-----Ursprüngliche Nachricht-----
Von: Owen, Brad V (Brad) [mailto:bvowen@LUCENT.COM]
Gesendet: Mittwoch, 11. Juni 2003 10:27
Betreff: SA3 LI CRs Approved

Dear SA3,

As there were no comments on the SA3 LI CRs and as agreed first
deadline has passed (June 10th), the CRs are now considered approved by SA3.
Attached are the final approved CRs.

Regards,
    Brad

Note: The mirror CR S3LI03_049 is withdrawn. The R5 CR to 33.107 will be
applied before the R6 CRs. So the release 6 version of 33.107 will
automatically incorporate the R5 change.

Approved

Tdoc	Title	Spec	Release	Category
S3LI03_035r2	Correct Abbreviations in TS 33.108	33.108	R6	D
S3LI03_037r1	Syntax error in Annex B.3	33.108	R6	A
S3LI03_038r2	Inconsistency in Annex B.3	33.108	R6	D
S3LI03_040r2	Data Link Establishment.......	33.108	R6	F
S3LI03_041	Correction on the usage.......	33.108	R6	F
S3LI03_043	Subscriber controlled.........	33.108	R6	F
S3LI03_048r1	Missing QoS Parameter in IRI	33.107	R5	F
S3LI03_051r1	References	33.106	R6	D
S3LI03_072r2	TEL URL for IMS interception..	33.107	R6	B
S3LI03_074r1	Field separator in subaddress	33.108	R6	D
S3LI03_075r1	Stereo delivery to LEMF	33.107	R6	D
S3LI03_076	Syntax error in Annex B.3	33.108	R5	F

Withdrawn

Tdoc	Title	Spec	Release	Category
S3LI03_049	Missing QoS Parameter in IRI	33.107	R6	A

Regards,
    Brad

CR-Form-v7

CHANGE REQUEST

| ⌘ | **33.108** CR **CRNum** | ⌘**rev** | **-** | ⌘ | Current version: | **6.1.0** | ⌘ |

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Correct Abbreviations in TS 33.108	
Source: ⌘	Nortel Networks	
Work item code:⌘	Security	**Date:** ⌘ 20/05/03
Category: ⌘ **D**		**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: ⌘	Incorrect abbreviations for NWOs/APs/SvPs
Summary of change:⌘	Changes to all occurrences in the specification.
Consequences if not approved: ⌘	Inconsistencies in use of terminology with respect to other 3GPP specifications.

Clauses affected: ⌘	3.2, 4.4, 4.4.1, 4.5.1, 4.5.2, 5.1.1, 5.1.2.1, 5.2.2.1, 5.3.1, 5.4.1, 6.1.1, 6.1.2, 6.2.2, 6.2.3, 7.1.1, 7.1.2, Annex B, Annex D, G.4

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

Other comments: ⌘	

3.2 Abbreviations

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

~~AP~~AN	Access ~~Provider~~Network
ASN.1	Abstract Syntax Notation, Version 1
ASE	Application Service Element
BER	Basic Encoding Rules
CC	Content of Communication
CSCF	Call Session Control Function
DF	Delivery Function
FTP	File Transfer Protocol
GGSN	Gateway GPRS Support Node
GLIC	GPRS LI Correlation
GPRS	General Packet Radio Service
GSM	Global System for Mobile communications
GSN	GPRS Support Node (SGSN or GGSN)
GTP	GPRS Tunnelling Protocol
HI	Handover Interface
HI1	Handover Interface Port 1 (for Administrative Information)
HI2	Handover Interface Port 2 (for Intercept Related Information)
HI3	Handover Interface Port 3 (for Content of Communication)
HLC	High Layer Compatibility
IA	Interception Area
IA5	International Alphabet No. 5
IAP	Interception Access Point
ICI	Interception Configuration Information
IE	Information Element
IIF	Internal Interception Function
IMEI	International Mobile station Equipment Identity
IMS	IP Multimedia Core Network Subsystem
IMSI	International Mobile Subscriber Identity
INI	Internal network interface
IP	Internet Protocol
IPS	Internet Protocol Stack
IRI	Intercept Related Information
LEA	Law Enforcement Agency
LEMF	Law Enforcement Monitoring Facility
LI	Lawful Interception
LIID	Lawful Interception Identifier
LLC	Lower layer compatibility
LSB	Least significant bit
MAP	Mobile Application Part
MF	Mediation Function
MS	Mobile Station
MSB	Most significant bit
MSISDN	Mobile Subscriber ISDN Number
MSN	Multiple Subscriber Number
NEID	Network Element Identifier
NID	Network Identifier
~~NWO~~NO	Network Operator
OA&M	Operation, Administration & Maintenance
P-CSCF	Proxy Call Session Control Function
PDP	Packet Data Protocol

PLMN	Public land mobile network
PSTN	Public Switched Telephone Network
ROSE	Remote Operation Service Element
R_x	Receive direction
S-CSCF	Serving Call Session Control Function
SGSN	Serving GPRS Support Node
SMAF	Service Management Agent Function
SMF	Service Management Function
SMS	Short Message Service
~~SvP~~SP	Service Provider
TCP	Transmission Control Protocol
TI	Target identity
TP	Terminal Portability
T-PDU	tunneled PDU
T_x	Transmit direction
UI	User Interaction
UMTS	Universal Mobile Telecommunication System
VPN	Virtual Private Network

4.4   Overview of handover interface

The generic handover interface adopts a three port structure such that administrative information (HI1), intercept related information (HI2), and the content of communication (HI3) are logically separated.

Figure 4.1 shows a block diagram with the relevant entities for Lawful Interception.

The outer circle represents the ~~NWO/AP/SvP~~operator's (NO/AN/SP) domain with respect to lawful interception. It contains the network internal functions, the internal network interface (INI), the administration function and the mediation functions for IRI and CC. The inner circle contains the internal functions of the network (e.g. switching, routing, handling of the communication process). Within the network internal function the results of interception (i.e., IRI and CC) are generated in the Internal Interception Function (IIF).

The IIF provides the Content of Communication (CC) and the Intercept Related Information (IRI), respectively, at the Internal Network Interface (INI). For both kinds of information, mediation functions may be used, which provide the final representation of the standardized handover interfaces at the ~~NWO/AP/SvP~~operator's (NO/AN/SP) domain boundary.

4.4.1 Handover interface port 2 (HI2)

The handover interface port 2 shall transport the IRI from the ~~NWO/AP/SvP~~operator's (NO/AN/SP) IIF to the LEMF.

The delivery to the handover interface port 2 shall be performed via data communication methods which are suitable for the network infrastructure and for the kind and volume of data to be transmitted. From the ~~NWOs/APs/SvPs~~operator (NO/AN/SP) to LEMF delivery is subject to the facilities procured by the government.

The delivery can in principle be made via different types of lower communication layers, which should be standard or widely used data communication protocols.

The individual IRI parameters shall be coded using ASN.1 and the basic encoding rules (BER). The format of the parameter's information content shall be based on existing telecommunication standards, where possible.

The individual IRI parameters have to be sent to the LEMF at least once (if available).

The IRI records are transmitted individually. As an option, IRI records can be aggregated for delivery to the same LEA (i.e. in a single delivery interaction). As there are time constraints associated with the delivery of IRI, the use of this optional feature is subject to national or regional requirements. As a general principle, IRI records shall be sent immediately and shall not be withheld in the MF/DF in order to use the IRI record aggregation option.

The IRI records shall contain information available from normal ~~NWO/APs/SvP~~provider (NO/AN/SP) operating procedures. In addition the IRI records shall include information for identification and control purposes as specifically required by the HI2 port.

4.5.1 Data transmission protocols

The protocol used by the "LI application" for the encoding and the sending of data between the MF and the LEMF is based on already standardized data transmission protocols like ROSE or FTP.

The specified data communication methods provide a general means of data communication between the LEA and the ~~NWO/AP/SvP's~~operator's (NO/AN/SP) mediation function. They are used for the delivery of:

- HI2 type of information (IRI records);

- Certain types of content of communication (e.g., SMS).

The present document specifies the use of the two possible methods for delivery: ROSE or FTP on the application layer and the BER on the presentation layer. The lower layers for data communication may be chosen in agreement with the ~~NWO/AP/SvP~~operator (NO/AN/SP) and the LEA.

