TSGS#23(04)0158

Source: **SA WG3 (Security)**

Title: **2 CRs to 33.108: Correction on the description of "initiator" in "PDP Context Modification CONTINUE Record" (Rel-5 and Rel-6)**

Document for: **Approval**

Agenda Item: **7.3.3**

SA Doc number	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	SA WG3 Doc number	Workitem
SP-040158	33.108	037	-	Rel-5	Correction on the description of “initiator” in “PDP Context Modification CONTINUE Record”	F	5.6.0	S3-040136	SEC1-LI
SP-040158	33.108	038	-	Rel-6	Correction on the description of “initiator” in “PDP Context Modification CONTINUE Record”	A	6.4.0	S3-040137	SEC1-LI

3GPP TSG SA WG3 Security — S3#32 **S3-040136**
09 - 13 February 2004
Edinburgh, Scotland, UK

3GPP TSG-SA3 LI Meeting #12 ***Tdoc ⌘S3LI04_018r1***
Miami, USA, 27 – 29 January 2004

CR-Form-v7

CHANGE REQUEST

⌘ **33.108** **CR** **037** ⌘ **rev** **-** ⌘ Current version: **5.6.0** ⌘

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

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

Title:	⌘	Correction on the description of "initiator" in "PDP Context Modification CONTINUE Record"
Source:	⌘	SA WG3 (LI Group)
Work item code:	⌘	SEC1-LI ***Date:*** ⌘ 28-01-2004
Category:	⌘	**F** ***Release:*** ⌘ Rel-5

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:	⌘	Table 6.11 in 3GPP TS 33.108 gives the "initiator" as parameter for the PDP Context **Modification** CONTINUE Record and gives the following description: "Provide to indicate whether the PDP context **activation** is network-initiated, intercept-subject-initiated, or not available.". This is not according to 3GPP TS 33.107 in which (see Table 2 in §7.3.2) the session initiator is defined as the initiator of the PDP Context activation, deactivation or **modification** request either the network or the 3G MS". This is also a misalignment inside TS 33.108 itself, because table 6.2 gives for initiator the following description: " This field indicates whether the PDP context activation, deactivation, **or modification** is MS directed or network initiated." While the PDP context activation initiator is communicated to LEMF in the BEGIN record, according to the current text in TS 33.108, the PDP context modification initiator is not communicated to LEMF. This problem affects also a comment in ASN.1 notation.
Summary of change:	⌘	The PDP context Modification CONTINUE record shall indicate in the "initiator" parameter whether the PDP context Modification (and not activation) is network initiated, intercept-subject-initiated, or not available.
Consequences if not approved:	⌘	LEMF would not get correct information about initiator of PDP context modification.

Clauses affected:	⌘	6.5.1.3 (Table 6.11), Annex B.3.

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

*** FIRST MODIFICATION ***

6.5.1.3 CONTINUE record information

The CONTINUE record is used to convey events during an active packet-data communication PDP Context.

The CONTINUE record shall be triggered when:

- An active PDP context is modified;
- during the inter-SGSN RAU, when target has got at least one PDP context active, the PLMN does not change and the triggering event information is available at the DF/MF.

In order to enable the LEMF to correlate the informations on HI3, a new correlation number shall not be generated within CONTINUE record.

Table 6.11: PDP Context Modification CONTINUE Record

Parameter	MOC	Description/Conditions
observed MSISDN observed IMSI observed IMEI	C	Provide at least one and others when available.
observed PDP address	C	The observed address after modification Provide to identify the: - static address requested by the intercept subject's MS, and allocated by the Network for a successful PDP context activation. - address allocated dynamically by the network to the intercept subject MS in association with a PDP context activation (i.e., address is sent by the Network in an Activate PDP Context Accept) for a successful PDP context activation procedure when the PDP Context activation request does not contain a static PDP address. - address offered by the network in association with a network-initiated PDP context activation request when the intercept subject's MS accepts the network-initiated PDP context activation request.
event type	C	Provide the PDP Context Modification event type.
event date event time	M	Provide the date and time the event is detected.
access point name	C	Provide to identify the: - packet data network to which the intercept subject requested to be connected when the intercept subject's MS is successful at performing a PDP context activation procedure (MS to Network). - access point of the packet data network that requested to be connected to the MS when the intercept subject's MS accepts a network-initiated PDP context activation (Network to MS).
PDP type	C	Provide to describe the PDP type of the observed PDP address. The PDP Type defines the end user protocol to be used between the external packet data network and the MS.
initiator	C	Provide to indicate whether the PDP context ~~activation~~ modification is network-initiated, intercept-subject-initiated, or not available.
network identifier	M	Shall be provided.
correlation number	C	Provide to uniquely identify the PDP context delivered to the LEMF used to correlate IRI records with CC.
lawful intercept identifier	M	Shall be provided.
location information	C	Provide, when authorized, to identify location information for the intercept subject's MS.
umts QOS	C	Provide to identify the QOS parameters.

