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**Source:** SA WG3  
**Title:** 2 CRs to 33.107: TEL URL for IMS interception identity (Rel-6)  
Stereo delivery to LEMF (Rel-6)  
**Document for:** Approval  
**Agenda Item:** 7.3.3

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Meet	SA Doc	TS No.	CR No	Rev	Rel	Cat	Subject	Vers. Current	Vers New	SAWG3 Doc
SP-21	SP-030479	33.107	032	-	Rel-6	B	Missing QoS Parameter in IRI	5.5.0	6.0.0	S3-030352
SP-21	SP-030479	33.107	033	-	Rel-6	D	Stereo delivery to LEMF	5.5.0	6.0.0	S3-030352

## CHANGE REQUEST

⌘ **33.107 CR 032** ⌘ 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

<b>Title:</b>	⌘ TEL URL for IMS interception identity		
<b>Source:</b>	⌘ SA WG3		
<b>Work item code:</b>	⌘ SEC1-LI	<b>Date:</b>	⌘ 14/05/2003
<b>Category:</b>	⌘ <b>B</b>	<b>Release:</b>	⌘ Rel-6
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ 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.
<b>Summary of change:</b>	⌘ It is proposed to add TEL URL to IMS interception identity.
<b>Consequences if not approved:</b>	⌘

<b>Clauses affected:</b>	⌘ 2; 3.2; 5; 5.1; 5.1.1; 7A.2								
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </table>	Y	N	X				Other core specifications	⌘ TS 33.108
	Y	N							
	X								
	Test specifications								
	O&M Specifications								
<b>Other comments:</b>	⌘								

## 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:

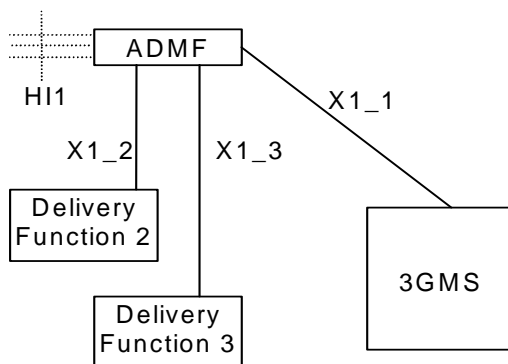
3GPP MS	3rd Generation Mobile Communication System
3G GGSN	3rd Generation Gateway GPRS Support Node
3G GSN	3rd Generation GPRS Support Node (GGSN/SGSN)
3G MSC	3rd Generation Mobile Switching Center
3G SGSN	3rd Generation Serving GPRS Support Node
3G UMSC	3rd Generation Unified Mobile Switching Centre
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 Identity
SAI	Service Area Identity
<a href="#">TEL URL</a>	<a href="#">“tel” URL as defined in [9]</a>

### THIRD MODIFIED SECTION:

## 5 Activation, deactivation and interrogation

Figure 2 is an extraction from the reference intercept configuration shown in figure 1 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 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 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 the ICE. 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.

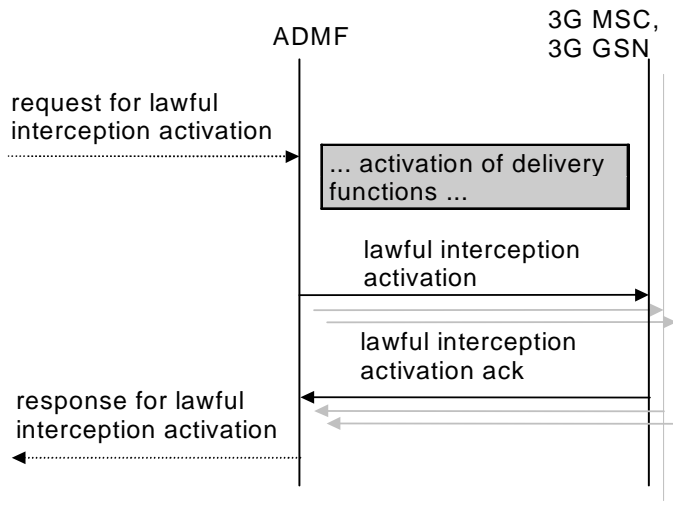
NOTE 3: As an option, only a single DF3 is used by and known to every 3G ICE (except at the CSCFs). In this case the address of DF3 can be omitted.

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.

