**3GPP TSG- Meeting # *705***

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** | **2** | **Current version:** |  |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI () | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | | 31 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change 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](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently there is Stage 2 description of LI for IMS Data Channel in release 18. There is no Stage 3. This document provides Stage 3 as an essential alignment for Release 18 of 33.128. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Modify existing IMS clauses to add Stage 3 details for IMS Data Channel LI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Solution will be incomplete. Stage 2 and 3 misalignment for Release 18. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 3.3, 7.12.2.1, 7.12.2.4.X (new), 7.12.2.5.X (new), 7.12.2.8.1, 7.12.2.8.2.2, 7.12.3.2.1, 7.12.3.2.2, 7.12.3.3, 7.12.4.1.X (new), 7.12.4.2.X (new), 7.12.4.2.Y (new), 7.12.4.2.Z (new) 7.12.5.1.X (new), 7.12.5.1.X.1 (new), 7.12.5.1.X.2 (new), 7.12.5.1.X.3 (new), 7.12.5.2.1, 7.12.6.1, 7.12.7.1, Attachments ASN.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | Schema changes for this CR can be found on the Forge:  Merge Request 281: <https://forge.3gpp.org/rep/sa3/li/-/merge_requests/281/diffs?commit_id=90235a8d1795cd0d27d00cf61c1c6acaaa37726d>  Commit Hash: 90235a8d1795cd0d27d00cf61c1c6acaaa37726d | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | S3i240653, s3i240671 | | | | | | | | |

\*\*START OF CHANGES\*\*

\*\*START OF FIRST CHANGE\*\*

# 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] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System Architecture for the 5G System".

[3] 3GPP TS 33.126: "Lawful Interception Requirements".

[4] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[5] 3GPP TS 33.127: "Lawful Interception (LI) Architecture and Functions".

[6] ETSI TS 103 120: "Lawful Interception (LI); Interface for warrant information".

[7] ETSI TS 103 221-1: "Lawful Interception (LI); Internal Network Interfaces; Part 1: X1".

[8] ETSI TS 103 221-2: "Lawful Interception (LI); Internal Network Interfaces; Part 2: X2/X3".

[9] ETSI TS 102 232-1: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 1: Handover specification for IP delivery".

[10] ETSI TS 102 232-7: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 7: Service-specific details for Mobile Services".

[11] 3GPP TS 33.501: "Security Architecture and Procedures for the 5G System".

[12] 3GPP TS 33.108: "3G security; Handover interface for Lawful Interception (LI)".

[13] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS)".

[14] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General Aspects".

[15] 3GPP TS 29.244: "Interface between the Control Plane and the User Plane nodes".

[16] 3GPP TS 29.502: "5G System; Session Management Services; Stage 3".

[17] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces; Stage 3".

[18] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[19] 3GPP TS 23.003: "Numbering, addressing and identification ".

[20] OMA-TS-MLP-V3\_5-20181211-C: "Open Mobile Alliance; Mobile Location Protocol, Candidate Version 3.5", <https://www.openmobilealliance.org/release/MLS/V1_4-20181211-C/OMA-TS-MLP-V3_5-20181211-C.pdf>.

[21] 3GPP TS 29.540: "5G System; SMS Services; Stage 3".

[22] 3GPP TS 29.518: "5G System; Access and Mobility Management Services; Stage 3".

[23] 3GPP TS 38.413: "NG Application Protocol (NGAP)".

[24] 3GPP TS 29.572: "Location Management Services; Stage 3".

[25] 3GPP TS 29.503: "5G System; Unified Data Management Services".

[26] IETF RFC 815: "IP datagram reassembly algorithms".

[27] IETF RFC 2460: "Internet Protocol, Version 6 (IPv6) Specification".

[28] IETF RFC 793: "Transmission Control Protocol".

[29] IETF RFC 768: "User Datagram Protocol".

[30] IETF RFC 4340: "Datagram Congestion Control Protocol (DCCP)".

[31] IETF RFC 4960: "Stream Control Transmission Protocol".

[32] IANA (www.iana.org): Assigned Internet Protocol Numbers, "Protocol Numbers".

[33] IETF RFC 6437: "IPv6 Flow Label Specification".

[34] IETF RFC 791: "Internet Protocol".

[35] Open Geospatial Consortium OGC 05-010: "URNs of definitions in ogc namespace".

[36] 3GPP TS 33.107: "3G security; Lawful interception architecture and functions".

[37] 3GPP TS 37.340: "Evolved Universal Radio Access (E-UTRA) and NR-Multi-connectivity; Stage 2".

[38] 3GPP TS 36.413: "S1 Application Protocol (S1AP)".

[39] OMA-TS-MMS\_ENC-V1\_3-20110913-A: "Multimedia Messaging Service Encapsulation Protocol".

[40] 3GPP TS 23.140: "Multimedia Messaging Protocol. Functional Description. Stage 2".

[41] 3GPP TS 38.415: "NG-RAN; PDU Session User Plane Protocol".

[42] 3GPP TS 23.273: "5G System (5GS) Location Services (LCS); Stage 2".

[43] IETF RFC 4566: "SDP: Session Description Protocol".

[44] 3GPP TS 24.193: "Stage 3: Access Traffic Steering, Switching and Splitting (ATSSS)".

[45] 3GPP TS 29.509: "5G System; Authentication Server Services; Stage 3".

[46] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[47] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[48] 3GPP TS 29.504: "5G System; Unified Data Repository Services; Stage 3".

[49] 3GPP TS 29.505: "5G System; Usage of the Unified Data Repository services for Subscription Data; Stage 3".