Table 6.11a: Start Of Interception (with PDP Context Active) CONTINUE Record (optional)

Parameter	MOC	Description/Conditions
observed MSISDN	C	Provide at least one and others when available.
observed IMSI		
observed IMEI		
observed PDP address	C	Provide to identify the: - static address requested by the intercept subject's MS, and allocated by the Network for a successful PDP context activation. - address allocated dynamically by the network to the intercept subject MS in association with a PDP context activation (i.e., address is sent by the Network in an Activate PDP Context Accept) for a successful PDP context activation procedure when the PDP Context activation request does not contain a static PDP address. - address offered by the network in association with a network-initiated PDP context activation request when the intercept subject's MS accepts the network-initiated PDP context activation request.
event type	C	Provide the Continue interception with active PDP event type.
event date	M	Provide the date and time the event is detected.
event time		
access point name	C	Provide to identify the: - packet data network to which the intercept subject requested to be connected when the intercept subject's MS is successful at performing a PDP context activation procedure (MS to Network). - access point of the packet data network that requested to be connected to the MS when the intercept subject's MS accepts a network-initiated PDP context activation (Network to MS).
PDP type	C	Provide to describe the PDP type of the observed PDP address. The PDP Type defines the end user protocol to be used between the external packet data network and the MS.
network identifier	M	Shall be provided.
correlation number	C	Provide to uniquely identify the PDP context delivered to the LEMF used to correlate IRI records with CC.
lawful intercept identifier	M	Shall be provided.
location information	C	Provide, when authorized, to identify location information for the intercept subject's MS.
QOS	C	Provide to identify the QOS parameters.

*** NEXT MODIFICATION ***

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 umtsIRIContent 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-1(1)}

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-1(1)}
```

```
umts-sending-of-IRI  OPERATION ::=
{
    ARGUMENT    UmtsIRIContent
    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.
```

```
UmtsIRIContent      ::= CHOICE
{
    iRI-Begin-record        [1] IRI-Parameters, -- include at least one optional parameter
    iRI-End-record          [2] IRI-Parameters,
    iRI-Continue-record     [3] IRI-Parameters, -- include at least one optional parameter
    iRI-Report-record       [4] IRI-Parameters  -- include at least one optional parameter
}
```

```
unknown-version         ERROR ::= { CODE local:0}
missing-parameter       ERROR ::= { CODE local:1}
unknown-parameter-value ERROR ::= { CODE local:2}
unknown-parameter       ERROR ::= { CODE local:3}

OperationErrors ERROR ::=
{
    unknown-version |
    missing-parameter |
    unknown-parameter-value |
    unknown-parameter
}
-- This values may be sent by the LEMF, when an operation or a parameter is misunderstood.
```

```
IRI-Parameters      ::= SEQUENCE
{
    hi2DomainId             [0] OBJECT IDENTIFIER,  -- 3GPP HI2 domain
    iRIversion              [23] ENUMERATED
    {
        version2(2),
        …
    } OPTIONAL,
        -- if not present, it means version 1 is handled
    lawfulInterceptionIdentifier    [1] LawfulInterceptionIdentifier,
        -- This identifier is associated to the target.
    timeStamp               [3] TimeStamp,
        -- date and time of the event triggering the report.)
    initiator               [4] ENUMERATED
    {
        not-Available       (0),
        originating-Target  (1),
            -- in case of GPRS, this indicates that the PDP context activation, modification
            -- or deactivation is MS requested
        terminating-Target  (2),
```

```
            -- in case of GPRS, this indicates that the PDP context activation, modification or
            -- deactivation is network initiated
    ...
    } OPTIONAL,

    locationOfTheTarget     [8] Location OPTIONAL,
        -- location of the target subscriber
    partyInformation        [9] SET SIZE (1..10) OF PartyInformation OPTIONAL,
        -- This parameter provides the concerned party, the identiy(ies) of the party
        --)and all the information provided by the party.

