TSGS#23(04)0160

Source: **SA WG3 (Security)**

Title: **2 CRs to 33.108: Implications of R5 onwards QoS parameters on ASN.1 module in 33.108. (Rel-5, 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-040160	33.108	040	-	Rel-5	Implications of R5 onwards QoS parameters on ASN.1 module in 33.108. R5	F	5.6.0	S3-040133	SEC1-LI
SP-040160	33.108	041	-	Rel-6	Implications of R5 onwards QoS parameters on ASN.1 module in 33.108. R6	A	6.4.0	S3-040134	SEC1-LI

3GPP TSG SA WG3 Security — S3#32 **S3-040133**
09 - 13 February 2004
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3GPP TSG-SA3 LI Meeting #12 ***Tdoc ⌘S3LI04_013r9***
Miami, USA, 27 – 29 January 2004

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CHANGE REQUEST

⌘ **33.108** **CR** **040** ⌘ **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 **X**

Title: ⌘	Implications of R5 onwards QoS parameters on ASN.1 module in 33.108. R5	
Source: ⌘	SA WG3 (LI Group)	
Work item code: ⌘	SEC1-LI	***Date:*** ⌘ 06-02-2004
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: ⌘	Currently **qoslu** parameter may have a maximum length of 11 octets. That means, it cannot convey octet 14 (mandatory for R5 onwards QoS), which was introduced to 24.008v5.2.0 as early as December 2001 (CN plenary # 14. NP-010660, CR 458r3, N1-011620). This CR provides for the correct reporting of QoS and makes modifications to the Object ID and version number to achieve backward/forward compatibility. The **qoslu** and **qosGn** parameters need to be changed to bold for consistency. **qoslu** was misleading and was replaced by **qosMobileRadio.**
Summary of change: ⌘	Involved parameters and data types were modified to accommodate longer QoS IE according to the value defined in TS 24.008v5.9.0 and 29.060v5.7.0. The 3GPP object tree was modified as well, by introducing new branches.
Consequences if not approved: ⌘	Incorrect reporting of QoS to the LEA.

Clauses affected: ⌘	B2; B.3			
Other specs affected: ⌘	**Y**	**N**		
		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	
Other comments: ⌘				

B.2 3GPP object tree

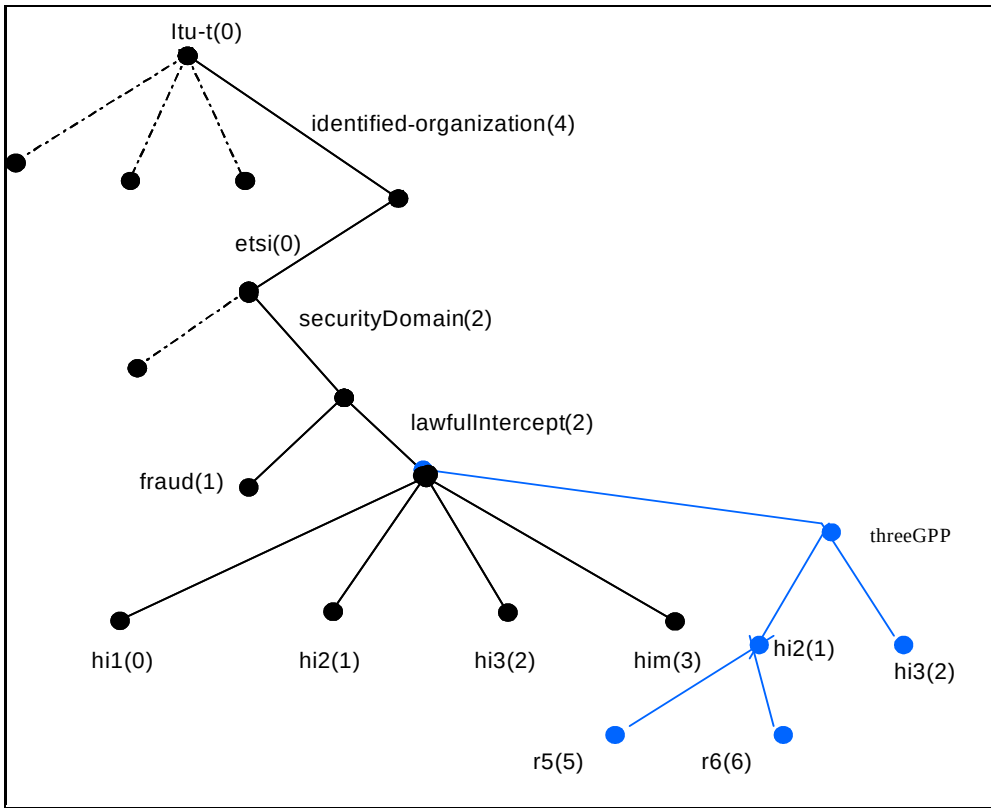

Figure B.1: 3GPP object tree

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~~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) r5(5) version-~~1~~3(~~1~~3)}

