TSGS#22(03)0594

Source: SA WG3 (Security)

Title: CRs to 33.108: CS Section for 33.108 – LI Management Operation and User data packet transfer (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-030594	33.108	030	-	Rel-6	CS Section for 33.108 – LI Management Operation	F	6.3.0	S3-030813	SEC1-LI
SP-030594	33.108	031	-	Rel-6	CS Section for 33.108 – User data packet transfer	F	6.3.0	S3-030814	SEC1-LI

3GPP TSG SA WG3 Security — S3#31 **S3-030813**
18 - 21 November 2003, Munich, Germany

3GPP TSG SA WG3 #11 LI Meeting ***Tdoc ⌘S3LI03_113r2 (mcc_mod)***
London, UK, 18 – 20 November 2003

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CHANGE REQUEST

⌘ **33.108** **CR** **030** ⌘ **rev** **-** ⌘ Current version: **6.3.0** ⌘

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

Title:	⌘	CS Section for 33.108 – LI Management Operation
Source:	⌘	SA WG3 (SA3-LI)
Work item code:	⌘	SEC1-LI
Date:	⌘	19/11/2003
Category:	⌘	**F**
Release:	⌘	**Rel-6**

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	The ETSI TS 101 671 Annex D.3 has not been reported into 33.108. This section describes the HI Management operations. It shall be reported for backward compatibility. It is also necessary to comply with the normative annex related to ROSE (see section A.1.2.3 in 33.108 (C.1.2.3 in TS 101 671)) Let's note this section is also necessary for PS HI2 when using ROSE
Summary of change:	⌘	TS 101 671 Annex D.3 is reported in 33.108 as Annex B.5
Consequences if not approved:	⌘	General: 33.108 Rel-6 CS section wouldn't be backward compatible with previous release. Particular: the normative Annex related to ROSE (see section A.1.2.3) would deal with ROSE operations that are not defined.

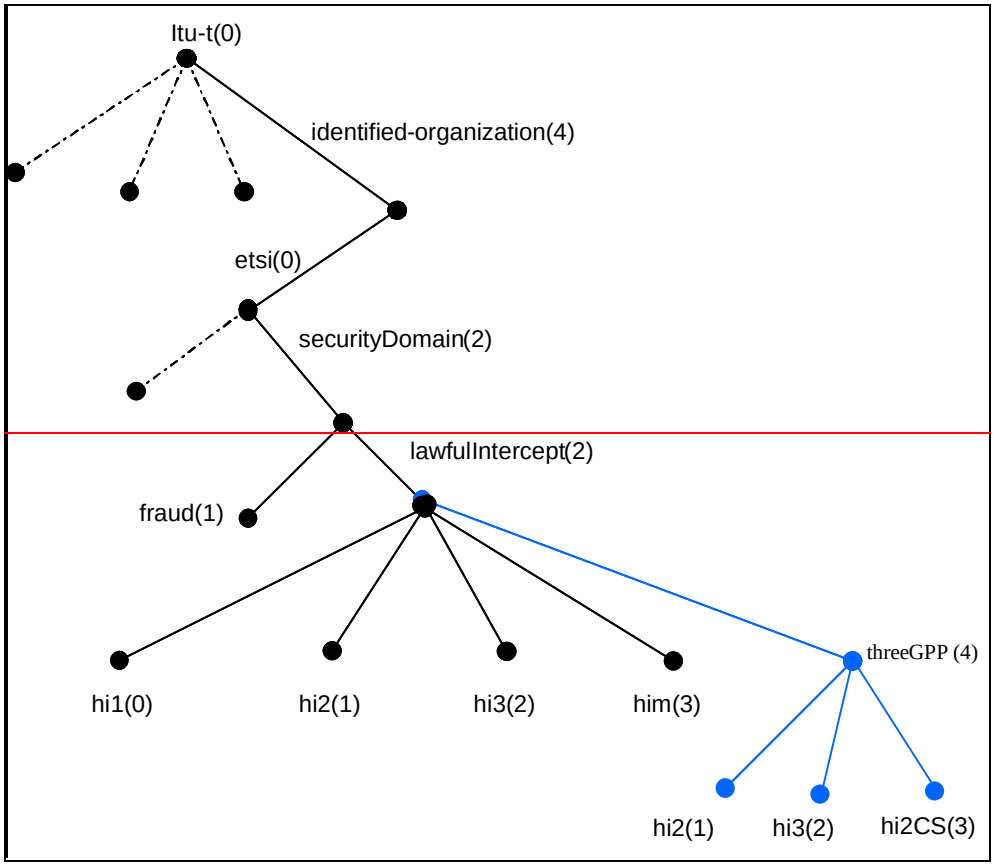
Clauses affected:	⌘	Annex B.2; new clause Annex B.5