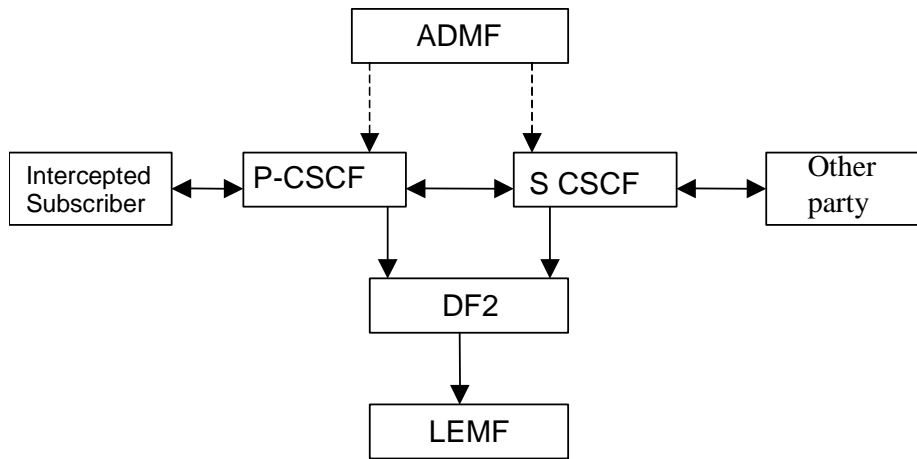


Figure 22: Provision of Intercept Related Information for multi-media

## CHANGE REQUEST

⌘ **TS 33.107 CR 033** ⌘ - ⌘ 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

<b>Title:</b>	⌘ Stereo delivery to LEMF		
<b>Source:</b>	⌘ SA WG3		
<b>Work item code:</b>	⌘ SEC1-LI	<b>Date:</b>	⌘ 20.05.2003
<b>Category:</b>	⌘ <b>D</b>	<b>Release:</b>	⌘ Rel-6
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

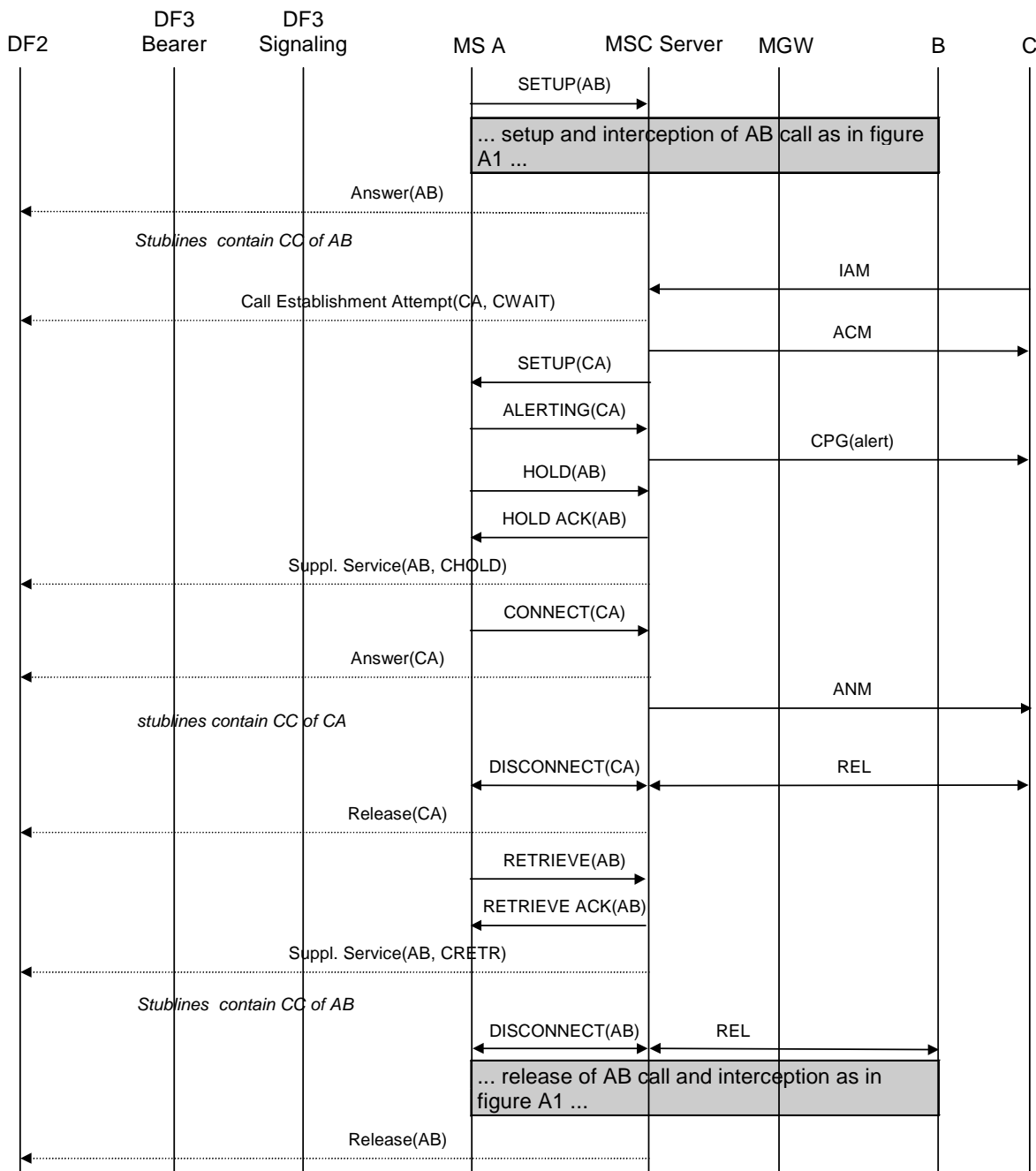
<b>Reason for change:</b>	⌘ Missing adaptation in the call flows		
<b>Summary of change:</b>	⌘ Delete all refereneses to mono (single stubline) delivery		
<b>Consequences if not approved:</b>	⌘ Inconsistent parts in the specification		