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) r5(5) version-13(13)}
```

```
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.
```

```
-- Parameters having the same tag numbers must be identical in Rel-5 and Rel-6 modules

IRI-Parameters      ::= SEQUENCE
{
    hi2DomainId             [0] OBJECT IDENTIFIER,  -- 3GPP HI2 domain
    iRIversion              [23] ENUMERATED
    {
        version2(2),
        …,
        version3(3)
    } 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
            -- or deactivation is MS requested
        terminating-Target  (2),
            -- in case of GPRS, this indicates that the PDP context activation 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 having the same tag numbers must be identical in Rel-5 and Rel-6 modules
```

******* Next modification*******

```
UmtsQos ::= CHOICE
{
    qosMobileRadioqosIu [1] OCTET STRING (SIZE(3..11)),
        -- The qosMobileRadioqosIu parameter shall be coded in accordance with the § 10.5.6.5 of
        -- document ref [9] or ref [21] without the Quality of service
        -- 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]
}
```

3GPP TSG SA WG3 Security — S3#32 **S3-040134**
09 - 13 February 2004
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3GPP TSG-SA3 LI Meeting #12 ***Tdoc ⌘S3LI04_014r10***
Miami, USA, 27 – 29 January 2004

CR-Form-v7

CHANGE REQUEST

⌘ **33.108** **CR** **041** ⌘ **rev** **-** ⌘ Current version: **6.4.0** ⌘

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

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

Title:	⌘	Implications of R5 onwards QoS parameters on ASN.1 module in 33.108. R6
Source:	⌘	SA WG3 (LI Group)
Work item code:	⌘	SEC1-LI
Date:	⌘	06-02-2004
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:	⌘	Currently **qoslu** parameter may have a maximum length of 11 octets. That means, it cannot convey octet 14 (mandatory for R5 onwards QoS), which was introduced to 24.008v5.2.0 as early as December 2001 (CN plenary # 14. NP-010660, CR 458r3, N1-011620). This CR provides for the correct reporting of QoS and makes modifications to the Object ID and version number to achieve backward/forward compatibility. The **qoslu** and **qosGn** parameters need to be changed to bold for consistency. **qoslu** was misleading and was replaced by **qosMobileRadio.**
Summary of change:	⌘	Involved parameters and data types were modified to accommodate longer QoS IE according to the value defined in TS 24.008v6.2.0 and 29.060v6.2.0. The 3GPP object tree was modified as well, by introducing new branches.
Consequences if not approved:	⌘	Incorrect reporting of the QoS to the LEA.

Clauses affected:	⌘	B2: B.3; B3a; B4

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

Other comments:	⌘	

B.2 3GPP object tree

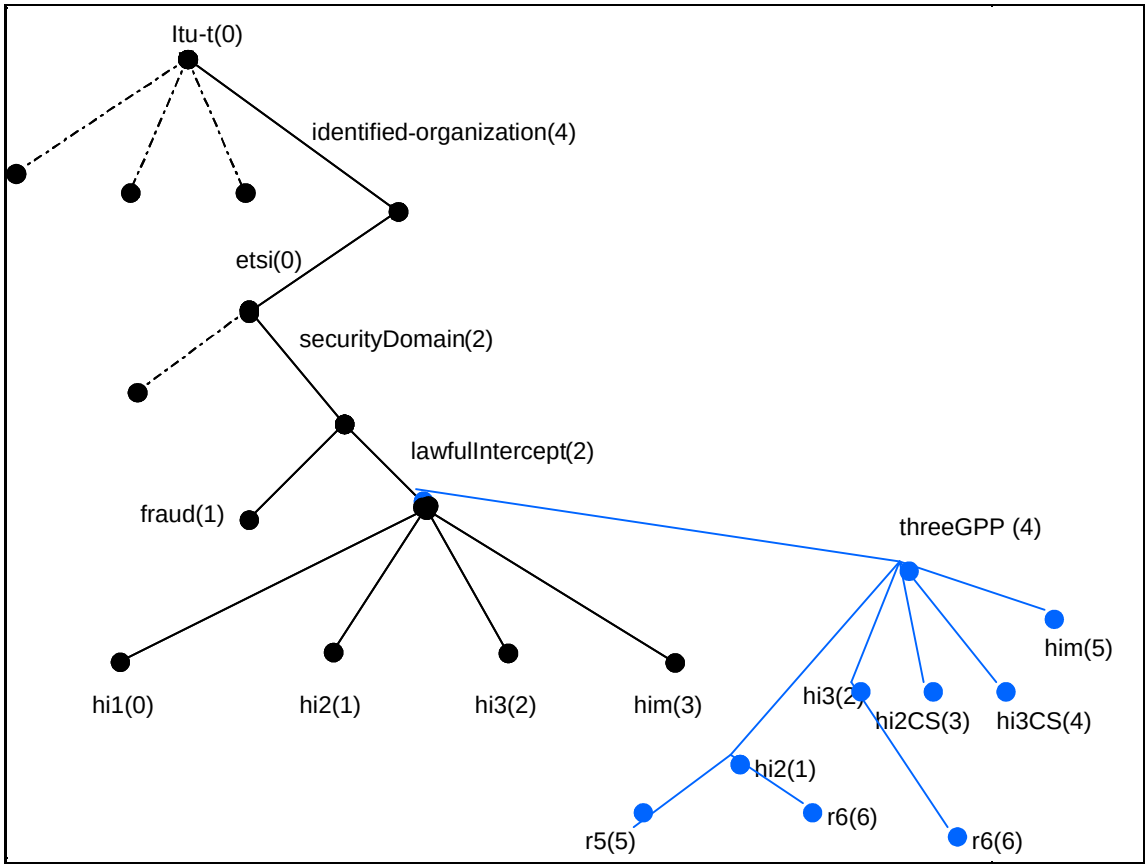

Figure B.1: 3GPP object tree

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) r6(6) version-23(23)}

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) r6(6) version-23(23)}
```

```
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.
```

```
-- Parameters having the same tag numbers must be identical in Rel-5 and Rel-6 modules.

IRI-Parameters      ::= SEQUENCE
{
    hi2DomainId             [0] OBJECT IDENTIFIER,  -- 3GPP HI2 domain
    iRIversion              [23] ENUMERATED
    {
        version2 (2),
        …,
        version3 (3)
    } 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
            -- or deactivation is MS requested
        terminating-Target  (2),
            -- in case of GPRS, this indicates that the PDP context activation 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 having the same tag numbers must be identical in Rel-5 and Rel-6 modules
```