    serviceCenterAddress    [13] PartyInformation OPTIONAL,
        -- e.g. in case of SMS message this parameter provides the address of  the relevant
        -- server within the calling (if server is originating) or called (if server is
        -- terminating) party address parameters
    sMS                     [14] SMS-report OPTIONAL,
        -- this parameter provides the SMS content and associated information

    national-Parameters     [16] National-Parameters OPTIONAL,
    gPRSCorrelationNumber   [18] GPRSCorrelationNumber OPTIONAL,
    gPRSevent               [20] GPRSEvent OPTIONAL,
        -- This information is used to provide particular action of the target
        -- such as attach/detach
    sgsnAddress             [21] DataNodeAddress OPTIONAL,
    gPRSOperationErrorCode  [22] GPRSOperationErrorCode OPTIONAL,
    ggsnAddress             [24] DataNodeAddress OPTIONAL,
    qOS                     [25] UmtsQos OPTIONAL,
    networkIdentifier       [26] Network-Identifier OPTIONAL,
    sMSOriginatingAddress   [27] DataNodeAddress OPTIONAL,
    sMSTerminatingAddress   [28] DataNodeAddress OPTIONAL,
    iMSevent                [29] IMSevent OPTIONAL,
    sIPMessage              [30] OCTET STRING  OPTIONAL,
    servingSGSN-number      [31] OCTET STRING (SIZE (1..20))    OPTIONAL,
    servingSGSN-address     [32] OCTET STRING (SIZE (5..17))    OPTIONAL,
                                -- Octets are coded according to 3GPP TS 23.003 [25]
    ...
}
```

```
-- PARAMETERS FORMATS
```

```
PartyInformation            ::= SEQUENCE
{
    party-Qualifier     [0]  ENUMERATED
    {
        gPRS-Target(3),
        ...
    },
    partyIdentity       [1] SEQUENCE
    {
        imei                    [1] OCTET STRING (SIZE (8)) OPTIONAL,
            -- See MAP format [4]

        imsi                    [3] OCTET STRING (SIZE (3..8)) OPTIONAL,
            -- See MAP format [4] International Mobile
            -- Station Identity E.212 number beginning with Mobile Country Code

        msISDN                  [6] OCTET STRING (SIZE (1..9)) OPTIONAL,
            -- MSISDN of the target, encoded in the same format as the AddressString
            -- parameters defined in MAP format document ref [4], § 14.7.8

        e164-Format             [7] OCTET STRING    (SIZE (1 .. 25)) OPTIONAL,
            -- E164 address of the node in international format. Coded in the same format as
            -- the calling party number  parameter of the ISUP (parameter part:[5])

        sip-url                 [8] OCTET STRING    OPTIONAL,
            -- See RFC 2543

        ...
    },

    services-Data-Information   [4] Services-Data-Information OPTIONAL,
        -- This parameter is used to transmit all the information concerning the
        -- complementary information associated to the basic data call
    ...
}
```

```
Location    ::= SEQUENCE
```

```
{
    globalCellID        [2] GlobalCellID    OPTIONAL,
        --see MAP format (see [4])
    rAI                 [4] Rai     OPTIONAL,
        -- the Routeing Area Identifier is coded in accordance with the § 10.5.5.15 of
        -- document ref [9] without the Routing Area Identification IEI (only the
        -- last 6 octets are used)
    gsmLocation         [5] GSMLocation OPTIONAL,
    umtsLocation        [6] UMTSLocation OPTIONAL,
    sAI                 [7] Sai OPTIONAL,
        -- format:  PLMN-ID 3 octets (no. 1 – 3)
        --          LAC     2 octets (no. 4 – 5)
        --          SAC     2 octets (no. 6 – 7)
        --          (according to 3GPP TS 25.413)
    ...
}
```

```
GlobalCellID    ::= OCTET STRING  (SIZE (5..7))
Rai             ::= OCTET STRING (SIZE (6))
Sai             ::= OCTET STRING (SIZE (7))
```