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

Other comments:	⌘	**Note: Figure B.1 is also changed in 33.108 CR031. Both changes need to be amalgamated in the figure on implementation of this CR.**

First modified section

B.2 3GPP object tree



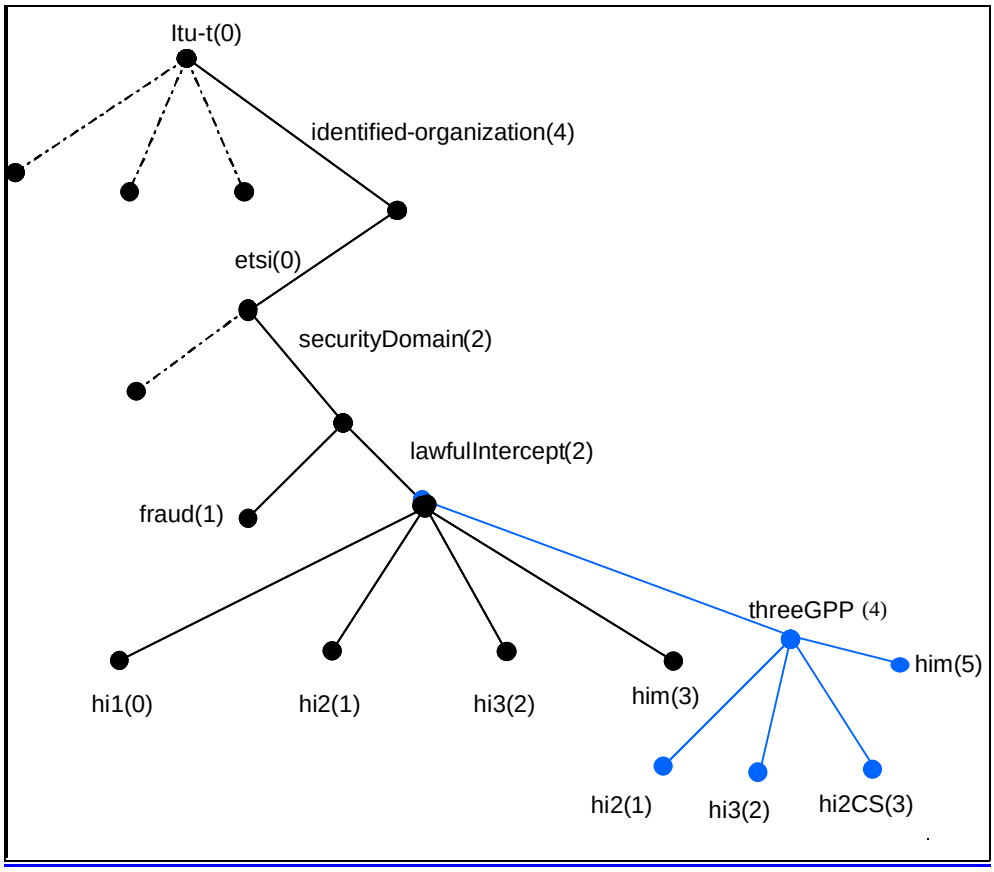


Figure B.1: 3GPP object tree

Next modified section

B.5 HI management operation

This data description applies only for ROSE delivery mechanism.