<b>Clauses affected:</b>	⌘ Annex A										
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications ⌘ Test specifications O&M Specifications	
Y	N										
	X										
	X										
	X										
<b>Other comments:</b>	⌘										



## A.3 Call hold / call waiting

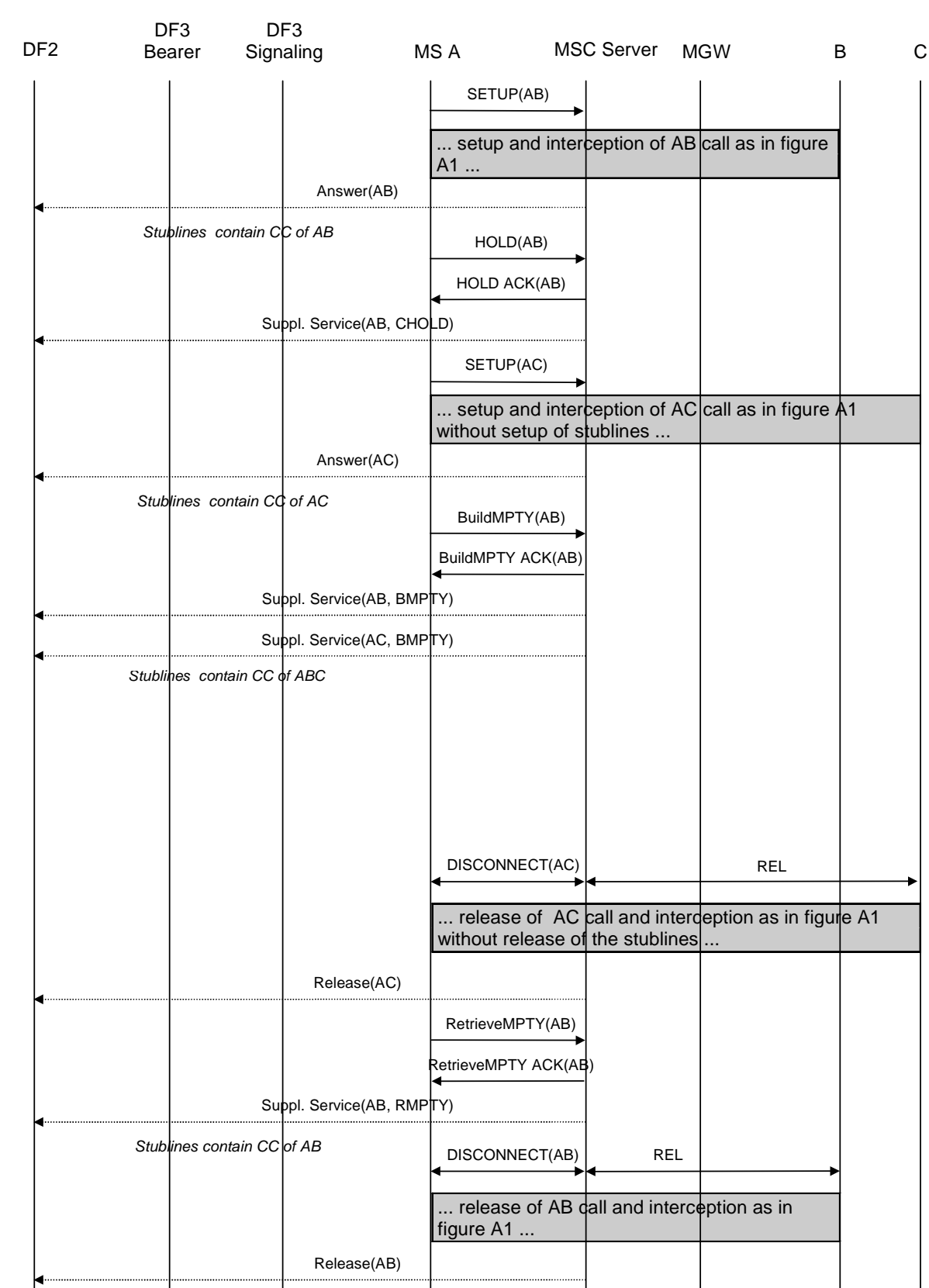
Figures A.3 and A.4 show the interception of calls involving call hold / call waiting. Figure A.3 covers the case where ~~one stubline or~~ one pair of stublines is used per target, figure A.4 covers the case where a separate ~~stubline or~~ pair of stublines is used for each target call. The mobile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



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## 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.