The delivery to the LEMF should use the internet protocol stack.

4.5.2 Application for IRI (HI2 information)

The handover interface port 2 shall transport the intercept related information (IRI) from the ~~NWO/AP/SvP's~~operator's (NO/AN/SP) MF to the LEMF.

The individual IRI parameters shall be coded using ASN.1 and the basic encoding rules (BER). Where possible, the format of the information content shall be taken over from existing telecommunication standards, which are used for these parameters with the network already (e.g., IP). Within the ASN.1 coding for IRI, such standard parameters are typically defined as octet strings.

5.1.1 Lawful Interception IDentifier (LIID)

For each target identity related to an interception measure, the authorized ~~NWO/AP/SvP~~ operator (NO/AN/SP) shall assign a special Lawful Interception IDentifier (LIID), which has been agreed between the LEA and the ~~NWO/AP/SvP~~operator (NO/AN/SP). It is used within parameters of all HI interface ports.

Using an indirect identification, pointing to a target identity makes it easier to keep the knowledge about a specific interception target limited within the authorized ~~NWO/AP/SvP~~operator (NO/AN/SP) and the handling agents at the LEA.

The Lawful Interception IDentifier LIID is a component of the CC delivery procedure and of the IRI records. It shall be used within any information exchanged at the Handover Interfaces HI2 and HI3 for identification and correlation purposes.

The LIID format shall consist of alphanumeric characters (or digit string for sub-address option, see annex J). It might for example, among other information, contain a lawful authorization reference number, and the date, when the lawful authorization was issued.

The authorized ~~NWO/AP/SvP~~operator (NO/AN/SP) shall enter for each target identity of the interception subject a unique LIID.

If more than one LEA intercepts the same target identity, there shall be unique LIIDs assigned, relating to each LEA.

5.1.2.1 Network Identifier (NID)

The Network IDentifier is a mandatory parameter; it should be internationally unique. It consists of one or both of the following two identifiers.

- ~~NWO/AP/SvP~~Operator- (NO/AN/SP)- identifier (mandatory):
  Unique identification of network operator, access network provider or service provider.

- Network element identifier NEID (optional):
  The purpose of the network element identifier is to uniquely identify the relevant network element carrying out the LI operations, such as LI activation, IRI record sending, etc.

A network element identifier may be:

- an E.164 international node number

- an X.25 address;

- an IP address.

5.2.2.1 Control Information for HI2

The main purpose of this information is the unique identification of records related to a target identity, including their unique mapping to the links carrying the Content of Communication. In general, parameters of this category are mandatory, i.e. they have to be provided in any record.

The following items are identified (in brackets: ASN.1 name and reference to the ASN.1 definition or clause B.3a):

1) Record type (*IRIContent*, see clause B.3a)
   IRI-BEGIN, IRI-CONTINUE, IRI-END, IRI-REPORT-record types.

2) Version indication (*iRIversion*, see clause B.3a)
   Identification of the particular version of the HI2 interface specification.

3) Communication Identifier (*CommunicationIdentifier,* see clauses 5.1.2 and B.3a).

4) Lawful Interception Identifier (*LawfulInterceptionIdentifier,* see clauses 5.1.1 and B.3a).

5) Date & time (*TimeStamp*, see clause B.3a)
   Date & time of record trigger condition.
   The parameter shall have the capability to indicate whether the time information is given as Local time without time zone, GMT with time zone, or UTC. Normally, the ~~NWO/AP/SvP~~operator (NO/AN/SP) shall define these options.

6) CC Link Identifier (*CC-Link-Identifier*, see clause 5.1.3 for definition and clause B.3a for ASN.1 definition).

5.3.1 Delivery of Content of Communication

CC will be delivered as described in annex J.

Exceptionally, SMS will be delivered via HI2.

The transmission media used to support the HI3 port shall be standard ISDN calls, based on 64 kbit/s circuit switched bearer connections. The CC links are set up on demand to the LEMF. The LEMF constitutes an ISDN DSS1 user function, with an ISDN DSS1 basic or primary rate access. It may be locally connected to the target switching node, or it may be located somewhere in the target network or in another network, with or without a transit network in between.

For network signalling, the standard ISDN user part shall be used. No modifications of the existing ISDN protocols shall be required. Any information needed for LI, like to enable correlation with the IRI records of a call, can be inserted in the existing messages and parameters, without the need to extend the ETSI standard protocols for the LI application.

For each LI activation, a fixed LEMF address is assigned; this address is, within the present document, not used for any identification purposes; identification and correlation of the CC links is performed by separate, LI specific information, see clause 5.1.

The functions defined in the ISDN user part standard, Version 1 (ETSI ISUP V1) are required as a minimum within the target network and, if applicable, the destination and transit networks, especially for the support of:

- Correlation of HI3 information to the other HI port's information, using the supplementary service user-to-user signalling 1 implicit (UUS1).

- Access verification of the delivery call (see clause 5.3.3).

The bearer capability used for the CC links is 64 kbit/s unrestricted digital information; this type guarantees that the information is passed transparently to the LEMF. No specific HLC parameter value is required.

The CC communication channel is a one-way connection, from the ~~NWO/AP/SvP~~operator's (NO/AN/SP) IIF to the LEMF, the opposite direction is not switched through in the switching node of the target.

5.4.1 General

In general, LI shall be possible for all connections and activities in which the target is involved. The target shall not be able to distinguish alterations in the offered service. It shall also not be possible to prevent interception by invoking supplementary services. Consequently, from a supplementary services viewpoint, the status of interactions with LI is "no impact", i.e. the behaviour of supplementary services shall not be influenced by interception.

Depending on the type of supplementary service, additional CC links to the LEA may be required, in addition to already existing CC links.

Within the IRI records, the transmission of additional, supplementary service specific data may be required.

Supplementary services, which have an impact on LI, with respect to CC links or IRI record content, are shown in table 5.7. The table is based on UMTS services, it considers the services which have been standardized at the time of finalizing the present document. Future services should be treated following the same principles.

NOTE 1: Co-ordination of handling of new services should be performed via 3GPP SA WG3-LI. If required, additions will be included in a subsequent version of the present document.

The question of Lawful Interception with Intelligent Networks is not covered in this version (see note 2).

NOTE 2: The general principle is, that LI takes place on the basis of a technical identity, i.e. a directory number. Only numbers which are known to the NWO/AP/SvPoperator (NO/AN/SP), and for which LI has been activated in the standard way, can be intercepted. No standardized functions are available yet which would enable an SCF to request from the SSF the invocation of LI for a call.

6.1.1 Lawful interception identifier

For each target identity related to an interception measure, the authorized NWO/AP/SvPoperator (NO/AN/SP) operator shall assign a special Lawful Interception Identifier (LIID), which has been agreed between the LEA and the NWO/AP/SvPoperator (NO/AN/SP).

Using an indirect identification, pointing to a target identity makes it easier to keep the knowledge about a specific interception target limited within the authorized NWO/AP/SvPoperator (NO/AN/SP) operators and the handling agents at the LEA.

The LIID is a component of the CC delivery procedure and of the IRI records. It shall be used within any information exchanged at the handover interfaces HI2 and HI3 for identification and correlation purposes.

The LIID format shall consist of alphanumeric characters. It might for example, among other information, contain a lawful authorization reference number, and the date, when the lawful authorization was issued.

The authorized NWO/AP/SvPoperator (NO/AN/SP) shall either enter a unique LIID for each target identity of the interception subject or a single LIID for multiple target identities all pertaining to the same interception subject.

If more than one LEA intercepts the same target identity, there shall be unique LIIDs assigned relating to each LEA.

6.1.2 Network identifier

The network identifier (NID) is a mandatory parameter; it should be internationally unique. It consists of the following two identifiers.

1) ~~NWO/AP/SvP~~Operator- (NO/AN/SP)~~-~~ identifier (mandatory):
   Unique identification of network operator, access network provider or service provider.

2) Network element identifier NEID (optional):
   The purpose of the network element identifier is to uniquely identify the relevant network element carrying out the LI operations, such as LI activation, IRI record sending, etc.