ASN.1 description of HI management operation (any HI interface)

```
UMTS-HIManagementOperations

{itu-t(0) identified-organization(4) etsi(0) securityDomain(2) lawfulintercept(2) threeGPP(4) him(5)
version1(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)}

        himDomainId
            FROM SecurityDomainDefinitions
            { itu-t (0) identified-organization (4) etsi (0) securityDomain (2)};
```

```
uMTS-sending-of-Password        OPERATION ::=
{
    ARGUMENT    UMTS-Password-Name
    ERRORS      { ErrorsHim }
    CODE        global:{ himDomainId sending-of-Password (1) version1 (1)}
}
-- Class 2 operation. The timer must be set to a value between 3 s and 240s.
-- The timer default value is 60s.
```

```
uMTS-data-Link-Test         OPERATION ::=
{
    ERRORS      { other-failure-causes }
    CODE        global:{ himDomainId data-link-test (2) version1 (1)}
}
-- Class 2 operation. The timer must be set to a value between 3s and 240s.
-- The timer default value is 60s.
```

```
uMTS-end-Of-Connection      OPERATION ::=
{
    ERRORS      { other-failure-causes }
    CODE        global:{ himDomainId end-of-connection (3) version1 (1)}
}
-- Class 2 operation. The timer must be set to a value between 3s and 240s.
-- The timer default value is 60s.
```

```
other-failure-causes    ERROR ::= { CODE local:0}
missing-parameter       ERROR ::= { CODE local:1}
unknown-parameter       ERROR ::= { CODE local:2}
erroneous-parameter     ERROR ::= { CODE local:3}

ErrorsHim               ERROR ::=
{
    other-failure-causes |
    missing-parameter |
    unknown-parameter |
    erroneous-parameter
}
```

```
UMTS-Password-Name          ::= SEQUENCE
{
    password    [1] OCTET STRING (SIZE (1..25)),
    name        [2] OCTET STRING (SIZE (1..25)),
    ...
}
    -- IA5 string recommended

END -– UMTS-HIManagementOperations
```

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London, UK, 18 – 20 November 2003

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CHANGE REQUEST

⌘ **33.108** **CR** **031** ⌘ **rev** **-** ⌘ Current version: **6.3.0** ⌘

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

Title:	⌘	CS Section for 33.108 – User data packet transfer
Source:	⌘	SA WG3 (SA3-LI)
Work item code:	⌘	SEC1-LI
Date:	⌘	19/11/2003
Category:	⌘	**F**
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R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The ETSI TS 101 671 Annex D.6 has not been reported into 33.108. This section describes the HI3 type of operation used to convey UUS information. It should be reported for backward compatibility. Moreover in 33.108 Table 5.7 it is stated that for User-to-user signalling 1,2,3: "Optionally, ETSI's HI3 interface for UUS may be maintained for backward compatibility reasons". The bullet for SMS in A.1.2.1 has been removed because it is not any longer valid at this level. SMS may be provided by IRI or User data packet (HI3 interface).
Summary of change:	⌘	1. TS 101 671 Annex D.6 is reported in 33.108 as Annex B.6 2. Additions to normative Annex (A.1.2.1 and A.1.2.2).
Consequences if not approved:	⌘	ETSI's HI3 interface for UUS is maintained for backward compatibility reasons but wouldn't be defined at stage-3 level.

Clauses affected:	⌘	Annex A.1.2.1; A.1.2.2; Annex B.2; new clause Annex B.6

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

Other comments:	⌘	**Note: Figure B.1 is also changed in 33.108 CR030. Both changes need to be amalgamated in the figure on implementation of this CR.**

First modified section

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 reports the data link unavailability to the 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.