[50] 3GPP TS 23.401 "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[51] 3GPP TS 24.301 "Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS), Stage 3".

[52] 3GPP TS 23.271 "Functional stage 2 description of Location Services (LCS)".

[53] 3GPP TS 29.172 "Evolved Packet Core (EPC) LCS Protocol (ELP) between the Gateway Mobile Location Centre (GMLC) and the Mobile Management Entity (MME); SLg interface".

[54] 3GPP TS 29.171 "LCS Application Protocol (LCS-AP) between the Mobile Management Entity (MME) and Evolved Serving Mobile Location Centre (E-SMLC); SLs interface".

[55] 3GPP TS 24.379: "Mission Critical Push to Talk (MCPTT) call control; protocol specification".

[56] OMA-TS-PoC-System\_Description-V2\_1-20110802-A: "OMA PoC System Description".

[57] 3GPP TS 29.541: "5G System; Network Exposure (NE) function services for Non-IP Data Delivery (NIDD); Stage 3".

[58] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

[59] 3GPP TS 29.338: "Diameter based protocols to support Short Message Service (SMS) capable Mobile Management Entities (MMEs); Stage 3".

[60] 3GPP TS 29.337: "Diameter-based T4 interface for communications with packet data networks and applications".

[61] 3GPP TS 24.250: "Protocol for Reliable Data Service; Stage 3".

[62] 3GPP TS 29.128: "Mobility Management Entity (MME) and Serving GPRS Support Node (SGSN) interfaces for interworking with packet data networks and applications".

[63] 3GPP TS 29.122: "T8 reference point for Northbound APIs".

[64] 3GPP TS 29.598: "5G System; Unstructured Data Storage Services; Stage3".

[65] 3GPP TS 33.535: "Authentication and Key Management for Applications (AKMA) based on 3GPP credentials in the 5G System (5GS)".

[66] IETF RFC 5246: "The Transport Layer Security (TLS) Protocol Version 1.2".

[67] GSMA IR.88: "IR.88 LTE and EPC Roaming Guidelines".

[68] GSMA NG.114 "IMS Profile for Voice, Video and Messaging over 5GS".

[69] IETF RFC 8225: "PASSporT: Personal Assertion Token".

[70] IETF RFC 8224: "Authenticated Identity Management in the Session Initiation Protocol (SIP)".

[71] IETF RFC 8588: "Personal Assertion Token (PaSSporT) Extension for Signature-based Handling of Asserted information using toKENs (SHAKEN)".

[72] 3GPP TS 24.196: "Enhanced Calling Name (eCNAM)".

[73] IETF draft-ietf-stir-passport-rcd-26: "PASSporT Extension for Rich Call Data".

NOTE: The above document cannot be formally referenced until it is published as an RFC.

[74] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP)and Session Description Protocol (SDP); Stage 3".

[75] IANA Session Initiation Protocol (SIP) Parameters: <https://www.iana.org/assignments/sip-parameters/sip-parameters.xhtml>

[76] IETF RFC 8946: "Personal Assertion Token (PASSporT) Extension for Diverted Calls".

[77] 3GPP TS 23.204: "3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Support of Short Message Service (SMS) over generic 3GPP Internet Protocol (IP) access; Stage 2".

[78] GSMA RCC.07: "Rich Communication Suite – Advanced Communications Services and Client Specification".

[79] IETF RFC 4975: "The Message Session Relay Protocol (MSRP)".

[80] IETF RFC 3862: "Common Presence and Instant Messaging (CPIM): Message Format".

[81] IETF RFC 5438: "Instant Message Disposition Notification (IMDN)".

[82] OMA-TS-CPM\_System\_Description-V2\_2-20170926-C: "OMA Converged IP Messaging System Description".

[83] Void.

[84] 3GPP TS 36.455: "Evolved Universal Terrestrial Radio Access (E-UTRA); LTE Positioning Protocol A (LPPa) ".

[85] 3GPP TS 37.355: "LTE Positioning Protocol (LPP)".

[86] 3GPP TS 38.455: "NG-RAN; NR Positioning Protocol A (NRPPa)".

[87] 3GPP TS 29.274: "3GPP Evolved Packet System (EPS); Evolved General Packet Radio Service (GPRS) Tunnelling Protocol for Control plane (GTPv2-C); Stage 3".

[88] 3GPP TS 29.513: "5G System; Policy and Charging Control signalling flows and QoS parameter mapping".

[89] 3GPP TS 29.512: "5G System; Session Management Policy Control Service; Stage 3".

[90] 3GPP TS 29.508: "5G System; Session Management Event Exposure Service; Stage 3".

[91] 3GPP TS 29.514: "5G System; Policy Authorization Service; Stage 3".

[92] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".

[93] 3GPP TS 24.558: "Enabling Edge Applications; Protocol specification".

[94] 3GPP TS 29.558: "Enabling Edge Applications; Application Programming Interface (API) specification".

[95] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".

[96] 3GPP TS 29.551: "5G System; Packet Flow Description Management Service; Stage 3".

[97] ETSI TS 103 280: "Lawful Interception (LI); Dictionary for common parameters".

[98] 3GPP TS 26.512: "5G Media Streaming (5GMS); Protocols".

[99] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS); Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

[100] 3GPP TS 29.563: "5G System; Home Subscriber Server (HSS) services for interworking with Unified Data Management (UDM); Stage 3".

[101] 3GPP TS 29.562: "5G System; Home Subscriber Server (HSS) Services; Stage 3".