   A network element identifier may be an IP address or other identifier. For GSM and UMTS systems deployed in the U.S., the network element identifier is required.

6.2.2 Quality

The quality of service associated with the result of interception should be (at least) equal to the quality of service of the original content of communication. This may be derived from the QoS class used for the original intercepted session [20]. However, when TCP is used as an OSI layer 4 protocol across the HI3, real time delivery of the result of the interception cannot be guaranteed. The QoS used from the ~~NWOs/APs/SvPs~~operator (NO/AN/SP) to the LEMF is determined by what law enforcement procures.

6.2.3 Reliability

The reliability associated with the result of interception should be (at least) equal to the reliability of the original content of communication. This may be derived from the QoS class used for the original intercepted session [7].

Reliability from the ~~NWOs/APs/SvPs~~operator (NO/AN/SP) to the LEMF is determined by what law enforcement procures.

7.1.1 Lawful interception identifier

For each target identity related to an interception measure, the authorized ~~NWO/AP/SvP~~operator (NO/AN/SP) ~~operator~~ shall assign a special Lawful Interception Identifier (LIID), which has been agreed between the LEA and the ~~NWO/AP/SvP~~operator (NO/AN/SP).

Using an indirect identification, pointing to a target identity makes it easier to keep the knowledge about a specific interception target limited within the authorized ~~NWO/AP/SvP~~operator (NO/AN/SP) ~~operators~~ and the handling agents at the LEA.

The LIID is a component of the CC delivery procedure and of the IRI records. It shall be used within any information exchanged at the handover interfaces HI2 and HI3 for identification and correlation purposes.

The LIID format shall consist of alphanumeric characters. It might for example, among other information, contain a lawful authorization reference number, and the date, when the lawful authorization was issued.

The authorized ~~NWO/AP/SvP~~operator (NO/AN/SP) shall either enter a unique LIID for each target identity of the interception subject or a single LIID for multiple target identities all pertaining to the same interception subject.

If more than one LEA intercepts the same target identity, there shall be unique LIIDs assigned relating to each LEA.

7.1.2 Network identifier

The network identifier (NID) is a mandatory parameter; it should be internationally unique. It consists of the following two identifiers.

1) ~~NWO/AP/SvP~~Operator- (NO/AN/SP)- identifier (mandatory):
   Unique identification of network operator, access network provider or service provider.

2) Network element identifier NEID (optional):
   The purpose of the network element identifier is to uniquely identify the relevant network element carrying out the LI operations, such as LI activation, IRI record sending, etc.

   A network element identifier may be an IP address or other identifier.

Annex B (normative):
Structure of data at the handover interface

This annex specifies the coding details at the handover interface HI for all data, which may be sent from the ~~NWO/AP/SvP~~operator's (NO/AN/SP) equipment to the LEMF, across HI.

At the HI2 and HI3 handover interface ports, the following data may be present:

- interface port HI2: Intercept related information (IRI);

- interface port HI3: records containing content of communication (CC).

The detailed coding specification for these types of information is contained in this annex, including sufficient details for a consistent implementation in the ~~NWO/AP/SvP~~operator's (NO/AN/SP) equipment and the LEMF.

It must be noticed some data are ROSE specific and have no meaning when FTP is used. Those specificities are described at the beginning of each sub-annex.

Annex D (informative):
LEMF requirements - handling of unrecognised fields and parameters

During decoding of a record at the LEA, the following exceptional situations may occur:

1) Unrecognized parameter: The parameter layout can be recognized, but its name is not recognized:
   The parameter shall be ignored, the processing of the record proceeds.

2) The parameter content or value is not recognized or not allowed:
   The parameter shall be ignored, the processing of the record proceeds.

3) The record cannot be decoded (e.g. it seems to be corrupted):
   The whole record shall be rejected when using ROSE delivery mechanism or ignored.

NOTE: In cases 2 and 3, the LEMF may wish to raise an alarm to the ~~NWO/AP/SvP~~operator (NO/AN/SP) administration centre. For case 1, no special error or alarm procedures need be started at the LEA, because the reason may be the introduction of a new version of the specification in the network, not be an error as such security aspects.

G.4 Cross reference of terms between J-STD-025-A and 3GPP

Table G-1: Cross Reference of Terms between J-STD-025-A and 3GPP

J-STD-025-A		3GPP LI Specifications [18], [19]	
-	Call Content	CC	Content of Communication
CCC	Call Content Channel	-	Handover Interface port 3
CDC	Call Data Channel	-	Handover Interface port 2
CF	Collection Function	LEMF	Law Enforcement Monitoring Facility
-	Call-identifying Information	IRI	Intercept Related Information
-	Call-identifying message	-	IRI record
DF	Delivery Function	-	Delivery Function / Mediation Function
-	a-interface	-	X1_1 interface
-	b-interface	-	HI1 interface
-	c-interface	-	X1_2 and X1_3 interfaces
-	d-interface	-	X2 and X3 interfaces
-	e-interface	HI	Handover Interface (HI2 and HI3)
IAP	Intercept Access Point	ICE+INE	Intercepting Control Element + Intercepting Network Element
-	Intercept subject	-	Target
LAES	Lawful Authorized Electronic Surveillance	LI	Lawful Intercept
-	CaseIdentity	LIID	Lawful Interception IDentifier
LEAF	Law Enforcement Administration Function	ADMF	Administration Function
SPAF	Service Provider Administration Function	ADMF	Administration Function
-	SystemIdentity	NID	Network IDentifier
TSP	Telecommunication Service Provider	~~NWO/AP/SvP~~ NO/AN/SP	~~Network Operator/Access Provider/Service Provider~~ Network Operator, Access Network Provider, Service Provider

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CHANGE REQUEST

⌘	**33.108** CR **CRNum**	⌘**rev**	**-**	⌘	Current version:	**6.1.0**	⌘

For **HELP** *on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Syntax error in Annex B.3	
Source: ⌘	Reg TP	
Work item code: ⌘	Security	***Date:*** ⌘ 20/05/03

Category: ⌘	**A**	***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: ⌘	Syntax error in of annex B.3 of TS 33.108

Summary of change: ⌘	In the ASN.1 description in annex B.3 of TS 33.108 there is a syntax error. However syntax checkers and compilers will not complete successfully. They will stop at this point and produce an error report.

Consequences if ⌘ ***not approved:***	Compilers can not run successfully when encoding the IRI.

Clauses affected: ⌘	Annex B.3

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

Other comments: ⌘	

B.3   Intercept related information (HI2)

...

```
    networkIdentifier       [26] Network-Identifier OPTIONAL,
    sMSOriginatingAddress   [27] DataNodeAddress OPTIONAL,
    sMSTerminatingAddress   [28] DataNodeAddress OPTIONAL,
    iMSevent                [29] IMSEevent OPTIONAL,
    sIPMessage              [30] OCTET STRING  OPTIONAL,
    servingSGSN-number      [31] OCTET STRING (SIZE (1..20))   OPTIONAL,
    servingSGSN-address     [32] OCTET STRING (SIZE (5..17))   OPTIONAL,
```

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CHANGE REQUEST

| ⌘ | **33.108** CR **CRNum** | ⌘ **rev** | **-** | ⌘ | Current version: | **6.1.0** | ⌘ |

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Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Inconsistency in Annex B.3	
Source: ⌘	Alcatel S. A.	
Work item code:⌘	Security	**Date:** ⌘ 21/05/03
Category: ⌘ **D**		**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: ⌘	Inconsistency of the ASN1 wording between ETSI TS 101 671 and 3GPP 33.108 in the ASN1 definition of Annex B.3
Summary of change:⌘	With FTP as well as with ROSE the ASN.1 encoding should start with '**UmtsIRIsContent'**.
Consequences if not approved: ⌘	Implementors might assume that aggregation of IRI records is not permitted when using ROSE as long as the ASN1 script source of TS 33.108 makes mention to the File terminology, as there is no File notation in ROSE, but only in FTP.

Clauses affected: ⌘	Annex B.3

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

Other comments: ⌘	

B.3   Intercept related information (HI2)

Declaration of ROSE operation umts-sending-of-IRI is ROSE delivery mechanism specific. When using FTP delivery mechanism, data ~~u~~**U**mtsIRI~~s~~**Content** must be considered.