```
GSMLocation     ::= CHOICE
{
    geoCoordinates  [1] SEQUENCE
    {
        latitude        [1] PrintableString (SIZE(7..10)),
                            -- format :     XDDMMSS.SS
        longitude       [2] PrintableString (SIZE(8..11)),
                            -- format :     XDDDMMSS.SS
        mapDatum        [3] MapDatum DEFAULT wGS84,
        ...
    },
        -- format :     XDDDMMSS.SS
        --              X           : N(orth), S(outh), E(ast), W(est)
        --              DD or DDD   : degrees (numeric characters)
        --              MM          : minutes (numeric characters)
        --              SS.SS       : seconds, the second part (.SS) is optionnal
        -- Example :
        --          latitude short form     N502312
        --          longitude long form     E1122312.18

    utmCoordinates  [2] SEQUENCE
    {
        utm-East        [1] PrintableString (SIZE(10)),
        utm-North       [2] PrintableString (SIZE(7)),
            -- example  utm-East    32U0439955
            --          utm-North   5540736
        mapDatum        [3] MapDatum DEFAULT wGS84,
        ...
    },

    utmRefCoordinates   [3] SEQUENCE
    {
        utmref-string       PrintableString (SIZE(13)),
        mapDatum            MapDatum DEFAULT wGS84,
        ...
    },
        -- example  32UPU91294045

    wGS84Coordinates    [4] OCTET STRING (SIZE(7..10))
        -- format is as defined in GSM 03.32; polygon type of shape is not allowed.
}

MapDatum ::= ENUMERATED
{
    wGS84,
    wGS72,
    eD50,   -- European Datum 50
    ...
}
```

```
UMTSLocation ::= CHOICE {
    point                   [1] GA-Point,
    pointWithUnCertainty    [2] GA-PointWithUnCertainty,
    polygon                 [3] GA-Polygon
}
```

```
GeographicalCoordinates ::= SEQUENCE {
    latitudeSign            ENUMERATED { north, south },
    latitude                INTEGER (0..8388607),
    longitude               INTEGER (-8388608..8388607),
    ...
}
```

```
GA-Point ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    ...
}
```

```
GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    uncertaintyCode             INTEGER (0..127)
}
```

```
maxNrOfPoints                       INTEGER ::= 15
```

```
GA-Polygon ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        geographicalCoordinates     GeographicalCoordinates,
        ...
    }
```

```
SMS-report      ::= SEQUENCE
{
    sMS-Contents    [3] SEQUENCE
    {
        sms-initiator       [1] ENUMERATED  -- party which sent the  SMS
        {
            target          (0),
            server          (1),
            undefined-party (2),
            ...
        },
        transfer-status     [2] ENUMERATED
        {
            succeed-transfer    (0),        -- the transfer of the SMS message succeeds
            not-succeed-transfer(1),
            undefined           (2),
            ...
        } OPTIONAL,
        other-message       [3] ENUMERATED  -- in case of terminating call, indicates if
                                            -- the server will send other SMS
        {
            yes         (0),
            no          (1),
            undefined   (2),
            ...
        } OPTIONAL,
        content             [4] OCTET STRING (SIZE (1 .. 270)) OPTIONAL,
                                -- Encoded in the format defined for the SMS mobile
        ...
    }
}
```

```
GPRSCorrelationNumber ::= OCTET STRING (SIZE(8..20))
```

```
GPRSEvent ::= ENUMERATED
{
    pDPContextActivation                    (1),
    startOfInterceptionWithPDPContextActive (2),
    pDPContextDeactivation                  (4),
    gPRSAttach                              (5),
    gPRSDetach                              (6),
    locationInfoUpdate                      (10),
    sMS                                     (11),
    pDPContextModification                  (13),
    servingSystem                           (14),
    ...
}
-- see ref [10]
```

```
IMSevent ::= ENUMERATED
{
    sIPmessage  (1),
    ...
}
```

```
Services-Data-Information ::= SEQUENCE
{
    gPRS-parameters [1] GPRS-parameters OPTIONAL,
    ...
}
```

```
GPRS-parameters ::= SEQUENCE
{
    pDP-address-allocated-to-the-target     [1] DataNodeAddress OPTIONAL,
    aPN                     [2] OCTET STRING (SIZE(1..100)) OPTIONAL,
    pDP-type                [3] OCTET STRING (SIZE(2)) OPTIONAL,
    ...
}
```

```
GPRSOperationErrorCode ::= OCTET STRING (SIZE(2))
-- refer to standard [9] for values(GMM cause or SM cause parameter).
```

```
UmtsQos ::= CHOICE
{
    qosIu [1] OCTET STRING (SIZE(3..11)),
        -- The qosIu parameter shall be coded in accordance with the § 10.5.6.5 of
        -- document ref [9] or ref [21] without the Quality of service IEI and Length of
        -- quality of service IE (only the last 3, or 11 octets are used. That is, first
        -- two octets carrying 'Quality of service IEI' and 'Length of quality of service
        -- IE' shall be excluded).
    qosGn [2] OCTET STRING (SIZE(3..254))
        -- qosGn parameter shall be coded in accordance with § 7.7.34 of document ref [17]
}
```