[102] 3GPP TS 24.341 "Support of SMS over IP networks, Stage 3".

[103] 3GPP TS 38.473 "NG-RAN;F1 application protocol (F1AP)".

[104] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

[105] ITU-T Recommendation Q.763 (1999): "Specifications of Signalling System No.7; Formats and codes".

[106] 3GPP TS 29.272: "Mobility Management Entity (MME) and Serving GPRS Support Node (SGSN) related interfaces based on Diameter protocol".

[107] IETF RFC 6442: "Location Conveyance for the Session Initiation Protocol".

[108] Void.

[109] OMA-TS-CPM\_Conv\_Function: "OMA CPM Conversation Functions".

[110] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[111] 3GPP TS 32.299: " Telecommunication management; Charging management; Diameter charging applications".

[112] 3GPP TS 32.423: "Telecommunication management; Subscriber and equipment trace; Trace data definition and management".

[113] 3GPP TS 38.414: "NG-RAN; NG data transport".

[114] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[115] IETF RFC 5322: "Internet Message Format".

[116] IETF RFC 4975: "The Message Session Relay Protocol (MSRP)".

[117] IETF RFC 6901: "JavaScript Object Notation (JSON) Pointer".

[118] IETF RFC 3261: "SIP: Session Initiation Protocol".

[119] W3C Recommendation: "XML Path Language (XPath)".

[120] IETF RFC 2046: "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types".

[121] 3GPP TR 33.928: "ADMF Logic for Provisioning Lawful Interception (LI) ".

[122] 3GPP TS 23.316: "Wireless and wireline convergence access support for the 5G System".

[123] 3GPP TS 23.038: "Alphabets and language-specific information".

[124] ITU-T Recommendation X.680 (2021): "Information technology—Abstract Syntax Notation One (ASN.1): Specification of basic notation".

[125] IETF RFC 4282: "The Network Access Identifier".

[126] IETF RFC 7042: "IANA Considerations and IETF Protocol and Documentation Usage for IEEE 802 Parameters".

[127] IEEE "Guidelines for Use of Extended Unique Identifier (EUI), Organizationally Unique Identifier (OUI), and Company ID (CID)", <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/tutorials/eui.pdf>

[128] 3GPP TS 24.502: "Access to the 3GPP 5G Core Network (5GCN) via Non-3GPP Access Networks (N3AN)".

[129] 3GPP TS 33.503: "Security aspects of Proximity based Services (ProSe) in the 5G System (5GS)".

[130] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents".

[131] 3GPP TS 24.174: "Support of multi-device and multi-identity in the IP Multimedia Subsystem (IMS)".

[132] OMA-TS-CPM\_Message\_Storage: "OMA CPM Message Storage".

[133] 3GPP TS 29.520: "Network Data Analytics Services".

[134] 3GPP2 C.S0015-A: "Short Message Service (SMS) for Wideband Spread Spectrum Systems".

[135] ETSI TS 102 232-5: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 5: Service-specific details for IP Multimedia services".

[136] ETSI TS 102 232-3: "Lawful Interception (LI); Handover Interface and Service-Specific Details (SSD) for IP delivery; Part 3: Service-specific details for internet access services".

[XXX] 3GPP TS 29.176: "IP Multimedia Subsystem (IMS); Media Function (MF); Services Stage 3".

[YYY] 3GPP TS 29.175: "IP Multimedia Subsystem (IMS) Application Server (AS) Services Stage 3".

[ZZZ] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia Telephony; Media handling and interaction"

\*\*END OF FIRST CHANGE\*\*

\*\*START OF SECOND CHANGE\*\*

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

ADMF LI Administration Function

CC Content of Communication

CSP Communication Service Provider

CUPS Control and User Plane Separation

DC Data Channel

DCSF Data Channel Signalling Function

DNAI Data Network Access Identifier

ICF Identity Caching Function

IEF Identity Event Function

IPPR Internet Protocol Packet Reporting

IQF Identity Query Function

IRI Intercept Related Information

LAF Location Acquisition Function

LALS Lawful Access Location Services

LARF Location Acquisition Requesting Function

LEA Law Enforcement Agency

LEMF Law Enforcement Monitoring Facility

LI Lawful Interception

LICF Lawful Interception Control Function

LI\_HI1 LI\_Handover Interface 1

LI\_HI2 LI\_Handover Interface 2

LI\_HI3 LI\_Handover Interface 3

LI\_HI4 LI\_Handover Interface 4

LI\_HILA Lawful Interception Handover Interface Location Acquisition

LI\_HIQR Lawful Interception Handover Interface Query Response

LIPF Lawful Interception Provisioning Function

LIR Location Immediate Request

LI\_SI Lawful Interception System Information Interface

LISSF Lawful Interception State Storage Function

LI\_ST Lawful Interception State Transfer Interface

LI\_X1 Lawful Interception Internal Interface 1

LI\_X2 Lawful Interception Internal Interface 2

LI\_X2\_LA Lawful Interception Internal Interface 2 Location Acquisition

LI\_X3 Lawful Interception Internal Interface 3

LI\_XEM1 Lawful Interception Internal Interface Event Management Interface 1

LI\_XER Lawful Interception Internal Interface Event Record

LI\_XLA Lawful Interception Internal Interface Location Acquisition

LI\_XQR Lawful Interception Internal Interface Query Response

LTF Location Triggering Function

MDF Mediation and Delivery Function

MDF2 Mediation and Delivery Function 2

MDF3 Mediation and Delivery Function 3

MDT Minimization of Drive Test

MM Multimedia Message

MMS Multimedia Message Service

N3AEC Non-3GPP Access Establishment Cause

N3AF Non-3GPP Access Function

NAT Network Address Translation

NPLI Network Provided Location Information

O&M Operations and Management

PKMF ProSe Key Management Function

POI Point Of Interception

RCS Rich Communication Suite

SDP Session Description Protocol

SIP Session Initiation Protocol

SIRF System Information Retrieval Function

SOI Start Of Interception

TF Triggering Function

TNGF Trusted Non-3GPP Gateway Function

TWIF Trusted WLAN Interworking Function

xCC LI\_X3 Communications Content.