ASN1 description of IRI (HI2 interface)

```
UmtsHI2Operations {itu-t(0) identified-organization(4) etsi(0) securityDomain(2)
lawfulintercept(2) threeGPP(4) hi2(1) version-2(2)}

DEFINITIONS IMPLICIT TAGS ::=

BEGIN
```

```
IMPORTS

        OPERATION,
        ERROR
            FROM Remote-Operations-Information-Objects
            {joint-iso-itu-t(2) remote-operations(4) informationObjects(5) version1(0)}

        LawfulInterceptionIdentifier,
        TimeStamp,
        Network-Identifier,
        National-Parameters,
        DataNodeAddress,
        IPAddress,
        IP-value,
        X25Address

            FROM HI2Operations
            {itu-t(0) identified-organization(4) etsi(0) securityDomain(2)
                lawfulIntercept(2) hi2(1) version3(3)}; -- TS 101 671 Edition 3
```

```
-- Object Identifier Definitions

-- Security DomainId
lawfulInterceptDomainId OBJECT IDENTIFIER ::= {itu-t(0) identified-organization(4)
etsi(0)
securityDomain(2) lawfulIntercept(2)}

-- Security Subdomains
threeGPPSUBDomainId OBJECT IDENTIFIER ::= {lawfulInterceptDomainId threeGPP(4)}
hi2DomainId OBJECT IDENTIFIER   ::= {threeGPPSUBDomainId hi2(1) version-2(2)}
```

```
umts-sending-of-IRI  OPERATION ::=
{
    ARGUMENT    UmtsIRIsFileContent
    ERRORS      { OperationErrors }
    CODE        global:{threeGPPSUBDomainId hi2(1) opcode(1)}
}
-- Class 2 operation . The timer shall be set to a value between 3 s and 240 s.
-- The timer.default value is 60s.
-- NOTE:    The same note as for HI management operation applies.
```

```
    UmtsIRIsFileContent ::= CHOICE
{
    umtsiRIContent          UmtsIRIContent,
    umtsIRIFileSequence     UmtsIRIFileSequence
}

UmtsIRIFileSequence      ::= SEQUENCE OF UmtsIRIContent
```

```
-- Aggregation of UmtsIRIContent is an optional feature.
-- It may be applied in cases when at a given point in time
-- several IRI records are available for delivery to the same LEA destination.
-- As a general rule, records created at any event shall be sent
-- immediately and not withheld in the DF or MF in order to
-- apply aggragation.
-- When aggregation is not to be applied,
-- UmtsIRIContent needs to be chosen.
```

CR-Form-v7

CHANGE REQUEST

⌘   **33.108** CR **CRNum** ⌘ **rev** **-** ⌘ Current version: **6.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐   Radio Access Network ☐   Core Network **X**

Title: ⌘	Data Link Establishment and Sending part for ROSE operation
Source: ⌘	Alcatel S. A.
Work item code:⌘	Security **Date:** ⌘ 21/05/03

Category: ⌘ **F**

Use <u>one</u> 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.

Release: ⌘ **Rel-6**

Use <u>one</u> 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: ⌘	TS 33.108 sections A.1.2.3 (Data Link Management) and A.1.2.1 (Sending part) related to ROSE operations can be considered as confusing. That CR gives a rewording for clarification of that ambiguity with more accuracy. When separation between those both parts becomes more clearly the TS 33.108 makes clear the data link establishment shall be initiated either by MF or by LEMF. That CR doesn't intend to restrict the behaviour to only one side initiation and therefore, for backward compatibility reasons, proposes that both currently allowed options shall be maintained.
Summary of change:⌘	Modified text in section A.1.2.3 and A.1.2.1
Consequences if ⌘ **not approved:**	Implementors might assume that there are restrictions for data link managment between MF and LEMF.

Clauses affected: ⌘	A.1.2.3, A.1.2.1 and A.1.2.3.1

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

Other comments: ⌘	

A.1.2.1 Sending part

To request the sending of data to a peer entity, the LI_Application provides the ASE_HI, the address of the peer entity, the nature of the data and the data.

On receiving a request of the LI_Application:

- If the data link toward the peer entity address is active, the ASE_HI, from the nature of the data provided, encapsulates this data in the relevant RO-Invoke operation.

- If the data link toward the peer entity address isn't active, the ASE_HI ~~establishes this data link (see annex A.1.2.3). Then, depending on the nature of the data provided, the ASE_HI encapsulates this data in the relevant RO-Invoke operation.~~reports the data link unavailability to LI-Application.

Note: Until the data link is established according to A.1.2.3.1, the request of the LI_Application cannot be successfully processed by ASE_HI.

*********** *NEXT MODIFICATION* ********

A.1.2.3 Data link management

This function is used to establish or release a data link between two peer LI_Applications entities (MF and LEMF). ~~Depending on a per destination address configuration data, the data link establishment may be required either by the LEMF LI_Application or by the MF LI_Application.~~

A.1.2.3.1 Data link establishment

Depending on a per destination address configuration data, the data link establishment may be requested either by the LEMF LI_Application or by the MF LI_Application.

To request the establishment of a data link toward a peer entity, the LI_Application provides, among others, the destination address of the peer entity (implicitly, this address defined the protocol layers immediately under the ASE_HI: TCP/IP, X25, …). On receipt of this request, the ASE_HI request the establishment of the data link with respect of the rules of the under layers protocol.

CR-Form-v7

CHANGE REQUEST

| ⌘ | **33.108** CR **CRNum** | ⌘**rev** | **-** | ⌘ | Current version: | **6.1.0** | ⌘ |

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Correction on the usage of Lawful Interception identifiers	
Source: ⌘	Ericsson	
Work item code:⌘	SEC1-LI	***Date:*** ⌘ 12/05/2003
Category: ⌘	**F**	***Release:*** ⌘ Rel-6

Use <u>one</u> 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 <u>one</u> 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: ⌘	The current version of TS 33.108 (rel-6) describes how the identifiers for Lawful Interception are exchanged between the mediation function and the LEMF and includes as possible option the interception of Call Content only. This is not according to 3GPP Lawful Interception Requirements TS 33.106, which states (clause 5.2.1.1) that "As a result of the activation (of a warrant) it shall be possible to request for the specified target, either IRI, or both the IRI and the CC and designate the LEA destination addresses for the delivery of the CC and IRI if required. These shall be selectable on a 3GMS basis according to national options".
Summary of change: ⌘	The description of usage of identifiers applicable to the "CC only" option is removed.
Consequences if not approved: ⌘	Lawful Interception Handover Interface would be not according to Lawful Interception Requirements. Misalignment between 3GPP TSs 33.106 and 33.108.

Clauses affected: ⌘	5.1.5

	Y	N		
Other specs affected: ⌘		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.

*** FIRST MODIFIED SECTION ***

5.1.5   Usage of Identifiers

The identifiers are exchanged between the mediation function and the LEMF via the interfaces HI1, HI2 and HI3. There exist several interface options for the exchange of information. Tables 5.1 and 5.2 define the usage of numbers and identifiers depending on these options.

NOTE: X in tables 5.1 and 5.2: Identifier used within parameters of the interface.

Table 5.1: Usage of identifiers, IRI and CC transmitted; options A, B (see clause 5.4.4)

Identifier	IRI and CC transmitted (option A)			IRI and CC transmitted (option B)		
	HI1	HI2	HI3	HI1	HI2	HI3
LIID	X	X	X	X	X	X
NID		X	X		X	X
CIN		X	X		X	X (see note 1)
CCLID					X	X (see note 2)
NOTE 1: The CIN of the 1st call for which this CC link has been set-up.						
NOTE 2: The CCLID may be omitted, see clause 5.1.3.						

