3GPP TSG SA WG3 #10 LI Meeting ***Tdoc ⌘S3LI03_094r2 (mod)***
Jackson Hole, USA, 22 – 24 September 2003

CR-Form-v7

CHANGE REQUEST

⌘ **33.107** **CR** **CRNum** ⌘**rev** **-** ⌘ Current version: **6.0.0** ⌘

*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 ☒

Title:	⌘	MSISDN/IMEI clarification for GPRS interception
Source:	⌘	SA WG3 LI Group
Work item code:	⌘	SEC-LI
Date:	⌘	30/09/2003
Category:	⌘	**F**
Release:	⌘	Rel-6

Use one 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)*
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)
Rel-6 (Release 6)

Reason for change:	⌘	Due to the fact that MSISDN and IMEI is not available all the time in SGSN and GGSN, the interception results may be incomplete, additional clarification have to be added in order to make LI users aware of this fact. A possible solution was dicussed during the Vienna meeting (Addition of the MSISDN to the GTP Forward Relocation Request Message – see S3LI03_039), but this was not accepted. Instead of changing the GTP protocol, it was agreed to make some clarification in 33.107.
Summary of change:	⌘	Addinga new reference and a note to chapter 5.
Consequences if not approved:	⌘	Contradiction between the requirement of interception based on MSISDN and IMEI and the technical reality.

Clauses affected:	⌘	2; 5; 5.1.1

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

First modified section

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document.*

[1] ETR 331: "Definition of User Requirements for Lawful Interception of Telecommunications Requirements of the Law Enforcement Agencies".

[2] ES 201 158: "Lawful Interception; Requirements for network functions".

[3] ES 201 671: "Handover Interface for the lawful interception of telecommunications traffic".

[4] GSM 01.33: "Lawful Interception requirements for GSM".

[5] GSM 02.33: "Lawful Interception - stage 1".

[6] GSM 03.33: "Lawful Interception - stage 2".

[7] 3G TS 33.106: "3GPP Lawful Interception Requirements".

[8] J-STD-25: "Interim Standard, Lawfully Authorised Electronic Surveillance".

[9] IETF RFC 2806: "URLs for Telephone Calls".

[10] 3G TS 23.060: "General Packet Radio Service (GPRS) – Stage 2".

Next modified section

5 Activation, deactivation and interrogation

Figure 2 is an extraction from the reference intercept configuration shown in figure 1which is relevant for activation, deactivation and interrogation of the lawful interception.

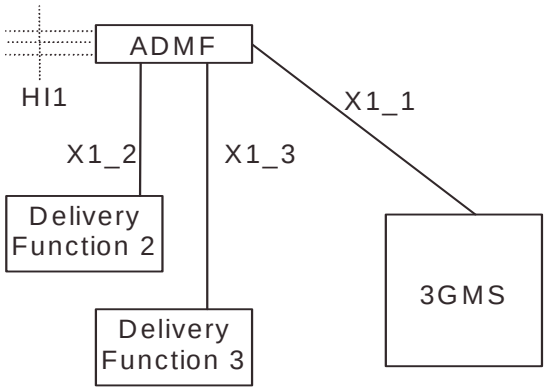

Figure 2: Functional model for Lawful Interception activation, deactivation and interrogation

In addition to the typical 3G ICEs functional entities, a new functional entity is introduced - the ADMF - the Lawful Interception administration function. The ADMF:

- interfaces with all the LEAs that may require interception in the intercepting network;
- keeps the intercept activities of individual LEAs separate;
- interfaces to the intercepting network.

Every physical 3G ICE is linked by its own X1_1-interface to the ADMF. Consequently, every single 3G ICE performs interception (activation, deactivation, interrogation as well as invocation) independently from other 3G ICEs. The HI1-interface represents the interface between the requester of the lawful interception and the Lawful administration function; it is included for completeness, but is beyond the scope of standardisation in this document.

The target identities for 3GPP MS CS and ~~GPRS~~ PS interception at the SGSN, GGSN, 3G MSC Server and 3G GMSC Server can be at least one of the following: IMSI, MSISDN or IMEI.

NOTE 1: Some communication content during a mobility procedure may not be intercepted when interception is based on MSISDN (only PS interception) or IMEI. The use of the IMSI does not have this limitation. For the availability of the target identities IMSI, MSISDN and IMEI (PS interception), refer to [9].

The target identities for multi-media at the CSCF can be one or more of the following: SIP URL or TEL URL. Other identities are for further study.

