CR-Form-v7

CHANGE REQUEST

| ⌘ | **TS 33.107 CR xxx** | ⌘ **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 **X**

Title: ⌘	Inclusion of Serving System IRI	
Source: ⌘	SA WG3-LI	
Work item code:⌘	SEC-LI	***Date:*** ⌘ 16/07/2002

Category: ⌘ **F**   ***Release:*** ⌘ Rel-5

| *Use one of the following categories:*	*Use one of the following releases:*
F *(correction)*	*2 (GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
B *(addition of feature),*	*R97 (Release 1997)*
C *(functional modification of feature)*	*R98 (Release 1998)*
D *(editorial modification)*	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	Serving System event reporting is a national option. This needs to be explicitly stated in the specification to prevent unnecessary implementation when not required in national configurations.
Summary of change:⌘	Adds figure 1c: HLR Intercept configuration and clarifies that Serving System event reporting is a national option. Corrects HLR reported events from "Roaming" to "Serving System". Makes editorial correction of adding a line break between concatenated words in Table 2.
Consequences if not approved: ⌘	Lack of clarity in HLR and Serving System event reporting and potential inconsistency within TS 33.107 and between TS 33.107 and TS 33.108.

Clauses affected: ⌘	4, 7.3, 7.3.2

	Y	N		
Other specs ⌘	**X**		Other core specifications ⌘	33.108
affected:		**X**	Test specifications	
		X	O&M Specifications	