```
END -- OF UmtsHI2Operations
```

*** END OF MODIFICATIONS ***

3GPP TSG SA WG3 Security — S3#32 **S3-040137**
09 - 13 February 2004
Edinburgh, Scotland, UK

3GPP TSG-SA3 LI Meeting #12 ***Tdoc ⌘S3LI04_019r1***
Miami, USA, 27 – 29 January 2004

CR-Form-v7

CHANGE REQUEST

⌘ **33.108** **CR** **038** ⌘ **rev** **-** ⌘ Current version: **6.4.0** ⌘

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

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Source:	⌘	SA WG3 (LI Group)
Work item code:	⌘	SEC1-LI ***Date:*** ⌘ 28-01-2004
Category:	⌘	**A** ***Release:*** ⌘ Rel-6

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Reason for change:	⌘	Table 6.11 in 3GPP TS 33.108 gives the "initiator" as parameter for the PDP Context **Modification** CONTINUE Record and gives the following description: "Provide to indicate whether the PDP context **activation** is network-initiated, intercept-subject-initiated, or not available.". This is not according to 3GPP TS 33.107 in which (see Table 2 in §7.3.2) the session initiator is defined as the initiator of the PDP Context activation, deactivation or **modification** request either the network or the 3G MS". This is also a misalignment inside TS 33.108 itself, because table 6.2 gives for initiator the following description: " This field indicates whether the PDP context activation, deactivation, **or modification** is MS directed or network initiated." While the PDP context activation initiator is communicated to LEMF in the BEGIN record, according to the current text in TS 33.108, the PDP context modification initiator is not communicated to LEMF. This problem affects also a comment in ASN.1 notation.
Summary of change:	⌘	The PDP context Modification CONTINUE record shall indicate in the "initiator" parameter whether the PDP context Modification (and not activation) is network initiated, intercept-subject-initiated, or not available.
Consequences if not approved:	⌘	LEMF would not get correct information about initiator of PDP context modification.

Clauses affected:	⌘	6.5.1.3 (Table 6.11), Annex B.3.
Other specs affected:	⌘	Y N ☐ ☒ Other core specifications ☐ ☒ Test specifications ☐ ☒ O&M Specifications
Other comments:	⌘	This CR is mirrored from the corresponding CR on rel-5 version of TS 33.108 in tdoc S3LI04_018r1.

*** FIRST MODIFICATION ***

6.5.1.3 CONTINUE record information

The CONTINUE record is used to convey events during an active packet-data communication PDP Context.

The CONTINUE record shall be triggered when:

- An active PDP context is modified;
- during the inter-SGSN RAU, when target has got at least one PDP context active, the PLMN does not change and the triggering event information is available at the DF/MF.

In order to enable the LEMF to correlate the informations on HI3, a new correlation number shall not be generated within CONTINUE record.

Table 6.11: PDP Context Modification CONTINUE Record

Parameter	MOC	Description/Conditions
observed MSISDN observed IMSI observed IMEI	C	Provide at least one and others when available.
observed PDP address	C	The observed address after modification Provide to identify the: - static address requested by the intercept subject's MS, and allocated by the Network for a successful PDP context activation. - address allocated dynamically by the network to the intercept subject MS in association with a PDP context activation (i.e., address is sent by the Network in an Activate PDP Context Accept) for a successful PDP context activation procedure when the PDP Context activation request does not contain a static PDP address. - address offered by the network in association with a network-initiated PDP context activation request when the intercept subject's MS accepts the network-initiated PDP context activation request.
event type	C	Provide the PDP Context Modification event type.
event date event time	M	Provide the date and time the event is detected.
access point name	C	Provide to identify the: - packet data network to which the intercept subject requested to be connected when the intercept subject's MS is successful at performing a PDP context activation procedure (MS to Network). - access point of the packet data network that requested to be connected to the MS when the intercept subject's MS accepts a network-initiated PDP context activation (Network to MS).
PDP type	C	Provide to describe the PDP type of the observed PDP address. The PDP Type defines the end user protocol to be used between the external packet data network and the MS.
initiator	C	Provide to indicate whether the PDP context ~~activation~~ modification is network-initiated, intercept-subject-initiated, or not available.