xIRI LI\_X2 Intercept Related Information

\*\* END OF SECOND CHANGE\*\*

\*\*START OF THIRD CHANGE\*\*

#### 7.12.2.1 General

This clause defines protocol and procedures to support the LI for IMS-based services. The scope of LI functions defined here are based on the IMS LI architecture defined in TS 33.127 [5] that includes:

- Target type – local ID, non-local ID.

- Roaming considerations – local break-out (LBO), home-routed (HR).

- Service specific aspects - normal sessions, redirected sessions, conferencing, STIR/SHAKEN, RCD/eCNAM, IMS Data Channel.

- Location reporting.

The IMS LI shall apply to all IMS-based services unless restricted by the service scoping as defined in clause 4.4 of the present document. When restricted by the service scoping, the IMS LI applies only to service types listed in table C.2 of ETSI TS 103 221-1 [7]). Clause 7.12.2.5 provides further details of IMS LI with service scoping.

As defined in TS 33.127 [5], the NFs that provide the IRI-POI and CC-TF are in the IMS signalling functions that handle the SIP messages and the NFs that provide the CC-POI are in the IMS media functions. The media interception in the packet core network (EPC or 5GC) is outside the scope of the present document.

For some of the services listed above, an alternate deployment option in addition to the default option is also specified in TS 33.127 [5]. The NFs that provide the IRI-POI, CC-TF and CC-POI in the alternate deployment option can be different.

The LIPF provisioning scenarios for IMS LI is illustrated in TR 33.928 [121].

\*\*END OF THIRD CHANGE\*\*

\*\*START OF FOURTH CHANGE\*\*

##### 7.12.2.4.X IMS Data Channel

This includes the LI for IMS data channel for the target as described in TS 33.127 [5].

The further details of LI for IMS data channel are described in clause 7.12.2.5.X.

\*\*END OF FOURTH CHANGE\*\*

\*\*START OF FIFTH CHANGE\*\*

##### 7.12.2.5.X LI for IMS Data Channel

This includes LI for IMS-based voice, video, application, or multimedia services for target originated or target terminated sessions.

LI for IMS Data Channel services applies if the following is true:

- The m-line in the SDP answer is application.

- Media format is webrtc-datachannel.

The generation of xIRI, however, shall be made independent from the SDP information.

It is possible that SDP offer and SDP answer may have different information in m-line. The determination on whether to intercept the IMS Data Channel media is based on the final outcome of SDP offer and answer, which happens to be in the SDP answer, see TS 26.114 [ZZZ] clause 6.2.10.

The media associated with an IMS Data Channel session may also change in the middle of a session using the re-INVITE procedures invoked by either of the parties involved in the session. Accordingly, the interception of IMS Data Channel media may start, resume, or cease in the middle of an IMS data channel session based media type negotiated at the conclusion the related SDP offer and answer. LI reporting for this procedure is reported via a IMSDataChannelSessionModification xIRI as described in clause 7.12.4.2.Y of the present document.

IMS Data Channel session xIRI and xCC are correlated independently from non-IMS Data Channel IMS sessions utilizing the mediaID within the mediaInfo parameter, see TS 29.176 [XXX] clauses 6.1.6.1 and 6.1.6.2.4.

\*\*END OF FIFTH CHANGE\*\*

\*\*START SIXTH CHANGE\*\*

##### 7.12.2.8.1 General concepts

An IMS based communication is intercepted when one of the following is true:

- The calling party identity on session originations or SMS originations is a target.

- The called party identity on session originations is a target non-local ID.

- The destination party identity in SMS originations is a target non-local ID.

- The called party identity on session terminations or SMS terminations is a target.

- The calling party identity on session terminations is a target non-local ID.

- The origination party identity in SMS terminations is target non-local ID.

- The redirecting party identity on session terminations is a target non-local ID.

- In the alternate deployment option for redirected sessions (see TS 33.127 [5]), redirecting party is a target.

- The redirected-to party identity is a target non-local ID.

- The conference URI in a conferencing session is a target.

- The callingIdentity within the SessionInfo parameter of the SessionEventNotification (see TS 29.165, clause 6.1.6.2.2) is a target when the IMS Data Channel is established for the originating party.

- The calledIdentity within the SessionInfo parameter of the SessionEventNotification (see TS 29.165, clause 6.1.6.2.2) is a target when the IMS Data Channel is established for the terminating party.

The above identities are used to identify that an IMS session is intercepted in the IRI-POI and in the CC-TF, the latter when the LI requires CC interception. In addition, the CC-TF uses the redirecting party identity to trigger the CC-POI even if the target is not a non-local ID.

\*\*END OF SIXTH CHANGE\*\*

\*\*START SEVENTH CHANGE\*\*

###### 7.12.2.8.2.2 Session based IMS services

This clause describes the method used to identify a session-based IMS service such as IMS-based voice service.