Table 5.2: Usage of identifiers, only IRI or only CC transmitted

Identifier	Only IRI transmitted		Only CC transmitted	
	HI1	HI2	HI1	HI3
LIID	X	X	X	X
NID		X		X
CIN		X		X
CCLID				

Identifier	Only IRI transmitted	
	HI1	HI2
LIID	X	X
NID		X
CIN		X
CCLID		

*** END OF MODIFICATIONS ***

CR-Form-v7

CHANGE REQUEST

| ⌘ | **33.108** CR **CRNum** | ⌘**rev** | **-** | ⌘ | Current version: | **6.1.0** | ⌘ |

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Subscriber controlled input clarification	
Source: ⌘	Ericsson	
Work item code: ⌘	SEC1-LI	***Date:*** ⌘ 12/05/2003
Category: ⌘ **F**		***Release:*** ⌘ Rel-6

Use <u>one</u> of the following categories:	*Use <u>one</u> 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: ⌘	The current version of the specification states that "At the exchange, where the subscriber data of a target shall be modified via a remote control procedure, an IRI-REPORT record shall be generated as if the control procedure had taken place locally". This sentence, which was incorporated from ETSI ES 201 671, is applicable to wireline network, in which the subscriber is connected to a local exchange, but not to wireless networks described in 3GPP specifications, in which the subscriber profile is stored in the HLR/HSS and downloaded to the VLR.
Summary of change: ⌘	The sentence quoted in the Reason for Change is deleted.
Consequences if not approved: ⌘	TS 33.108 would contain a misleading sentence, not applicable to wireless networks.

Clauses affected: ⌘	5.4.5

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

Other comments: ⌘	The current text was incorporated by ETSI ES 201 671.

How to create CRs using this form:
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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.

*** FIRST MODIFIED SECTION ***

5.4.5   Subscriber Controlled Input (SCI): Activation / Deactivation / Interrogation of Services

For user procedures for control of Supplementary Services (Activation/Deactivation/Interrogation), a special IRI record type (IRI-REPORT record) is defined to transmit the required information.

The IRI-REPORT record shall contain an indicator, whether the request of the target has been processed successfully or not.

At the exchange, where the subscriber data of a target shall be modified via a remote control procedure, an IRI-REPORT record shall be generated as if the control procedure had taken place locally.

*** END OF MODIFICATIONS ***

CR-Form-v7

CHANGE REQUEST

⌘   **TS 33.107** CR **CRNum** ⌘**rev** **-** ⌘ Current version: **5.5.0** ⌘

*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: ⌘	Missing QoS Parameter in IRI	
Source: ⌘	Siemens AG	
Work item code:⌘		**Date:** ⌘ 20 / 05 / 2003

Category: ⌘ **F**

Use <u>one</u> 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.

Release: ⌘ Rel-5

Use <u>one</u> 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: ⌘	This paramter was missing in this LI specification, but already required in TS 33.108.
Summary of change:⌘	Adding of missing parameter in IRI's
Consequences if not approved: ⌘	Inconsistency in LI implementation. Leagal consiquences for the operators.

Clauses affected: ⌘	7.4.3, 7.4.4

	Y	N		
Other specs Affected: ⌘		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.

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 DF2 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
Network Element Identifier
Location Information
Failed context activation reason
IAs (if applicable)
Session Initiator (optional)
QoS (optional)

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 DF2 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
Network Element Identifier
Location Information
Old Location Information (optional)
IAs (if applicable)
QoS (optional)

Presence of the optional Old Location Information field indicates that PDP context was already active, and being intercepted. However, the absence of this information does not imply that interception has not started in the old location SGSN for an active PDP context.

CR-Form-v7

CHANGE REQUEST

⌘	**TS 33.106** CR **CRNum** ⌘**rev** **-** ⌘ Current version:	**5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network ☐   Core Network **X**

Title: ⌘	References	
Source: ⌘	Siemens AG	
Work item code: ⌘		**Date:** ⌘ 20 / 05 / 2003
Category: ⌘ **D**		**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: ⌘	Wrong / old references
Summary of change: ⌘	Bring in the new documents for handover of LI and the adapted generell requirements.
Consequences if not approved: ⌘	Wrong references would couse wrong implementations.

Clauses affected: ⌘	2, 6

	Y	N		
Other specs affected: ⌘		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.

[1] European Union Council Resolution on the Lawful Interception of Telecommunications (17. January 1995)

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

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

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

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

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

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

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

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

[9] TS 33.107:"3G Security; Lawful Interception Architecture and Functions

[10] TS 33.108:" 3G security; Handover interface for Lawful Interception (LI)

6 Handover Interface Requirements

Handover interface requirements are defined in [10]. ~~By national~~For national or regional specifications. ~~S~~ see references [4] and [8].

CR-Form-v7

CHANGE REQUEST

| ⌘ | **33.107** CR **CRNum** | ⌘**rev** | **-** | ⌘ | Current version: | **5.5.0** | ⌘ |

*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: ⌘	TEL URL for IMS interception identity	
Source: ⌘	Nokia	
Work item code:⌘		***Date:*** ⌘ 14/05/2003
Category: ⌘ **B**		***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: ⌘	3GPP TS 23.228 section "Public user identities" introduces TEL URL as public user identity. The IMS user needs the TEL URL for the communication to/from legacy telephone systems. The TEL URL scheme is introduced in the IETF RFC 2806. Interception in IMS system is also needed based on TEL URL identity.
Summary of change:⌘	It is proposed to add TEL URL to IMS interception identity.
Consequences if ⌘ ***not approved:***	

Clauses affected: ⌘	2; 3.2; 5; 5.1; 5.1.1; 7A.2

	Y	**N**	
Other specs ⌘	**X**		Other core specifications ⌘ TS 33.108
affected:			Test specifications
			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".

SECOND MODIFIED SECTION:

3.2   Abbreviations

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

3GPP MS	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
DF	Delivery Function
ECT	Explicit Call Transfer
GPRS	General Packet Radio Service
HI	Handover Interface
IA	Interception Area
ICEs	Intercepting Control Elements (3G MSC Server, 3G GMSC Server, P-CSCF, S-CSCF, SGSN, GGSN)
INEs	Intercepting Network Elements (,3G MSC Server, 3G GMSC Server, P-CSCF, S-CSCF, SGSN, GGSN, MGW)

IP	Internet Protocol
IRI	Intercept Related Information
LDI	Location Dependent Interception
LEA	Law Enforcement Agency
LEMF	Law Enforcement Monitoring Facility
RA	Routing Area
RAI	Routing Area Identitiy
SAI	Service Area Identity
TEL URL	"tel" URL as defined in [9]

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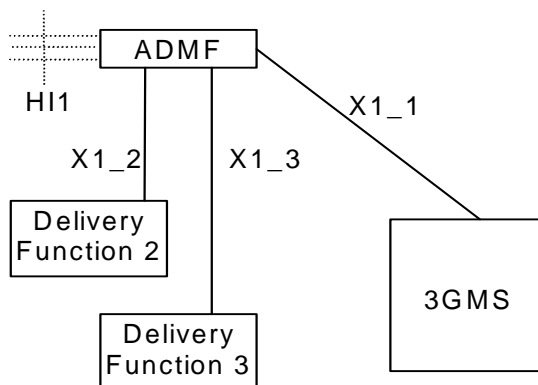
Figure 2: Functional model for Lawful Interception activation, deactivation and interrogation

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 interception at the SGSN, GGSN, 3G MSC Server and 3G GMSC Server can be at least one of the following: IMSI, MSISDN or IMEI.

The target identities~~y~~ for multi-media at the CSCF can be one or more of the following: SIP URL or TEL URL.~~ is the SIP URL at the CSCF.~~ 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: 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: 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.

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, or SIP URL or TEL URL) (see notes 4, 5, 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 IMEI is not applicable at the 3G Gateway.

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

NOTE 6:   However, 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.
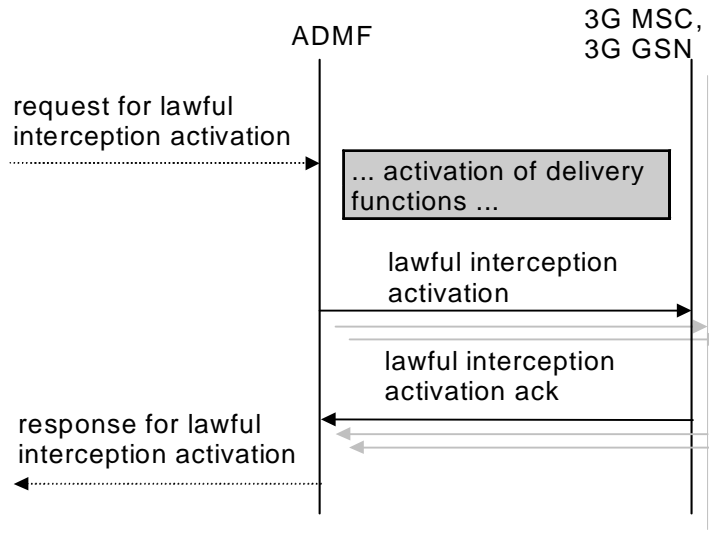
Figure 3: Information flow on X1_1-interface for Lawful Interception activation

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.