Depending on the natures of the data provided by the LI_Application, the ASE_HI encapsulates this data within the relevant ROSE operation:

- IRI: in this case the data provided by the application are encoded within the class 2 RO-Invoke operation *Umts_Sending_of_IRI*.
- ~~SMS: in this case the data provided by the application are encoded within the class 2 RO-Invoke operation *Umts_Sending-of-IRI*.~~

The following section has been included only for backward compatibility reasons towards ETSI ES 201 671 [24]:

- User packet data transfer (used for data, which can be exchanged via ISUP/DSS1/MAP signalling: e.g. UUS, SMS): in this case the data provided by the application are encoded:
  - either within the class 2 RO-Invoke operation "Circuit-Call-related-services" in case of data associated to a circuit call (e.g. for UUS 1 to 3). The ASN.1 format is described in clause B.5 (HI3 interface);
  - or within the class 2 RO-Invoke operation "No-Circuit-Call-related-services" in case of data not associated with a circuit call (e.g. for SMS). The ASN.1 format is described in clause B.5 (HI3 interface).

Depending on the class of the operation, the ASE-HI may have to wait for an answer. In this case a timer, depending on the operation, is started on the sending of the operation and stopped on the receipt of an answer (RO_Result, RO_Error, RO_Reject).

On timeout of the timer, the ASE_HI indicates to the LI_Application that no answer has been received. It is under the LI_Application responsibility to send again the data or to inform the administrator of the problem.

On receipt of an answer component (after verification that the component isn't erroneous), the ASE_HI stop the relevant timer and acts depending on the type of component:

- On receipt of a RO_Result, the ASE_HI provide the relevant LI_Application an indication that the data has been received by the peer LI-application and the possible parameters contained in the RO_Result.
- On receipt of a RO_Error, the ASE_HI provide the relevant LI_Application an indication that the data hasn't been received by the peer LI-application and the possible "Error cause". The error causes are defined for each operation in the relevant ASN1 script. It is under the LI_Application responsibility to generate or not an alarm message toward an operator or administrator.
- On receipt of a RO_Reject_U/P, the ASE_HI provide the relevant LI_Application an indication that the data hasn't been received by the peer LI-application and the "Problem cause". The "problem causes" are defined in [7]

to [8]. It is under the LI_Application responsibility to send again the data or to inform the operator/administrator of the error.

On receipt of an erroneous component, the ASE_HI acts as described in ITU-T Recommendations [7] to [8].

A.1.2.2 Receiving part

On receipt of a ROSE operation from the lower layers:

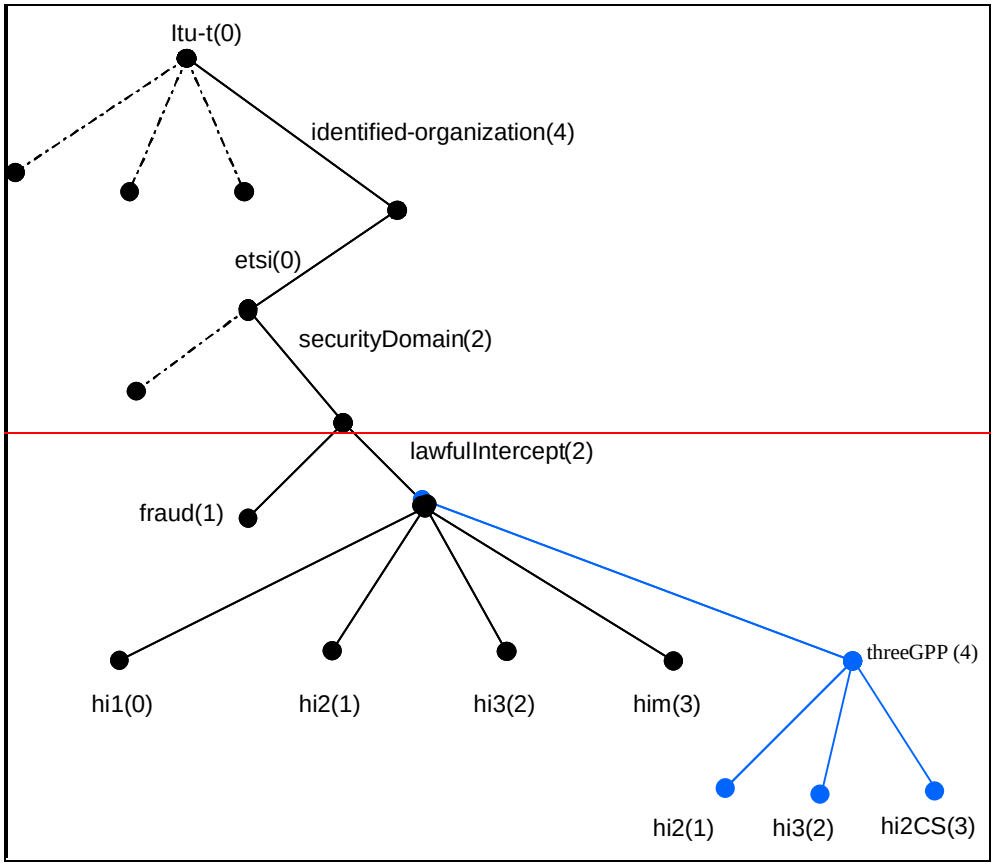
- When receiving operations from the peer entity, the ASE_HI verifies the syntax of the component and transmits the parameters to the LI-Application. If no error/problem is detected, in accordance with the [7] to [8] standard result (only Class2 operation are defined), the ASE_HI sends back a RO_Result which coding is determined by the relevant operation ASN1 script. The different operations which can be received are:
- RO-Invoke operation "Sending-of-IRI" (HI2 interface);
- RO-Invoke operation "No-Circuit-Call-Related-Services" (HI3 interface).
- RO-Invoke operation "Circuit-Call-Related-Services" (HI3 interface).

In case of error, the ASE_HI acts depending on the reason of the error or problem:

- In accordance with the rules defined by [7] to [8], an RO_Error is sent in the case of an unsuccessful operation at the application level. The Error cause provided is one among those defined by the ASN1 script of the relevant operation;
- In accordance with the rules defined in [7] to [8], an RO_Reject_U/P is sent in the case of an erroneous