network identifier	M	Shall be provided.
correlation number	C	Provide to uniquely identify the PDP context delivered to the LEMF used to correlate IRI records with CC.
lawful intercept identifier	M	Shall be provided.
location information	C	Provide, when authorized, to identify location information for the intercept subject's MS.
umts QOS	C	Provide to identify the QOS parameters.

Table 6.11a: Start Of Interception (with PDP Context Active) CONTINUE Record (optional)

Parameter	MOC	Description/Conditions
observed MSISDN	C	Provide at least one and others when available.
observed IMSI		
observed IMEI		
observed PDP address	C	Provide to identify the: - static address requested by the intercept subject's MS, and allocated by the Network for a successful PDP context activation. - address allocated dynamically by the network to the intercept subject MS in association with a PDP context activation (i.e., address is sent by the Network in an Activate PDP Context Accept) for a successful PDP context activation procedure when the PDP Context activation request does not contain a static PDP address. - address offered by the network in association with a network-initiated PDP context activation request when the intercept subject's MS accepts the network-initiated PDP context activation request.
event type	C	Provide the Continue interception with active PDP event type.
event date	M	Provide the date and time the event is detected.
event time		
access point name	C	Provide to identify the: - packet data network to which the intercept subject requested to be connected when the intercept subject's MS is successful at performing a PDP context activation procedure (MS to Network). - access point of the packet data network that requested to be connected to the MS when the intercept subject's MS accepts a network-initiated PDP context activation (Network to MS).
PDP type	C	Provide to describe the PDP type of the observed PDP address. The PDP Type defines the end user protocol to be used between the external packet data network and the MS.
network identifier	M	Shall be provided.
correlation number	C	Provide to uniquely identify the PDP context delivered to the LEMF used to correlate IRI records with CC.
lawful intercept identifier	M	Shall be provided.
location information	C	Provide, when authorized, to identify location information for the intercept subject's MS.
QOS	C	Provide to identify the QOS parameters.

*** NEXT MODIFICATION ***

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 UmtsIRIsContent 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    UmtsIRIsContent
    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.
```

```
UmtsIRIsContent     ::= CHOICE
{
    umtsiRIContent          UmtsIRIContent,
    umtsIRISequence             UmtsIRISequence
}

UmtsIRISequence     ::= 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.
```

```
UmtsIRIContent      ::= CHOICE
{
    iRI-Begin-record        [1] IRI-Parameters, -- include at least one optional parameter
    iRI-End-record          [2] IRI-Parameters,
    iRI-Continue-record     [3] IRI-Parameters, -- include at least one optional parameter
    iRI-Report-record       [4] IRI-Parameters  -- include at least one optional parameter
}
```

```
unknown-version         ERROR ::= { CODE local:0}
missing-parameter       ERROR ::= { CODE local:1}
unknown-parameter-value ERROR ::= { CODE local:2}
unknown-parameter       ERROR ::= { CODE local:3}

OperationErrors ERROR ::=
{
    unknown-version |
    missing-parameter |
    unknown-parameter-value |
    unknown-parameter
}
-- This values may be sent by the LEMF, when an operation or a parameter is misunderstood.
```

```
IRI-Parameters      ::= SEQUENCE
{
    hi2DomainId             [0] OBJECT IDENTIFIER,  -- 3GPP HI2 domain
    iRIversion              [23] ENUMERATED
    {
        version2(2),
        …
    } OPTIONAL,
        -- if not present, it means version 1 is handled
    lawfulInterceptionIdentifier    [1] LawfulInterceptionIdentifier,
        -- This identifier is associated to the target.
    timeStamp               [3] TimeStamp,
        -- date and time of the event triggering the report.)
    initiator               [4] ENUMERATED
    {
        not-Available       (0),
        originating-Target  (1),
            -- in case of GPRS, this indicates that the PDP context activation, modification
            -- or deactivation is MS requested
        terminating-Target  (2),
            -- in case of GPRS, this indicates that the PDP context activation, modification or
            -- deactivation is network initiated
    ...
    } OPTIONAL,