FOURTH MODIFIED SECTION:

7A.2   Provision of IRI

SIP messaging is reported as Intercept Related Information for the interception of multi-media service. As shown in figure 22 below, all SIP messages executed on behalf of a target subscriber are subject to intercept at the P CSCF and S CSCF. Based upon network configuration, the ADMF shall provision P CSCFs, or S CSCFs, or both P CSCFs and S CSCFs with SIP URL or TEL URL target identifiers. These resulting intercepted SIP messages shall be sent to DF2 for mediation prior to transmittal across the HI2 interface.

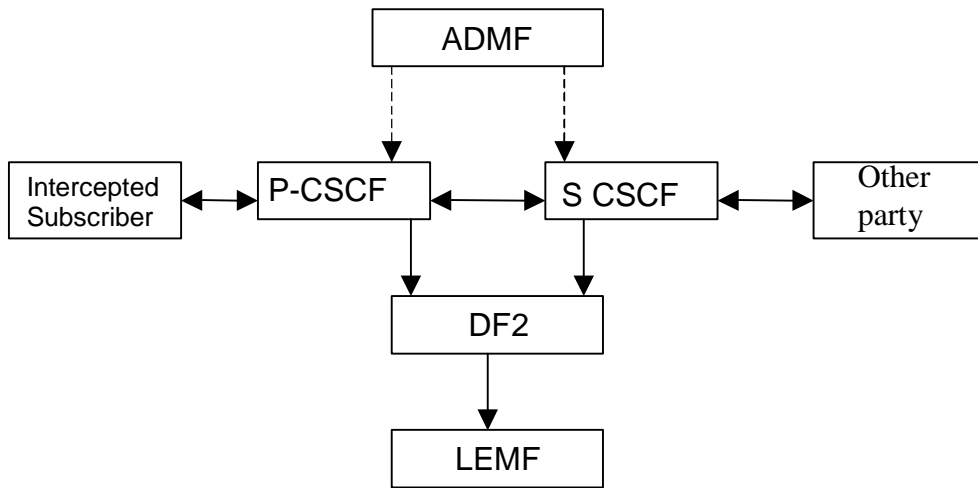Figure 22: Provision of Intercept Related Information for multi-media

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CHANGE REQUEST

| ⌘ | **33.108** CR **CRNum** | ⌘**rev** | **-** | ⌘ | Current version: | **6.1.0** | ⌘ |

For **HELP** *on using this form, see bottom of this page or look at the pop-up text over the* ⌘ *symbols.*

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network ☐ Core Network **X**

Title:	⌘	Field separator in subaddress

Source:	⌘	Nokia

Work item code:⌘		**Date:** ⌘	21/05/2003

Category:	⌘	**D**		**Release:** ⌘	Rel-6

Use <u>one</u> 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 <u>one</u> 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:	⌘	Field separator is not specified unambiguously in clause J.2.3.2. Some authorities have query interpretation of the clause J.2.3.2. Respective CR was approved in ETSI TC LI meeting in Benalmadena to TS 101 671.

Summary of change:⌘	Addition to J.2.3.2 and example of usage of Field separator in table J.2.5

Consequences if not approved:	⌘	Misinterpretation of separated fields and misaligment with ETSI TS 101 671.

Clauses affected:	⌘	J.2.3.2

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

Other comments:	⌘	

J.2.3.2 Field order and layout

Fields shall be presented into the subaddress in the following order:

Table J.2.3: Fields in the Called Party Subaddress

Order	Field
1	Operator-ID
2	CIN
3	CCLID
4	National Parameters

Table J.2.4: Fields in the Calling Party Subaddress

Order	Field
1	Lawful Interception Identifier (LIID)
2	Direction
3	Service Octets

Each field noted above shall be included, whether empty or not, and a field separator shall separate each field. When a field is empty, that shall be indicated by two consecutive field separators (including field separator from the previous field). There shall be a field separator after the final field, too.

Table J.2.5. Example how field separator should be used when field is empty

Bits								Octets
8	7	6	5	4	3	2	1	
Called party subaddress identifier								1
Length of called party subaddress contents								2
Type of subaddress = user specified, odd/even indicator								3
Operator-ID ②				Operator-ID ①				4
Operator-ID ④				Operator-ID ③				5
Field separator				Operator-ID ⑤				6
CCLID ①				Field separator				7
CCLID ③				CCLID ②				8
CCLID ⑤				CCLID ④				9
CCLID ⑦				CCLID ⑥				10
Field separator				CCLID ⑧				11
								12
								13
								14
								15
(see note)								16
								17
								18
								19
								20
								21
								22
								23

NOTE: The Octets after the final field (CCLID) of the Called Party Subaddress are reserved for national use, e.g. for authentication purposes.

The Service Octets as available shall always be mapped into octets 19 to 23 of the Calling Party Subaddress, as appropriate. If one of the parameters TMR, BC or HLC is not available, the octet shall be fill with "FF" hex. If Mobile

Teleservice Code is not available, octet 23 shall not be transmitted. If Mobile Teleservice Code and Mobile Bearer Service Code are not available, octets 22 and 23 shall not be transmitted.

Table J.2.65 represent called party subaddress and table J.2.76 calling party subaddress with the maximum length of the identifiers.

Table J.2.65: Called Party Subaddress

Bits								Octets
8	7	6	5	4	3	2	1	
Called party subaddress identifier								1
Length of called party subaddress contents								2
Type of subaddress = user specified, odd/even indicator								3
Operator-ID ②				Operator-ID ①				4
Operator-ID ④				Operator-ID ③				5
Field separator				Operator-ID ⑤				6
CIN ②				CIN ①				7
CIN ④				CIN ③				8
CIN ⑥				CIN ⑤				9
CIN ⑧				CIN ⑦				10
CCLID ①				Field separator				11
CCLID ③				CCLID ②				12
CCLID ⑤				CCLID ④				13
CCLID ⑦				CCLID ⑥				14
Field separator				CCLID ⑧				15
see note								16
								17
								18
								19
								20
								21
								22
								23
NOTE: The Octets after the final field (CCLID) of the Called Party Subaddress are reserved for national use, e.g. for authentication purposes.								

Table J.2.76: Calling Party Subaddress

Bits								Octets
8	**7**	**6**	**5**	**4**	**3**	**2**	**1**	
Calling party subaddress identifier								1
Length of calling party subaddress contents								2
Type of subaddress = user specified, odd/even indicator according to the amount of BCD-digits								3
LIID ②				LIID ①				4
LIID ④				LIID ③				5
LIID ⑥				LIID ⑤				6
LIID ⑧				LIID ⑦				7
LIID ①⓪				LIID ⑨				8
LIID ①②				LIID ①①				9
LIID ①④				LIID ①③				10
LIID ①⑥				LIID ①⑤				11
LIID ①⑧				LIID ①⑦				12
LIID ②⓪				LIID ①⑨				13
LIID ②②				LIID ②①				14
LIID ②④				LIID ②③				15
Field separator				LIID ②⑤				16
Field separator				Direction				17
spare				spare				18
ITU-T Recommendation Q.763 [32] TMR (see note 1)								19
ITU-T Recommendation Q.931 BC [33] octet 3 (see note 2)								20
ITU-T Recommendation Q.931 HLC [33] octet 4 (see note 3)								21
Mobile Bearer Service Code (see note 4)								22
Mobile Teleservice Code (see note 5)								23
NOTE 1: If available, the Transmission Medium Requirement according to EN 300 356 [29]. If not available, the value is "FF" hex.								
NOTE 2: If available, only octet 3 of the Bearer Capability I.E. according to EN 300 403 [30] If not available, the value is "FF" hex.								
NOTE 3: If available, only octet 4 of the High Layer Compatibility I.E. according to EN 300 403 [30]. If not available, the value is "FF" hex.								
NOTE 4: If available, the Mobile Bearer Service Code according to ETS 300 974 [34], clause 14.7.10. If not available, the octets 22 and 23 shall not be transmitted.								
NOTE 5: If available, the Mobile Teleservice Code according to ETS 300 974 [34], clause 14.7.9. If not available, the octet 23 shall not be transmitted.								