Next modified section

B.2 3GPP object tree



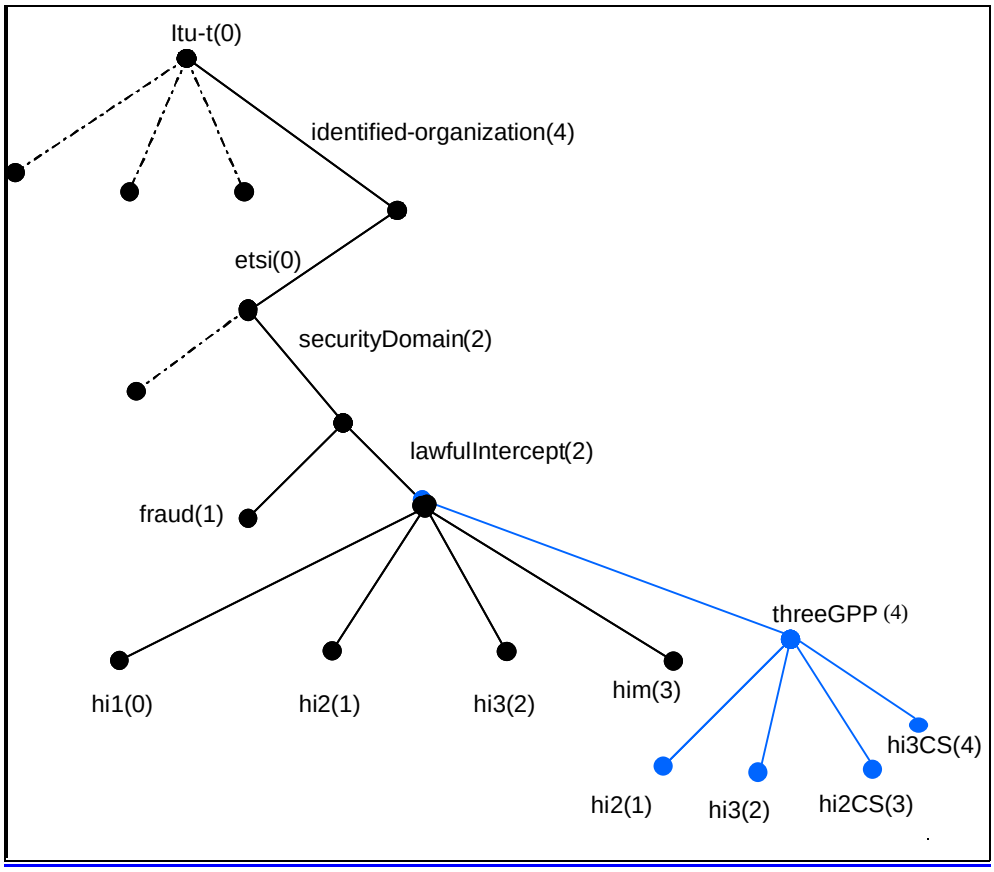


Figure B.1: 3GPP object tree

Next modified section

B.6 User data packet transfer (HI3)

Declaration of ROSE operations circuit-Call-related-Services and no-circuit-Call-related-Services are ROSE delivery mechanism specific. When using FTP delivery mechanism, data Content-Report must be considered.

ASN.1 description of circuit data transfer operation (HI3 interface)

```
UMTS-HI3CircuitLIOperations
{itu-t(0) identified-organization(4) etsi(0) securityDomain(2) lawfulintercept(2) threeGPP(4)
hi3CS(4) version1(1)}

DEFINITIONS IMPLICIT TAGS ::=

-- The following operations are used to transmit user data, which can be exchanged via the DSS1,
-- ISUP or MAP signalling (e.g. UUS).

BEGIN

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

```
    hi3CircuitLISubDomainId
        FROM
        SecurityDomainDefinitions
        { itu-t (0) identified-organization (4) etsi (0) securityDomain (2)}

    LawfulInterceptionIdentifier,
    CommunicationIdentifier,
    TimeStamp,
    OperationErrors,
    Supplementary-Services,

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

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

```
uMTS-circuit-Call-related-Services  OPERATION ::=
{
    ARGUMENT    UMTS-Content-Report
    ERRORS      { OperationErrors }
    CODE        global:{ hi3CircuitLISubDomainId circuit-Call-Serv (1) version1 (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.
```

```
uMTS-no-Circuit-Call-related-Services   OPERATION ::=
{
    ARGUMENT    UMTS-Content-Report
    ERRORS      { OperationErrors }
    CODE        global:{ hi3CircuitLISubDomainId no-Circuit-Call-Serv (2) version1 (1)}
}
-- Class 2 operation. The timer must be set to a value between 10s and 120s.
-- The timer default value is 60s.
```

```
UMTS-Content-Report     ::= SEQUENCE
{
    lawfulInterceptionIdentifier    [6] LawfulInterceptionIdentifier OPTIONAL,
    communicationIdentifier         [1] CommunicationIdentifier,
        -- Used to uniquely identify an intercepted call: the same as used for the relevant IRI.
        -- Called "callIdentifier" in edition 1 ES 201 671.
    timeStamp                       [2] TimeStamp,
    initiator                       [3] ENUMERATED
    {
        originating-party(0),
        terminating-party(1),
        forwarded-to-party(2),
        undefined-party(3),
        ...
    } OPTIONAL,
    content                         [4] Supplementary-Services OPTIONAL,
        -- UUI are encoded in the format defined for the User-to-user information parameter
        -- of the ISUP protocol (see EN 300 356 [30]). Only one UUI parameter is sent per message.
    sMS-report                      [5] SMS-report OPTIONAL,
    ...
}
```

```
END -- UMTS-HI3CircuitLIOperations
```