~	~~Cell Global Identity~~
DF	Delivery Function
ECT	Explicit Call Transfer
GPRS	General Packet Radio Service
HI	Handover Interface
IA	Interception Area
IP	Internet Protocol
IRI	Intercept Related Information
LDI	Location Dependent Interception
LEA	Law Enforcement Agency
LEMF	Law Enforcement Monitoring Facility
RA	Routing Area
SAI	Service Area Identity

** NEXT CHANGED SECTION **

7.3.2   Structure of the events

There are seven different events in which the information is sent to the DF2P if this is required. Details are described in the following section. The events for interception are configurable (if they are sent to DF2P) in the 3G GSN and can be suppressed in the DF2P.

The following events are applicable to 3G SGSN:

-    Mobile Station Attach;

-    Mobile Station Detach;

- PDP context activation;

- Start of intercept with PDP context active;

- PDP context deactivation;

- RA update;

- SMS.

NOTE: 3G GGSN interception is a national option. Location information may not be available in this case.

The following events are applicable to the 3G GGSN:

- PDP context activation ;

- PDP context deactivation ;

- Start of interception with PDP context active.

A set of fields as shown below is used to generate the events. The events transmit the information from 3G GSN to DF2P. This set of fields as shown below can be extended in the 3G GSN, if this is necessary as a national option. DF2P can extend this information if this is necessary as a national option e.g. a unique number for each surveillance warrant.

Table 2: Information Events for Packet Data Event Records

Observed MSISDN MSISDN of the target subscriber (monitored subscriber)
Observed IMSI IMSI of the target subscriber (monitored subscriber)
Observed IMEI IMEI of the target subscriber (monitored subscriber),it shall be checked for each activation over the radio interface.
Event type Description which type of event is delivered: PDP attach, PDP detach, PDP context activation, Start of intercept with PDP context active, PDP context deactivation, SMS, Cell and/or RA update,
Event date Date of the event generation in the 3G GSN
Event time Time of the event generation in the 3G GSN
PDP address The PDP address of the target subscriber. Note that this address might be dynamic.
Access Point Name The APN of the access point. (Typically the GGSN of the other party)
Routing Area Code The routing area code of the target defines the RA in a PLMN.
PDP Type The used PDP type.
Correlation Number The correlation number is used to correlate CC and IRI.
SMS The SMS content with header which is sent with the SMS-service. The header also includes the SMS-Centre address.
SAI Service Area Identity
Failed attach reason Reason for failed attach of the target subscriber.
Failed context activation reason Reason for failed context activation of the target subscriber.
IAs The observed Interception Areas

7.4 Packet Data related events

7.4.1 Mobile Station Attach

For attach an attach-event is generated. When an attach activation is generated from the mobile to servicing 3G G SN this event is generated. These fields will be delivered to the DF2P if available:

Observed MSISDN
Observed IMSI
Observed IMEI
Event Type
Event Time
Event Date
Service Area Identity
Routing area code
Failed attach reason
IAs (if applicable)

7.4.2 Mobile Station Detach

For detach a detach-event is generated, this is for the common (end) detach. These fields will be delivered to the DF2P if available:

Observed MSISDN
Observed IMSI
Observed IMEI
Event Type
Event Time
Event Date
Service Area Identity
Routing Area code
IAs (if applicable)

7.4.3 Packet Data PDP context activation

For PDP context activation a PDP context activation-event is generated. When a PDP context activation is generated from the mobile to 3G GSN this event is generated. These fields will be delivered to the DF2P if available:

Observed MSISDN
Observed IMSI
Observed IMEI
PDP address of observed party
Event Type
Event Time
Event Date
Correlation number
Access Point Name
PDP Type
Service Area Identity
Routing area code
Failed context activation reason
IAs (if applicable)

7.4.4   Start of interception with PDP context active

This event will be generated if interception for a target is started and if the target has at least one PDP context active. If more then one PDP context are open for each of them an event record is generated. These fields will be delivered to the DF2P if available:

Observed MSISDN
Observed IMSI
Observed IMEI
PDP address of observed party
Event Type
Event Time
Event Date
Correlation number
Access Point Name
PDP Type
Service Area Identity
Routing area code
IAs (if applicable)

7.4.5   Packet Data PDP context deactivation

At PDP context deactivation a PDP context deactivation-event is generated. These fields will be delivered to the DF2if available:

Observed MSISDN
Observed IMSI
Observed IMEI
PDP address of observed party
Event Type
Event Time
Event Date
Correlation number
Access point name
Service Area Identity
Routing area code
IAs (if applicable)

7.4.6 RA update

For each RA update an update-event with the fields about the new location is generated. These fields will be delivered to the DF2P if available:

Observed MSISDN
Observed IMSI
Observed IMEI
Event Type
Event Time
Event Date
Service Area Identity
Routing area code
IAs (if applicable)

7.4.7   SMS

For MO-SMS the event is generated in the 3G SGSN, when the SMS-Centre successfully receives the SMS; for MT-SMS the event is generated in the 3G SGSN when the target receives the message. This fields will be delivered to the DF2P if available:

Observed MSISDN
Observed IMSI
Observed IMEI
Event Type
Event Time
Event Date
Service Area Identity
Routing area code
SMS
IAs (if applicable)