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CHANGE REQUEST

| ⌘ | **TS 33.107** CR **CRNum** | ⌘ | **-** | ⌘ | Current version: | **5.5.0** | ⌘ |

*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: ⌘	Stereo delivery to LEMF	
Source: ⌘	Siemens AG	
Work item code: ⌘	Security	**Date:** ⌘ 20.05.2003
Category: ⌘ **D**		**Release:** ⌘ Rel-6

Use <u>one</u> 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 <u>one</u> 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: ⌘	Missing adaptation in the call flows
Summary of change: ⌘	Delete all refences to mono (single stubline) delivery
Consequences if not approved: ⌘	Inconsistent parts in the specification

Clauses affected: ⌘	Annex A	

	Y	**N**		
Other specs ⌘		X	Other core specifications	⌘
affected:		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.

# A.3   Call hold / call waiting

Figures A.3 and A.4 show the interception of calls involving call hold / call waiting. Figure A.3 covers the case where ~~one stubline or~~ one pair of stublines is used per target, figure A.4 covers the case where a separate ~~stubline or~~ pair of stublines is used for each target call. The mobile that receives the waiting call (A) is the target for interception.
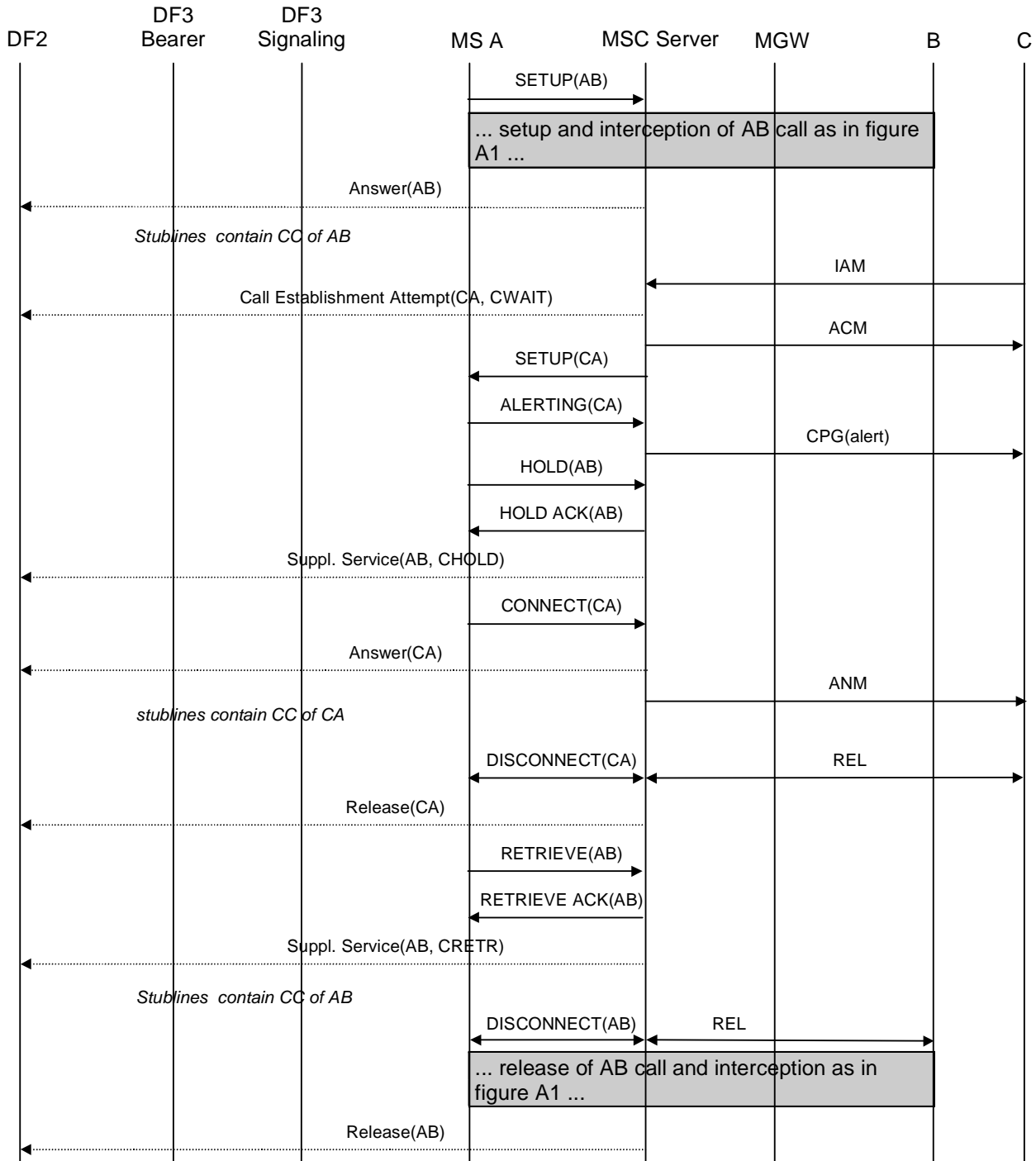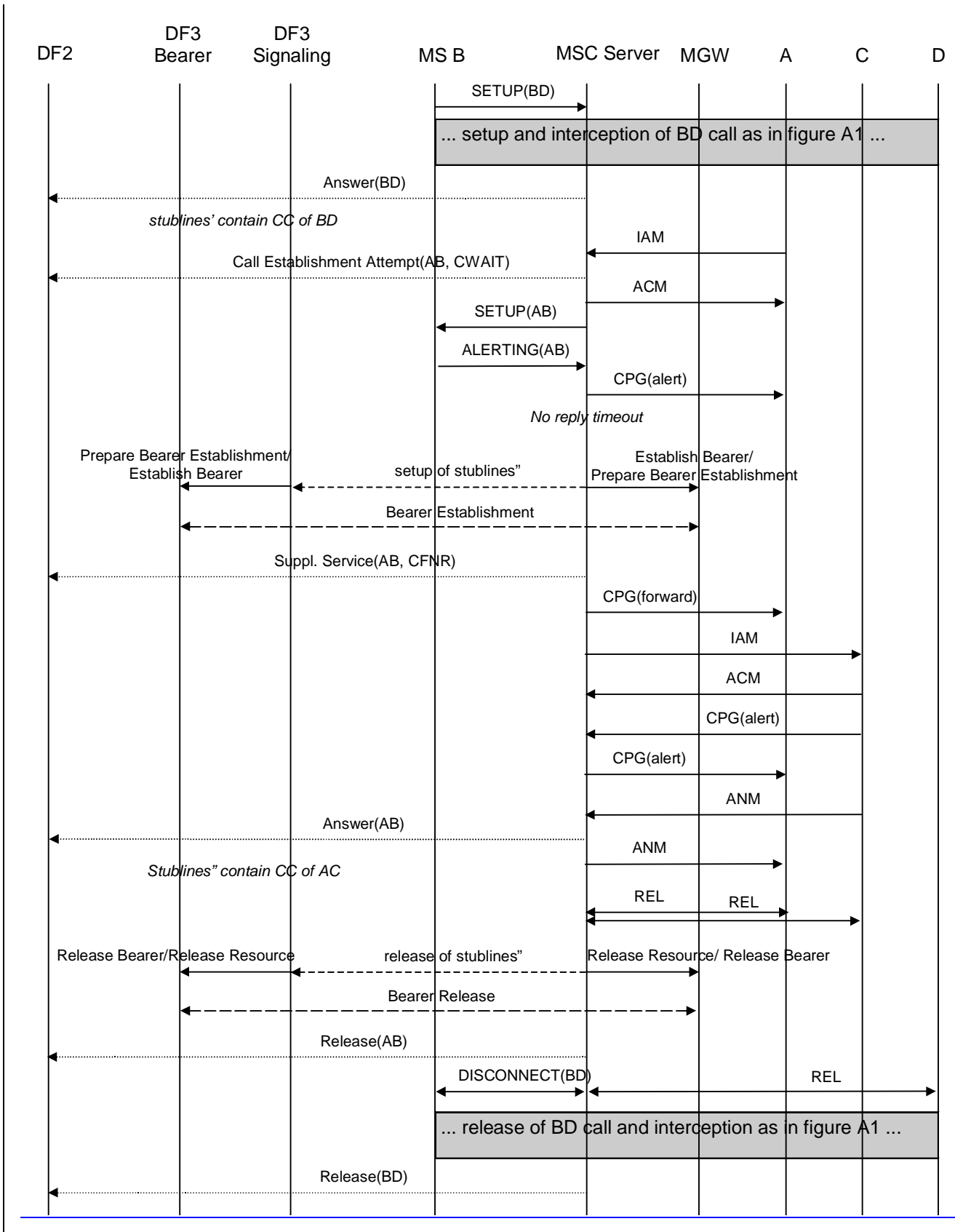
A.4   Multiparty calls

