TSGS#27(05) 0256

Source: **SA3**

Title: **CRs to 33.107 on Correction on the use of identities for I-WLAN lawful interception (Rel-6)**

Document for: **Approval**

Agenda Item: **7.3.3**

Meeting	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SA1 Doc
SP-28	SP-050256	33.107	052	-	Rel-6	F	Correction on the use of identities for I-WLAN lawful interception	6.4.0	6.5.0	S3-050199

TSG-SA WG1 #38 **S3-050199**
Geneva, Switzerland, 26th to 29th April 2005 **Agenda Item:**

3GPP TSG-SA3-LI Meeting #17 ***Tdoc ⌘S3LI05_035r1***
Sophia Antipolis, France, 5-7 April 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **33.107** **CR** **052** ⌘ **rev** **-** ⌘ Current version: **6.4.0** ⌘

*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:	⌘	Correction on the use of identities for I-WLAN lawful interception
Source:	⌘	SA3-LI
Work item code:	⌘	SEC1-LI
Date:	⌘	05/04/2005
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:
Ph2 (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)
Rel-7 (Release 7)

Reason for change:	⌘	In the current version of TS 33.107, it is assumed that the IMSI is always available at the PDG, while the MSISDN is not. This is not according to the 3GPP WLAN specifications, which do not foresee the IMSI at PDG.
Summary of change:	⌘	The MSISDN is reccomended as identity for I-WLAN Lawful Interception, instead of IMSI. It is also clarified that the NAI can be encrypted or based on temporary identities at the PDG and in those cases cannot be used for interception at that node. Morevoer, 3GPP TS 29.234 is added as reference.
Consequences if not approved:	⌘	Mismatches between TS 33.107 and other 3GPP I-WLAN specifications. Not reliable interception mechanisms and functions at the PDG.

Clauses affected:	⌘	2, 5, 5.1.1, 9.3.1

Other specs affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	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/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.

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] ETSI TS 101 331: "Telecommunications security; Lawful Interception (LI); Requirements of Law Enforcement Agencies".

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

[3] ETSI 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] 3GPP TS 33.106: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; 3G Security; Lawful Interception Requirements".

[8] ANSI J-STD-025-A: "Lawfully Authorised Electronic Surveillance".

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

[10] 3GPP TS 23.060: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; General Packet Radio Service (GPRS); Service description".

[11] 3GPP TS 33.108: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; 3G Security; Handover interface for Lawful Interception".

[12] IETF RFC 3261: "SIP: Session Initiation Protocol".

[13] 3GPP TS 21.905: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Vocabulary for 3GPP Specifications".

[14] 3GPP TS 23.234: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; 3GPP system to Wireless Local Area Network (WLAN) Interworking; System Description".

[15] 3GPP TS 23.008: "3rd Generation Partnership Project; Technical Specification Group Core Network; Organization of subscriber data".

[16] 3GPP TS 29.234: "3rd Generation Partnership Project; Technical Specification Group Core Network; 3GPP system to Wireless Local Area Network (WLAN) interworking; Stage 3".

[17] 3GPP TS 24.234: "3rd Generation Partnership Project; Technical Specification Group Core Network; 3GPP system to Wireless Local Area Network (WLAN) interworking; User Equipment (UE) to network protocols; Stage 3".

*** NEXT MODIFICATION ***

5 Activation, deactivation and interrogation

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

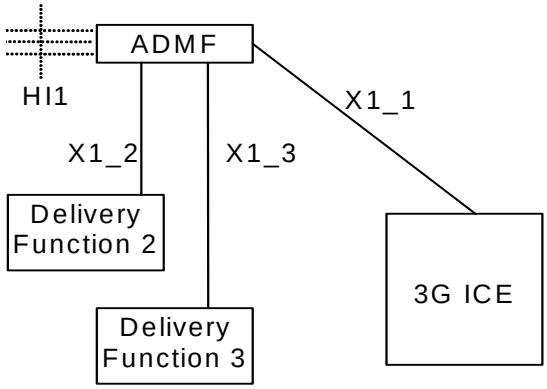

Figure 2: Functional model for Lawful Interception activation, deactivation and interrogation

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 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 [10].

The target identities for multi-media at the CSCF can be one or more of the following: SIP URI or TEL URL. Other identities are not defined in this release.

The target identities for 3GPP WLAN Interworking interception can be MSISDN, IMSI or NAI. For the availability of the target identities in the I-WLAN nodes (AAA server, PDG), refer to [14], [15], [16] and [17].

NOTE 2: The NAI may be a temporary ID, therefore the use of MSISDN ~~IMSI~~ is recommended.

NOTE 3: The ~~MSISDN~~ IMSI may be used, however, in many cases it will not be available.

In the 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);
- location dependent interception is not applicable to CSCF.

NOTE 4: 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 5: 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.

Editors' note: Location dependent intercept for the 3G MSC Server and SSGN is not defined for this release.

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 MODIFICATION ***

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 URI or TEL URL, NAI) (see notes 4, 5, 6 and 7);
- 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 the 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, HLR and AAA server). 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, HLR and AAA server). In this case the address of DF3 can be omitted.

NOTE 4: Since the IMEI is not available, interception 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 ICEs.

NOTE 5: Interception at the CSCFs is based upon either SIP URI or TEL URL. SIP URI and TEL URL as target identities are not supported by the other ICEs.

NOTE 6: Interception based on NAI is only applicable at AAA server and PDG. As the NAI could be encrypted or based on temporary identity at the PDG, interception based on the NAI is not applicable in those cases in that node.

NOTE 7: ~~In case MSISDN~~ As the IMSI is not available in most cases, interception based on the ~~MSISDN~~ IMSI is not applicable at the ~~AAA server and the~~ PDG.

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.

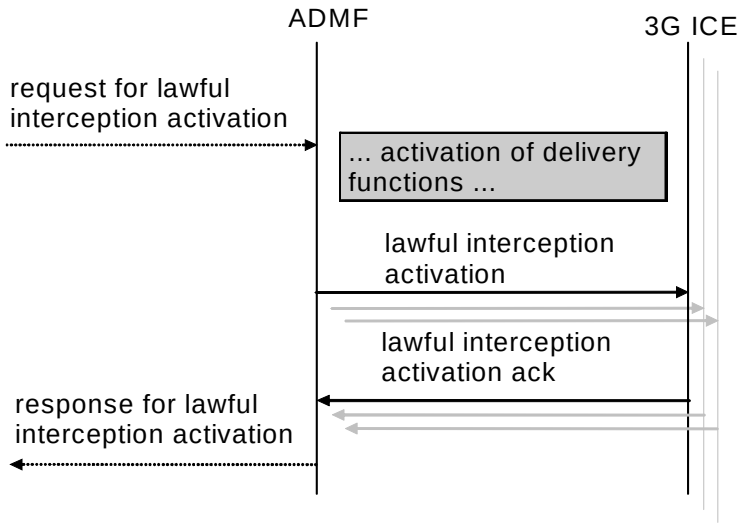

Figure 3: Information flow on X1_1-interface for Lawful Interception activation

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

*** NEXT MODIFICATION ***

9.3.1 X2-interface

The following information needs to be transferred from the PDG or the AAA server to the DF2 in order to allow a DF2 to perform its functionality:

- target identity (IMSI, NAI, or MSISDN~~, if available~~);
- events and associated parameters as defined in section 9.3.2 may be provided;
- the target location (if available);
- Correlation number (for PDG only);
- Quality of Service (QoS) identifier (if available).

The IRI should be sent to DF2 using a reliable transport mechanism.

*** END OF MODIFICATIONS ***