    locationOfTheTarget     [8] Location OPTIONAL,
        -- location of the target subscriber
    partyInformation        [9] SET SIZE (1..10) OF PartyInformation OPTIONAL,
        -- This parameter provides the concerned party, the identiy(ies) of the party
        --)and all the information provided by the party.

    serviceCenterAddress    [13] PartyInformation OPTIONAL,
        -- e.g. in case of SMS message this parameter provides the address of  the relevant
        -- server within the calling (if server is originating) or called (if server is
        -- terminating) party address parameters
    sMS                     [14] SMS-report OPTIONAL,
        -- this parameter provides the SMS content and associated information

    national-Parameters     [16] National-Parameters OPTIONAL,
    gPRSCorrelationNumber   [18] GPRSCorrelationNumber OPTIONAL,
    gPRSevent               [20] GPRSEvent OPTIONAL,
        -- This information is used to provide particular action of the target
        -- such as attach/detach
    sgsnAddress             [21] DataNodeAddress OPTIONAL,
    gPRSOperationErrorCode  [22] GPRSOperationErrorCode OPTIONAL,
    ggsnAddress             [24] DataNodeAddress OPTIONAL,
    qOS                     [25] UmtsQos OPTIONAL,
    networkIdentifier       [26] Network-Identifier OPTIONAL,
    sMSOriginatingAddress   [27] DataNodeAddress OPTIONAL,
    sMSTerminatingAddress   [28] DataNodeAddress OPTIONAL,
    iMSevent                [29] IMSevent OPTIONAL,
    sIPMessage              [30] OCTET STRING  OPTIONAL,
    servingSGSN-number      [31] OCTET STRING (SIZE (1..20))    OPTIONAL,
    servingSGSN-address     [32] OCTET STRING (SIZE (5..17))    OPTIONAL,
                                -- Octets are coded according to 3GPP TS 23.003 [25]
    ...
}
```

```
-- PARAMETERS FORMATS
```

```
PartyInformation            ::= SEQUENCE
{
    party-Qualifier     [0]  ENUMERATED
    {
        gPRS-Target(3),
        ...
    },
    partyIdentity       [1] SEQUENCE
    {
        imei                    [1] OCTET STRING (SIZE (8)) OPTIONAL,
            -- See MAP format [4]

        imsi                    [3] OCTET STRING (SIZE (3..8)) OPTIONAL,
            -- See MAP format [4] International Mobile
            -- Station Identity E.212 number beginning with Mobile Country Code

        msISDN                  [6] OCTET STRING (SIZE (1..9)) OPTIONAL,
            -- MSISDN of the target, encoded in the same format as the AddressString
            -- parameters defined in MAP format document ref [4], § 14.7.8

        e164-Format             [7] OCTET STRING    (SIZE (1 .. 25)) OPTIONAL,
            -- E164 address of the node in international format. Coded in the same format as
            -- the calling party number  parameter of the ISUP (parameter part:[5])

        sip-url                 [8] OCTET STRING    OPTIONAL,
            -- See [26]

        ...,
        tel-url                 [9] OCTET STRING    OPTIONAL,
            -- See [36]
    },

    services-Data-Information   [4] Services-Data-Information OPTIONAL,
        -- This parameter is used to transmit all the information concerning the
        -- complementary information associated to the basic data call
    ...
}
```

```
Location    ::= SEQUENCE
{
    globalCellID        [2] GlobalCellID    OPTIONAL,
        --see MAP format (see [4])
    rAI                 [4] Rai     OPTIONAL,
        -- the Routeing Area Identifier is coded in accordance with the § 10.5.5.15 of
        -- document ref [9] without the Routing Area Identification IEI (only the
        -- last 6 octets are used)
    gsmLocation         [5] GSMLocation OPTIONAL,
    umtsLocation        [6] UMTSLocation OPTIONAL,
    sAI                 [7] Sai OPTIONAL,
        -- format:  PLMN-ID 3 octets (no. 1 – 3)
        --          LAC     2 octets (no. 4 – 5)
        --          SAC     2 octets (no. 6 – 7)
        --          (according to 3GPP TS 25.413)
    ...
}
```

```
GlobalCellID    ::= OCTET STRING  (SIZE (5..7))
Rai             ::= OCTET STRING (SIZE (6))
Sai             ::= OCTET STRING (SIZE (7))
```

```
GSMLocation     ::= CHOICE
{
    geoCoordinates  [1] SEQUENCE
    {
        latitude        [1] PrintableString (SIZE(7..10)),
                            -- format :     XDDMMSS.SS
        longitude       [2] PrintableString (SIZE(8..11)),
                            -- format :     XDDDMMSS.SS
        mapDatum        [3] MapDatum DEFAULT wGS84,
        ...
    },
        -- format :     XDDDMMSS.SS
        --              X           : N(orth), S(outh), E(ast), W(est)
        --              DD or DDD   : degrees (numeric characters)