Figures A.5 and A.6 show the interception of multiparty calls. Figure A.5 covers the case where ~~one stubline or~~ one pair of stublines is used per target, figure A.6 covers the case where a separate ~~stubline or~~ pair of stublines is used for each target call. The mobile setting up the multiparty call (A) is the target for interception.
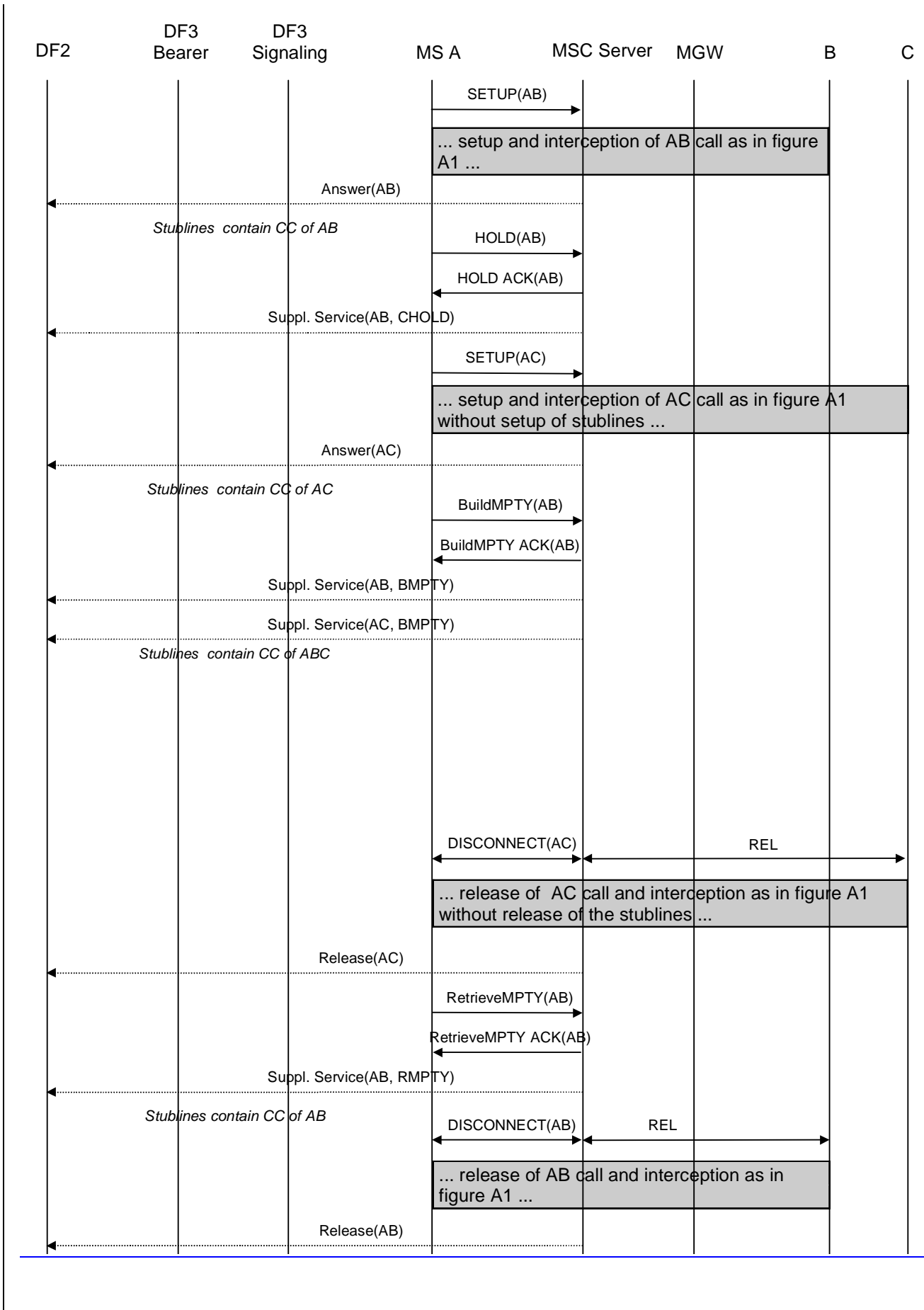
A.5.7   Call waiting / call forwarding on no reply

Figures A.10 and A.11 show the interception of a call involving both call waiting and call forwarding on no reply. Figure A.10 covers the case where ~~one stubline or~~ one pair of stublines is used per target, figure A.11 covers the case where a separate ~~stubline or~~ pair of stublines is used for each target call. The mobile that activated call forwarding on no reply and receives the waiting call (B) is the target for interception. In figure A.10 a new ~~(pair of)~~ stublines needs to be set up when the call is forwarded since the first ~~(pair of)~~ stublines is still used for the initial call.

DF2	DF3 Bearer	DF3 Signaling	MS B	MSC Server	MGW	A	C	D

SETUP(BD)

... setup and interception of BD call as in figure A1 ...

Answer(BD)

stublines' contain CC of BD

IAM

Call Establishment Attempt(AB, CWAIT)

ACM

SETUP(AB)

ALERTING(AB)

CPG(alert)

No reply timeout

Prepare Bearer Establishment/ Establish Bearer   setup of stublines"   Establish Bearer/ Prepare Bearer Establishment

Bearer Establishment

Suppl. Service(AB, CFNR)

CPG(forward)

IAM

ACM

CPG(alert)

CPG(alert)

ANM

Answer(AB)

ANM

Stublines" contain CC of AC

REL   REL

Release Bearer/Release Resource   release of stublines"   Release Resource/ Release Bearer

Bearer Release

Release(AB)

DISCONNECT(BD)   REL

... release of BD call and interception as in figure A1 ...

Release(BD)

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CHANGE REQUEST

| ⌘ | **33.108** CR **CRNum** | ⌘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: ⌘	Syntax error in Annex B.3	
Source: ⌘	Reg TP	
Work item code:⌘	Security	**Date:** ⌘ 20/05/03

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: ⌘	Syntax error in of annex B.3 of TS 33.108

Summary of change:⌘	In the ASN.1 description in annex B.3 of TS 33.108 there is a very minor syntax error. However syntax checkers and compilers will not complete successfully. They will stop at this point and produce an error report.

Consequences if ⌘ **not approved:**	Compilers can not run successfully when encoding the IRI.

Clauses affected: ⌘	Annex B.3

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

Other comments: ⌘	

B.3   Intercept related information (HI2)

...

```
networkIdentifier       [26] Network-Identifier OPTIONAL,
sMSOriginatingAddress    [27] DataNodeAddress OPTIONAL,
sMSTerminatingAddress    [28] DataNodeAddress OPTIONAL,
iMSevent                [29] IMSEevent OPTIONAL,
sIPMessage              [30] OCTET STRING  OPTIONAL,
servingSGSN-number      [31] OCTET STRING (SIZE (1..20))   OPTIONAL,
servingSGSN-address     [32] OCTET STRING (SIZE (5..17))   OPTIONAL,
```