******** Next modification********

```
UmtsQos ::= CHOICE
{
    gosMobileRadioqosIu [1] OCTET STRING (SIZE(3..11)),
        -- The gosMobileRadioqosIu parameter shall be coded in accordance with the § 10.5.6.5 of
        -- document ref [9] or ref [21] without the Quality of service
        -- 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]
}
```

******* Next modification*******

B.3a Interception related information (HI2 CS)

For North America the use of J-STD-25 A[23] is recommended.

Declaration of ROSE operation sending-of-IRI is ROSE delivery mechanism specific. When using FTP delivery mechanism, data IRI-Content must be considered.

ASN1 description of IRI (HI2 CS interface)

```
UmtsCS-HI2Operations
{ itu-t (0) identified-organization (4) etsi (0) securityDomain (2) lawfulIntercept (2) threeGPP(4)
hi2CS (3) 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,
    Intercepted-Call-State,
    PartyInformation,
    CallContentLinkCharacteristics,
    CommunicationIdentifier,
    CC-Link-Identifier,
    National-Parameters

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

    Location,
    SMS-report

    FROM UmtsHI2Operations
        {itu-t(0) identified-organization(4) etsi(0) securityDomain(2)
            lawfulintercept(2) threeGPP(4) hi2(1) r6(6) version-23(23)};


-- 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)}
hi2CSDomainId OBJECT IDENTIFIER ::= {threeGPPSUBDomainId hi2CS(3) version-1(1)}
```

******* Next modification*******

B.4 HI3 CC definition

```
Umts-HI3-PS {itu-t(0) identified-organization(4) etsi(0) securityDomain(2) lawfulintercept(2)
threeGPP(4) hi3(2) r6(6) version-1(1)}

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

IMPORTS

GPRSCorrelationNumber
    FROM UmtsHI2Operations
    {itu-t(0) identified-organization(4) etsi(0) securityDomain(2) lawfulintercept(2) threeGPP(4)
    hi2(1) r6(6) version-13(13)}    -- from 3GPP UmtsHI2Operations

LawfulInterceptionIdentifier,

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