When an IMS session is originated from an IMS UE (using SIP INVITE), the IRI-POI/CC-TF examines the following to verify for a target match:

- P-Asserted Identity header and From header present in the SIP INVITE when the target identity is IMPU.

- Request URI header and To header present in the SIP INVITE when the target identity is IMPU and target is non-local ID.

- Digest username of Authorization header of the SIP REGISTER when the target identity is IMPI.

- +sip.instance-id of Contact header received in the SIP REGISTER request when the target identity is PEIIMEI or IMEI.

The use of Request URI header and To header present in the SIP INVITE for matching target non-local ID is done on the redirected sessions irrespective of whether the session is originated from an IMS UE.

When an IMS session is terminated at an IMS UE (using SIP INVITE), the IRI-POI/CC-TF examines the following to verify for a target match:

- Request URI and To header present in the SIP INVITE when the target identity is IMPU.

- P-Asserted-Identity, From header, History Info header and Diversion header present in the SIP INVITE when the target identity is IMPU and target is non-local ID.

- Digest username of Authorization header of the SIP REGISTER when the target identity is IMPI.

- +sip.instance-id of Contact header received in the SIP REGISTER request when the target identity is PEIIMEI or IMEI.

NOTE: IRI-POI/CC-TF that uses the information received in the SIP REGISTER to perform a target match cannot do such a target match unless the NF is on the signalling path of SIP REGISTER flow.

In addition, the IRI-POI in the alternate deployment option (TS 33.127 [5]) and CC-TF, examine the following to verify a target match when an IMS session is terminated to an IMS UE:

- History Info header and Diversion header present in the SIP INVITE when the target identity is IMPU and the target is not a non-local ID.

For conference sessions, the IRI-POI and CC-TF examine the following to verify a target match:

- P-Asserted-Identity, From header present in the SIP INVITE when a target initiates a conference session or when the target joins a "meet-me" conference session.

- Conference URI present in the SIP INVITE when the conference URI is the target.

IRI-POI/CC-TF may use the Via header or the Route header to determine whether the SIP INVITE is for an originating IMS session or a terminating IMS session. IRI-POI/CC-TF stores (locally) the SIP Call Id to associate the subsequent SIP messages received on the same session for a target match.

For IMS Data Channel sessions, the IRI-POI and CC-TF use the following to verify a target match:

* CallingIdentity in the SessionInfo parameter of the SessionEventNotificaiton when the SessionCase is ORIGINATING\_IMS\_SESSION.
* CalledIdentity in the SessionInfo parameter of the SessionEventNotification when the SessionCase is TERMINATING\_IMS\_SESSION.

The CallingIdentity and CalledIdentity are present in the SessionInfo parameter when the Event Type is SESSION ESTABLISHMENT REQUEST and MEDIA CHANGE REQUEST.

\*\*END OF SEVENTH CHANGE\*\*

\*\*START OF EIGHTH CHANGE\*\*

##### 7.12.3.2.1 Session-based IMS services

The table 7.12.3.2-1 below shows the applicability of NFs in which the IRI-POIs are provisioned with the target identifiers listed in clause 7.12.2.2 for session based IMS sessions (e.g. voice). See TS 33.127 [5] and TR 33.928 [121].

When the service scoping is applicable, the IRI-POIs in the NFs shown in table 7.12.3.2-1 are provisioned only when the type of service is voice/text or messaging (i.e. MSRP-based).

Table 7.12.3.2-1: IRI-POIs in the NFs that need to be provisioned for session-based IMS service

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NF  (IMS signalling function) | Not a target non-local ID | | Target non-local ID | | Reference |
| Default | Alternate option | Default | Alternate option |
| P-CSCF | YES | YES | YES | NO | In this clause |
| S-CSCF | YES | NO | NO | YES | In this clause |
| E-CSCF | YES | NO | NO | NO | In this clause |
| IBCF | NO | YES | YES | YES | In this clause |
| MGCF | NO | YES | YES | NO | In this clause |
| AS | YES | YES | YES | YES | In this clause |
| HSS | YES | YES | NO | NO | 7.2.3 |
| DCSF | YES | YES | (see NOTE) | (see NOTE) | In this clause |
| NOTE: Target non-local ID for DCSF interception of IMS Data Channel is not considered in this Release. | | | | | |

Table 7.12.3.2-2 shows the minimum details of the LI\_X1 ActivateTask message used for provisioning the IRI-POIs in the NFs listed in table 7.12.3.2-1 for session based IMS-based services.

Table 7.12.3.2-2: ActivateTask message for activating IRI-POI for session-based IMS service

|  |  |  |
| --- | --- | --- |
| ETSI TS 103 221-1 [7] field name | Description | M/C/O |
| XID | XID assigned by LIPF. The value used here shall be the same when IRI-POIs in multiple NFs are provisioned for a warrant. The value used here shall also be same as the value used for provisioning the CC-TFs (see table 7.12.3.3-1), MDF2 (see table 7.12.3.4-1) and MDF3 (see table 7.12.3.5-1). | M |
| TargetIdentifiers | One or more of the target identifiers listed in the clause 7.12.2.2 with the embedded conditions implied. | M |
| DeliveryType | Set to “X2Only. | M |
| ListOfDIDs | Delivery endpoints of LI\_X2. These delivery endpoints shall be configured using the *CreateDestination* message as described in ETSI TS 103 221-1 [7] clause 6.3.1 prior to first use. | M |
| ListOfServiceTypes | Present if interception is to be done on one or more a specific service type. Using the format defined in ETSI TS 103 221-1 [7] based on the service scoping listed below this table. When multiple intercepts are activated on a target identifier, the service scoping shall be the union of all of them. | C |

When service scoping is required, the IRI-POIs present in the NFs listed in table 7.12.3.2-1 shall support the following service types from the structure defined in ETSI TS 103 221-1 [7]:

- The enumerated value of "voice" or "messaging" in the service type field.