|	
Other comments: ⌘	Adds missing parts from previously approved CR025

4 Functional architecture

The following figures contain the reference configuration for the lawful interception. The circuit-switched configuration is shown in figure 1a. The packet-switched configuration is shown in figure 1b. The various entities and interfaces are described in more detail in the succeeding subclauses.
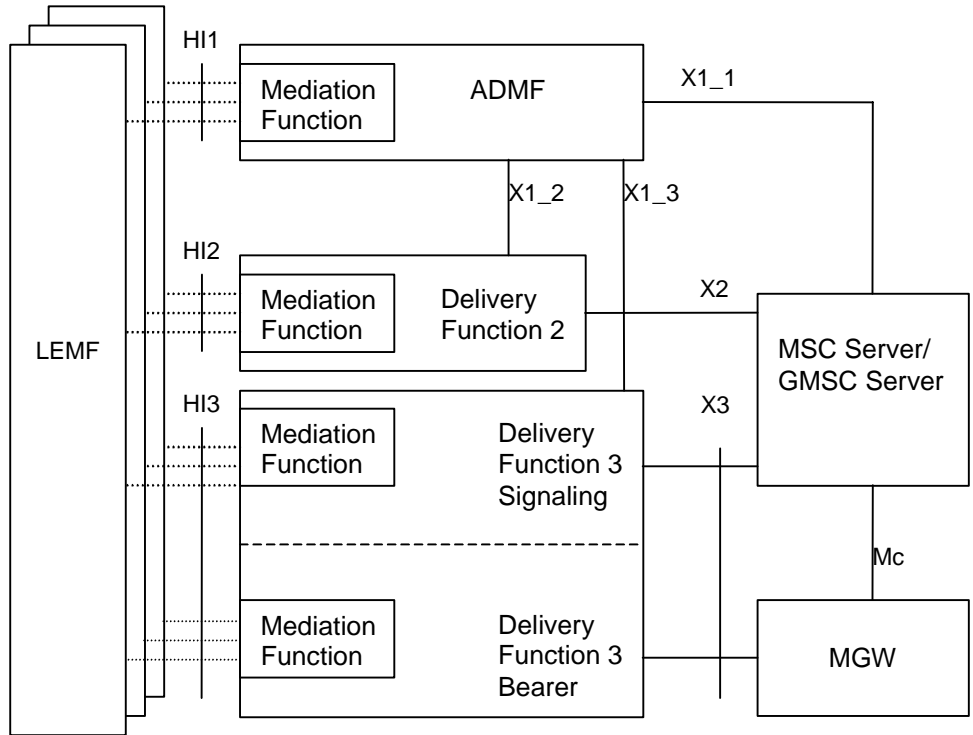
Figure 1a: Circuit switched intercept configuration
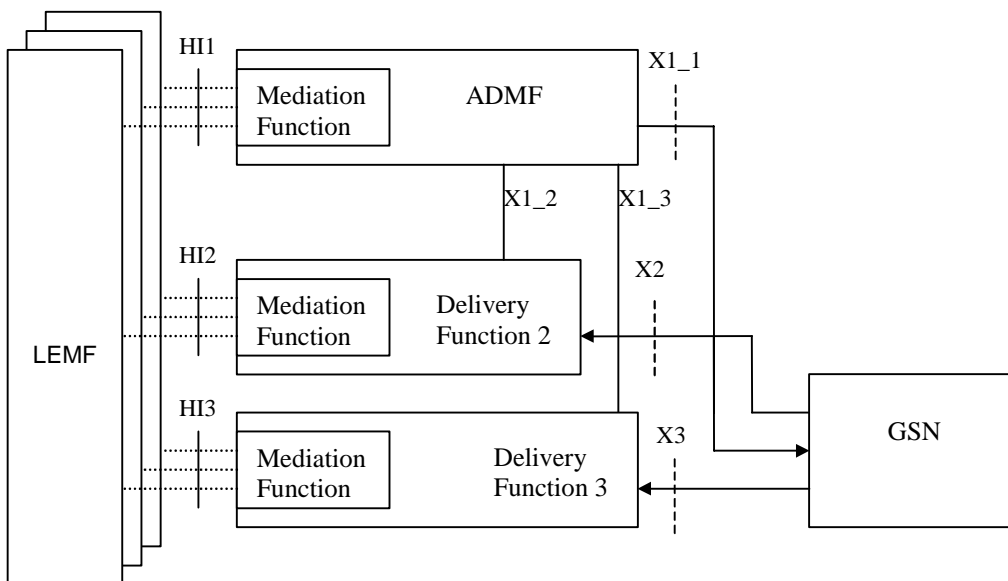
Figure 1b: Packet Switched Intercept configuration
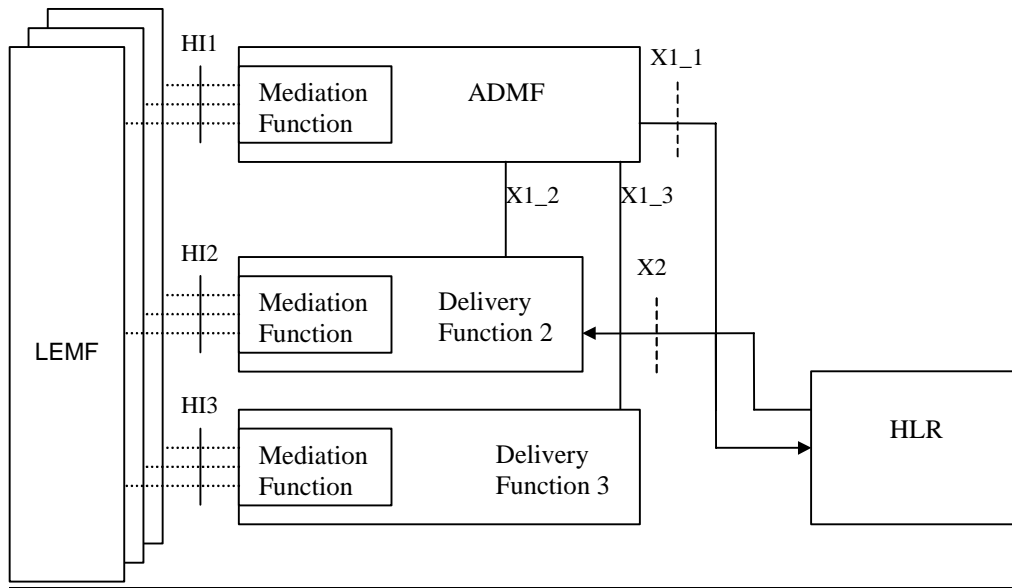
Figure 1c: HLR Intercept configuration

The reference configuration is only a logical representation of the entities involved in lawful interception and does not mandate separate physical entities. This allows for higher levels of integration.

Regional Mediation Functions, which may be transparent or part of the administration and delivery functions, are used to convert information on the HI1, HI2 and HI3 interfaces in the format described in various national or regional specifications. For example, if ES 201 671 or J-STD-25 is used, then the adaptation to HI1, HI2 and HI3 will be as defined in those specifications.

DF3 is responsible two primary functions:

- Call Control (Signaling) for the intercepted product; and

- Bearer Transport for the intercepted product.

HI3 is the interface towards the LEMF. It must be able to handle the signalling and the bearer transport for the intercepted product. LEMF can be located within the 3G network or can be in any other network.