In case of location dependent interception the following network/national options exist:

- target location versus Interception Areas (IAs) check in the 3G ICEs and Delivery Functions (DFs);
- target location versus IAs check in the DFs (physical collocation of the DFs to the 3G ICEs may be required by national law).

NOTE ~~1~~2: The IA is previously defined by a set of cells. From the location of the target this set of cells permits to find the relevant IA.

NOTE ~~2~~3: It is not required that the 3G GMSC or the 3G GGSN are used for interception when Location Dependent Interception is invoked and the location of the target is not available.

Location dependent intercept at the CSCF is for further study.

Location dependent intercept for the 3G MSC Server and SSGN is for further study.

The ADMF shall be able to provision P-CSCFs independently from S-CSCFs. If both P-CSCFs and S-CSCFs are administered within the network for intercept, redundant multi-media IRI may be presented to the agency as a result.

Next modified section

5.1 Activation

Figures 3,4 and 5 show the information flow for the activation of Lawful Interception.

5.1.1 X1_1-interface

The messages sent from the ADMF to the 3G ICEs (X1_1-interface) contain the:

- target identities (MSISDN, IMSI, IMEI, SIP URL or TEL URL) (see notes 4, 5 and 6);
- information whether the Content of Communication (CC) shall be provided (see note 1);
- address of Delivery Function 2 (DF2) for the intercept related information (see note 2);
- address of Delivery Function 3 (DF3) for the intercepted content of communications (see note 3);
- IA in case of location dependent interception.

NOTE 1: As an option, the filtering whether intercept product and/or intercept related information has to be provided can be part of the delivery functions. (Note that intercept product options do not apply at the CSCF). If the option is used, the corresponding information can be omitted on the X1_1-interface, while "information not present" means "intercept product and related information has to be provided" for theICE. Furthermore the delivery function which is not requested has to be "pseudo-activated", in order to prevent error cases at invocation.

NOTE 2: As an option, only a single DF2 is used by and known to every 3G ICE. In this case the address of DF2 can be omitted.

NOTE 3: As an option, only a single DF3 is used by and known to every 3G ICE (except at the CSCFs). In this case the address of DF3 can be omitted.

NOTE 4: Since the IMEI is not available, interception ~~of~~ based on IMEI is not applicable at the 3G Gateway. Moreover in case the IMEI is not available, interception based on IMEI is not applicable at 3G ICE.

NOTE 5: Interception at the CSCFs is based upon either SIP URL or TEL URL.

NOTE 6: SIP URL as a target identity is not supported by the other ICEs.

If after activation subsequently Content of Communications (CC) or Intercept Related Information (IRI) has to be activated (or deactivated) an "activation change request" with the same identity of the target is to be sent.

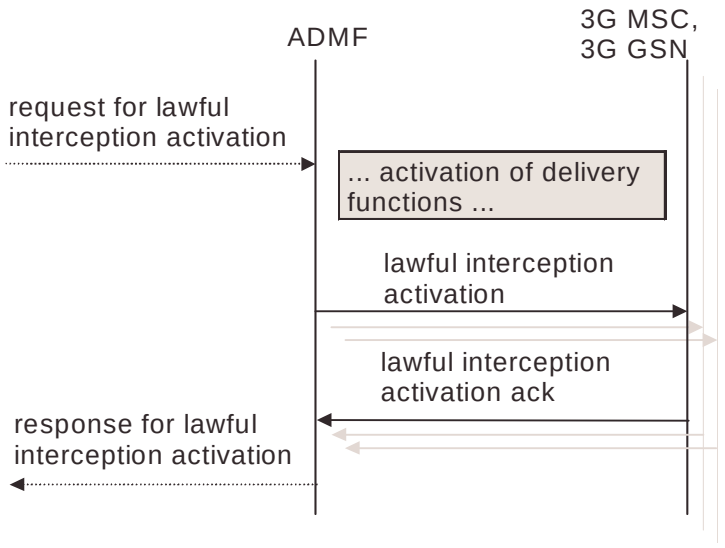

Figure 3: Information flow on X1_1-interface for Lawful Interception activation

Interception of a target can be activated on request from different LEAs and each LEA may request interception via a different identity. In this case, each target identity on which to intercept will need to be sent via separate activation messages from ADMF to the 3G ICEs on the X1_1-interface. Each activation can be for IRI only, or both CC and IRI.

When several LEAs request activation on the same identity then the ADMF determines that there are existing activations on the identity. In this case, the ADMF may (as an implementation option) send an additional activation message to the 3G ICEs. When the activation needs to change from IRI only to CC and IRI an activation change message will be sent to the 3G ICEs.

In case of a secondary interception activation only the relevant LEAs will get the relevant IRIs.