The ModifyTask and DeactivateTask messages that the LIPF may send to the IRI-POIs present in the NFs listed in table 7.12.3.2-1 shall include the XID of the Task created by the above ActivateTask message.

##### 7.12.3.2.2 Session-independent IMS services

Table 7.12.3.2-3 below shows the applicability of NFs in which the IRI-POIs are provisioned with the target identifiers listed in clause 7.12.2.2 for session independent services (e.g. SMS over IP). See TS 33.127 [5] and TR 33.928 [121].

When the service scoping is applicable, the IRI-POIs in the NFs shown in table 7.12.3.2-3 are provisioned only when the service type is messaging (i.e. SMS over IP).

Table 7.12.3.2-3: IRI-POIs in the NFs that need to be provisioned for session-independent IMS-based service

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NF  (IMS signalling function) | Not a target non-local ID | | Target non-local ID | | Reference |
| Default | Alternate option | Default | Alternate option |
| P-CSCF | YES | YES | YES | YES | In this clause |
| S-CSCF | YES | NO | YES | NO | In this clause |
| E-CSCF | YES | NO | NO | NO | In this clause |
| IBCF | NO | YES | NO | YES | In this clause |
| MGCF | NO | NO | NO | NO | In this clause |
| AS | NO | NO | NO | NO | In this clause |
| HSS | YES | YES | NO | NO | Clause 7.2.3 |

Table 7.12.3.2-4 shows the minimum details of the LI\_X1 ActivateTask message used for provisioning the IRI-POIs in the NFs listed in table 7.12.3.2-3 for session independent IMS-based voice services.

Table 7.12.3.2-4: ActivateTask message for activating IRI-POI for session independent IMS-based service

|  |  |  |
| --- | --- | --- |
| ETSI TS 103 221-1 [7] field name | Description | M/C/O |
| XID | XID assigned by LIPF. The value used here shall be the same when IRI-POIs in multiple NFs are provisioned for a warrant. | M |
| TargetIdentifiers | One or more of the target identifiers listed in the clause 7.12.2.2 with the embedded conditions implied. | M |
| DeliveryType | Set to " X2Only". | M |
| ListOfDIDs | Delivery endpoints of LI\_X2. These delivery endpoints shall be configured using the *CreateDestination* message as described in ETSI TS 103 221-1 [7] clause 6.3.1 prior to first use. | M |
| ListOfServiceTypes | Present if interception of one or more listed service types is required. Using the format defined in ETS TSI 103 221-1 [7] based on the service scoping listed below this table. When multiple intercepts are activated on a target identifier, the service scoping shall be the union of all of them. | C |

When service scoping is required, the IRI-POIs present in the NFs listed in table 7.12.3.2-3 shall support the following service types from the structure defined in ETSI TS 103 221-1 [7]:

- The enumerated value of "messaging" in the service type field.

The ModifyTask and DeactivateTask messages that the LIPF may send to the IRI-POIs present in the NFs listed in table 7.12.3.2-3 shall include the XID of the Task created by the above ActivateTask message.

#### 7.12.3.3 Provisioning of CC-TF

The table 7.12.3.3-1 below shows the applicability of NFs in which the CC-TFs are provisioned with the target identifiers listed in clause 7.12.2.2 for session-based IMS services (e.g. voice). See TS 33.127 [5] and TR 33.928 [121].

Table 7.12.3.3-1: CC-TFs in the NFs that need to be provisioned for session-based IMS service

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| NF  (IMS signalling function) | Not a target non-local ID | | Target non-local ID | |
| Default | Alternate option | Default | Alternate option |
| P-CSCF | YES | YES | YES | NO |
| IBCF | YES | YES | YES | YES |
| MGCF | YES | YES | YES | NO |
| AS/MRFC | YES | YES | YES | YES |
| Conferencing AS/MRFC | YES | YES | YES | YES |
| IMS-AS | YES | YES | YES | NO |
| DCSF | YES | YES | (see NOTE) | (see NOTE) |
| NOTE: Target non-local ID for DCSF interception of IMS Data Channel is not considered in this Release. | | | | |

Table 7.12.3.3-2 shows the minimum details of the LI\_X1 ActivateTask message used for provisioning the CC-TFs in the NFs listed in table 7.12.3.3-1 for session-based IMS services.

Table 7.12.3.3-2: ActivateTask message for activating CC-TF for session-based IMS services

|  |  |  |
| --- | --- | --- |
| ETSI TS 103 221-1 [7] field name | Description | M/C/O |
| XID | XID assigned by LIPF. The value used here shall be the same when IRI-POIs in multiple NFs are provisioned for a warrant. The value used here shall also be same as the value used for provisioning the IRI-POIs (see table 7.12.3.2-2), MDF2 (see table 7.12.3.4-1) and MDF3 (see table 7.12.3.5-1). | M |
| TargetIdentifiers | One or more of the target identifiers listed in the clause 7.12.2.2 with the embedded conditions implied. | M |
| DeliveryType | Set to “X3Only“. | M |
| ListOfDIDs | Delivery endpoints of LI\_X3. These delivery endpoints shall be configured using the *CreateDestination* message as described in ETSI TS 103 221-1 [7] clause 6.3.1 prior to first use. | M |
| ListOfServiceTypes | Present if interception of one or more listed service types is required. Using the format defined in ETSI TS 103 221-1 [7] based on the service scoping listed below this table. When multiple intercepts are activated on a target identifier, the service scoping shall be the union of all of them. | C |

When service scoping is required, the CC-TF present in the NFs listed in table 7.12.3.3-1 shall support the following service scoping from the structure defined in ETSI TS 103 221-1 [7]:

- The enumerated value of "voice" or "messaging" in the service type field.