There is one Administration Function (ADMF) in the network. Together with the delivery functions it is used to hide from the 3G ICEs that there might be multiple activations by different Law Enforcement Agencies (LEAs) on the same target. The administration function may be partitioned to ensure separation of the provisioning data from different agencies.

The HI2 and HI3-interfaces represent the interfaces between the LEA and two delivery functions. The delivery functions are used:

- to distribute the Intercept Related Information (IRI) to the relevant LEA(s) via HI2 (based on IAs, if defined);

- to distribute the Content of Communication (CC) to the relevant LEA(s) via HI3 (based on IAs, if defined).

See the remaining sections of this document for definitions of the X1_1, X1_2, X1_3, X2 and X3 interfaces.

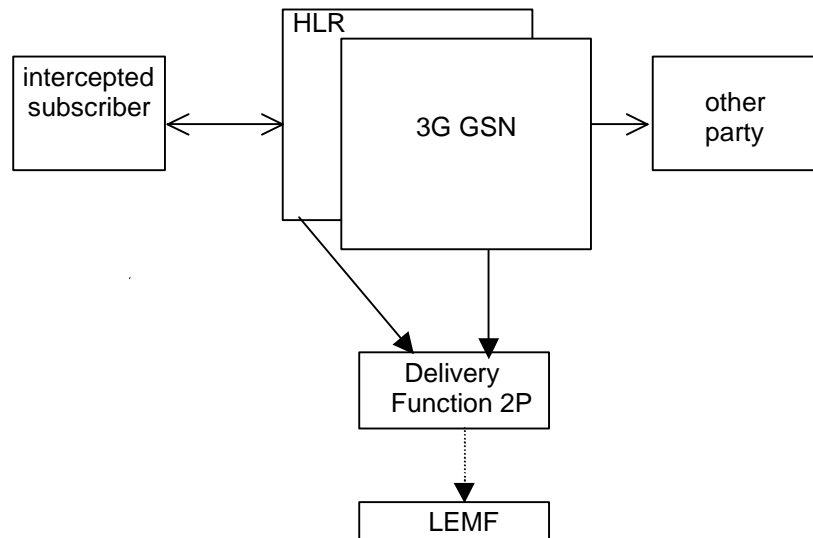Interception at the Gateways is a national option.

*** NEXT CHANGE ***

7.3 Provision of Intercept Related Information

Intercept Related Information (Events) are necessary at the Mobile Station Attach, Mobile Station Detach, PDP Context Activation, Start of intercept with PDP context active, PDP Context Deactivation, RA update, Serving System and SMS events.

Serving System event reporting is a national option.

Figure 21 shows the transfer of intercept related information to the DF2. If an event for / from a mobile subscriber occurs, the 3G GSN or the Home Location Register (HLR) sends the relevant data to the DF2.

See section 7A for multi-media Intercept Related Information produced at the CSCF.

Figure 21: Provision of Intercept Related Information

*** NEXT CHANGE ***

7.3.2   Structure of the events

There are eight different events in which the information is sent to the DF2 if this is required. Details are described in the following section. The events for interception are configurable (if they are sent to DF2) in the 3G GSN or the HLR and can be suppressed in the DF2.

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 modification;

-   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 modification;

- PDP context deactivation;

- Start of interception with PDP context active.

The following events are applicable to the HLR:

- ~~Roaming~~<u>Serving System</u>.

A set of fields as shown below is used to generate the events. The events transmit the information from 3G GSN or HLR to DF2. This set of fields as shown below can be extended in the 3G GSN or HLR, if this is necessary as a national option. DF2 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: MS attach, MS detach, PDP context activation, Start of intercept with PDP context active, PDP context deactivation, SMS, Serving System, Cell and/or RA update.
Event date Date of the event generation in the 3G GSN or the HLR.
Event time Time of the event generation in the 3G GSN or the HLR.
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).
Location Information Location Information is the Service Area Identity (SAI), RAI and/or location area identity that is present at the GSN at the time of event record production.
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.
Network Element Identifier Unique identifier for the element reporting the ICE.
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.
Session Initiator The initiator of the PDP context activation, deactivation or modification request either the network or the 3G MS.
Initiator SMS indicator whether the SMS is MO or MT.
Deactivation / termination cause The termination cause of the PDP context.
QoS This field indicates the Quality of Service associated with the PDP Context procedure.
Serving System Address Information about the serving system (e.g. serving SGSN number or serving SGSN address).

*** END OF CHANGES ***