        --              MM          : minutes (numeric characters)
```

```
        --              SS.SS       : seconds, the second part (.SS) is optionnal
        -- Example :
        --          latitude short form     N502312
        --          longitude long form     E1122312.18

    utmCoordinates  [2] SEQUENCE
    {
        utm-East        [1] PrintableString (SIZE(10)),
        utm-North       [2] PrintableString (SIZE(7)),
            -- example  utm-East    32U0439955
            --          utm-North   5540736
        mapDatum        [3] MapDatum DEFAULT wGS84,
        ...
    },

    utmRefCoordinates   [3] SEQUENCE
    {
        utmref-string       PrintableString (SIZE(13)),
        mapDatum            MapDatum DEFAULT wGS84,
        ...
    },
        -- example  32UPU91294045

    wGS84Coordinates    [4] OCTET STRING (SIZE(7..10))
        -- format is as defined in GSM 03.32; polygon type of shape is not allowed.
}

MapDatum ::= ENUMERATED
{
    wGS84,
    wGS72,
    eD50,   -- European Datum 50
    ...
}
```

```
UMTSLocation ::= CHOICE {
    point                   [1] GA-Point,
    pointWithUnCertainty    [2] GA-PointWithUnCertainty,
    polygon                 [3] GA-Polygon
}
```

```
GeographicalCoordinates ::= SEQUENCE {
    latitudeSign            ENUMERATED { north, south },
    latitude                INTEGER (0..8388607),
    longitude               INTEGER (-8388608..8388607),
    ...
}
```

```
GA-Point ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    ...
}
```

```
GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    uncertaintyCode             INTEGER (0..127)
}
```

```
maxNrOfPoints                       INTEGER ::= 15
```

```
GA-Polygon ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        geographicalCoordinates     GeographicalCoordinates,
        ...
    }
```

```
SMS-report      ::= SEQUENCE
{
    sMS-Contents    [3] SEQUENCE
    {
        sms-initiator       [1] ENUMERATED  -- party which sent the  SMS
        {
            target          (0),
            server          (1),
            undefined-party (2),
            ...
```

```
        },
        transfer-status     [2] ENUMERATED
        {
            succeed-transfer    (0),        -- the transfer of the SMS message succeeds
            not-succeed-transfer(1),
            undefined           (2),
            ...
        } OPTIONAL,
        other-message       [3] ENUMERATED  -- in case of terminating call, indicates if
                                            -- the server will send other SMS
        {
            yes         (0),
            no          (1),
            undefined   (2),
            ...
        } OPTIONAL,
        content             [4] OCTET STRING (SIZE (1 .. 270)) OPTIONAL,
                                    -- Encoded in the format defined for the SMS mobile
        ...
    }
}
```

```
GPRSCorrelationNumber ::= OCTET STRING (SIZE(8..20))
```

```
GPRSEvent ::= ENUMERATED
{
    pDPContextActivation                    (1),
    startOfInterceptionWithPDPContextActive (2),
    pDPContextDeactivation                  (4),
    gPRSAttach                              (5),
    gPRSDetach                              (6),
    locationInfoUpdate                      (10),
    sMS                                     (11),
    pDPContextModification                  (13),
    servingSystem                           (14),
    ...
}
-- see ref [10]
```

```
IMSevent ::= ENUMERATED
{
    sIPmessage  (1),
    ...
}
```

```
Services-Data-Information ::= SEQUENCE
{
    gPRS-parameters [1] GPRS-parameters OPTIONAL,
    ...
}
```

```
GPRS-parameters ::= SEQUENCE
{
    pDP-address-allocated-to-the-target     [1] DataNodeAddress OPTIONAL,
    aPN                     [2] OCTET STRING (SIZE(1..100)) OPTIONAL,
    pDP-type                [3] OCTET STRING (SIZE(2)) OPTIONAL,
    ...
}
```

```
GPRSOperationErrorCode ::= OCTET STRING (SIZE(2))
-- refer to standard [9] for values(GMM cause or SM cause parameter).
```

```
UmtsQos ::= CHOICE
{
    qosIu [1] OCTET STRING (SIZE(3..11)),
        -- The qosIu parameter shall be coded in accordance with the § 10.5.6.5 of
        -- document ref [9] or ref [21] without the Quality of service IEI and Length of
        -- quality of service IE (only the last 3, or 11 octets are used. That is, first
        -- two octets carrying 'Quality of service IEI' and 'Length of quality of service
        -- IE' shall be excluded).
    qosGn [2] OCTET STRING (SIZE(3..254))
        -- qosGn parameter shall be coded in accordance with § 7.7.34 of document ref [17]
}
```

```
END -- OF UmtsHI2Operations
```

*** END OF MODIFICATIONS ***