The ModifyTask and DeactivateTask messages that the LIPF may send to the CC-TFs present in the NFs listed in table 7.12.3.3-1 shall include the XID of the Task created by the above ActivateTask message.

\*\*END OF EIGHTH CHANGE\*\*

\*\*START NINTH CHANGE\*\*

##### 7.12.4.1.X IRI-POI in DCSF

The DCSF provides the IRI-POI when the interception of IMS Data Channel services is required.

The IRI-POI present in the DCSF identifies the IMS Data Channel services to be intercepted according to clause 7.12.2.5.X.

The present document defines the following xIRIs for the IMS Data Channel LI:

* IMSDataChannelSetup.
* IMSDataChannelModification.
* IMSDataChannelTermination.

The above xIRIs generated for an IMS Data Channel shall be correlated.

\*\*END OF NINTH CHANGE\*\*

\*\*START TENTH CHANGE\*\*

##### 7.12.4.2.X IMS Data Channel Setup

The IRI-POI present in the DCSF that also has the CC-TF (which would have triggered the media interception at the CC-POI) shall generate the IMSDataChannelSetup xIRI when the IRI-POI in the DCSF detects that the IMS DC has been successfully setup.

Accordingly, the IRI-POI present in the DCSF shall generate the IMSDataChannelSetup xIRI when the following conditions are met:

- The target match conditions are satisfied as described in clause 7.12.2.8.2.2.

AND

- A SessionEventNotification with the EventType of "SESSION\_ESTABLISHMENT\_SUCCESS" of "MEDIA\_CHANGE\_SUCCESS" (when the IMS DC is setup during a SIP re-Invite) is received from the IMS-AS.

Table 7.12.4.2.X-1: Payload for IMSDataChannelSetup record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| targetIdentity | IMPU | 1 | Identity of the target | M |
| callingIdentity | IMPU | 0..1 | Identities of the originator of the session. | C |
| calledIdentity | IMPU | 1..MAX | Identity of the terminating party. | C |
| sessionEventNotification | SBIType | 0..1 | Contains the entire payload of the Session Event Notification sent from the DC-AS to the DCSF. Shall be encoded as per TS 29.175 [YYY] clause 6.1.6.2.2. The SBIReference for this parameter shall be populated with  'TS29175\_Nimsas\_SessionEventControl.yaml#/components/schemas/Nims\_SessionEventControlService' as specified in TS 29.175 [YYY] clause A.2. | C |
| mediaInstructionData | SBIType | 0..1 | Contains the entire payload of the Media Instruction sent from the DCSF to the DC-AS. The SBIReference for this parameter shall be populated with  'TS29175\_Nimsas\_MediaControl.yaml#/components/schemas/Nimsas\_MediaControlService' as specified in TS 29.175 [YYY] clause A.3. | C |

##### 7.12.4.2.Y IMS Data Channel Modification

The IRI-POI present in the DCSF shall generate the IMSDataChannelModifcation xIRI when the POI in the DCSF observes a media change event resulting in a modification to an existing target IMS Data Channel session.

Accordingly, the IRI-POI present in the DCSF shall generate the IMSDataChannelModification xIRI when the following conditions are met:

- The target match conditions are satisfied as described in clause 7.12.2.8.2.2.

AND

- The DCSF receives a NotificationEvent from the DC-AS for the target with the eventType set to "MEDIA\_ CHANGE\_SUCCESS".

Table 7.12.4.2.Y-1: Payload for IMSDataChannelModification record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| targetIdentity | IMPU | 1 | Identity of the target | M |
| callingIdentity | IMPU | 0..1 | Identity of the originating party of the session. | C |
| calledIdentity | IMPU | 1..MAX | Identity of the terminating party. | C |
| sessionEventNotification | SBIType | 0..1 | Contains the entire payload of the Session Event Notification sent from the DC-AS to the DCSF. Shall be encoded as per TS 29.175 [YYY] clause 6.1.6.2.2. The SBIReference for this parameter shall be populated with  'TS29175\_Nimsas\_SessionEventControl.yaml#/components/schemas/Nims\_SessionEventControlService' as specified in TS 29.175 [YYY] clause A.2. | C |
| mediaInstructionData | SBIType | 0..1 | Contains the entire payload of the Media Instruction sent from the DCSF to the DC-AS. The SBIReference for this parameter shall be populated with  'TS29175\_Nimsas\_MediaControl.yaml#/components/schemas/Nimsas\_MediaControlService' as specified in TS 29.175 [YYY] clause A.3. | C |

##### 7.12.4.2.Z IMS Data Channel Termination

The IRI-POI present in the DCSF shall generate the IMSDataChannelTermination xIRI when the IMS Data Channel previously setup for the target is terminated.

Accordingly, the IRI-POI present in the DCSF shall generate the IMSDataChannelTermination xIRI when the following conditions are met:

- The target match conditions are satisfied as described in clause 7.12.2.8.2.2.

AND

- The DCSF receives a session control event for the target with the NotificationEvent, eventType parameter set to "SESSION\_TERMINATION".

Table 7.12.4.2.Z-1: Payload for IMSDataChannelTermination record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field name | Type | Cardinality | Description | M/C/O |
| targetIdentity | IMPU | 1 | Identity of the target | M |
| callingIdentity | IMPU | 0..1 | Identities of the originator of the session. | C |
| calledIdentity | IMPU | 1..MAX | Identity of the terminating party. | C |
| sessionEventNotification | SBIType | 0..1 | Contains the entire payload of the Session Event Notification sent from the DC-AS to the DCSF. Shall be encoded as per TS 29.175 [YYY] clause 6.1.6.2.2. The SBIReference for this parameter shall be populated with  'TS29175\_Nimsas\_SessionEventControl.yaml#/components/schemas/Nims\_SessionEventControlService' as specified in TS 29.175 [YYY] clause A.2. | C |
| mediaInstructionData | SBIType | 0..1 | Contains the entire payload of the Media Instruction sent from the DCSF to the DC-AS. The SBIReference for this parameter shall be populated with  'TS29175\_Nimsas\_MediaControl.yaml#/components/schemas/Nimsas\_MediaControlService' as specified in TS 29.175 [YYY] clause A.3. | C |

\*\*END OF TENTH CHANGE\*\*

\*\*START OF ELEVENTH CHANGE\*\*

##### 7.12.5.1.X IMS Data Channel media interception

###### 7.12.5.1.X.1 General

##### The CC-POI functions for IMS Data Channel may be provided by the DC-AS or the MF.

When the MF is functioning as an UDP Proxy for A2P or P2A type of IMS Data Channel, the media is exchanged between the target UE and the DC-AS over a DTLS tunnel and will be encrypted at the MF. The media interception in this case is provided by the CC-POI present in the DC-AS.

NOTE 1: In the event DC-AS is provided by a third party provider, media is not available in the CSP domain in an unencrypted form.

When the MF is functioning as a HTTP Proxy for A2P, P2A, P2P, P2A2P type of IMS Data Channels, the media is in the encrypted form between the UE and the MF, and then between MF and either a DC-AS or other party’s UE. In this case, the media interception is provided by the CC-POI present in the MF.

NOTE 2: When the MF is functioning as an UDP Proxy for P2P type of IMS Data Channel, the media exchanged between the two UEs are via a DTLS tunnel and will be encrypted at the MF. In such case, the media is not available in the CSP domain in an unencrypted form. As a result, the delivery of intercepted media in an unencrypted form is not possible.

###### 7.12.5.1.X.2 CC-TF in DCSF

The DCSF provides the CC-TF functions when the following conditions are met:

* The CC-POI functions are provided at the DC-AS.
* Target match as described in clause 7.12.2.8.2.2 are met.

DC-AS provides the CC-POI functions when the MF is used as a UDP proxy for A2P and P2A IMS Data Channel.

###### 7.12.5.1.X.3 CC-TF in IMS-AS

The IMS-AS provides the CC-TF when the following conditions are met:

* The CC-POI functions are provided by the MF. Target match as described in clause 7.12.2.8.2.2 is met.

MF provides the CC-POI functions when the MF is functioning as a HTTP Proxy for A2P, P2A, P2P, P2A2P type of IMS Data Channel.

\*\*END OF ELEVENTH CHANGE\*\*

\*\*START OF TWELFTH CHANGE\*\*

##### 7.12.5.2.1 General

As described in clause 7.12.5.1, the CC-POI may reside in the IMS-AGW, TrGW, IM-MGW, MRFP, or the MF. The trigger to perform the media interception is provided by the CC-TF present in the P-CSCF, IBCF, MGCF, AS/MRFC, IMS-AS respectively.

NOTE 1: The present document assumes that the above NFs that have the CC-TF and the NFs that have the CC-POI interact with each other using the H.248 messages.

When the IRI-POI and the CC-TF are provided by two different NFs, the interception of media is performed at the core-network side of the NF that has the CC-POI. This is to align the media interception with the SDP information reported in the xIRI.

When the IRI-POI and the CC-TF are provided by the same NF, based on the deployment option, the interception of media can be done at the access side or core network side of an IMS-AGW, at the peer network side or the core network side of an TrGW. For the IM-MGW, the media interception is always done on the core network side since the peer network is in CS domain. For the MRFP and MF, all sides are core network and therefore, the media interception is always on the core network side.

In some IMS data channel scenarios, the CC-POI functions may also be provided by the DC-AS with DCSF providing the CC-TF functions.

The possibilities of such media interception points are illustrated in figure 7.12.5.2-1.



Figure 7.12.5.2-1: Media interception point options in the CC-POIs

NOTE 2: Even when the option of access side or peer network side is chosen, for certain session scenarios (e.g. hold), media interception may have to be moved to the core network side.

The time at which trigger is sent to the CC-POI has a relationship to the NF (that has the CC-TF) handling of SIP messages that carry the SDP offer and SDP answer as those SIP messages result in the NF (that has the CC-TF) creating/modifying the media contexts at the NF that handles the media.

The procedures used to activate (i.e. trigger) the media interception at the CC-POI present in IMS-AGW, TrGW and IM-MGW are the same. The procedures used to activate (i.e. trigger) the media interception at the MRFP can be different due to the nature of media functions provided by the MRFP can be different (e.g. conferencing, announcements).

\*\*END OF TWELFTH CHANGE\*\*

\*\*START OF THIRTEENTH CHANGE\*\*

#### 7.12.6.1 General

The CC-POI shall generate the xCC for the IMS media based on the LI\_T3 trigger received from the CC-TF. The CC-POI shall then deliver the xCC to the MDF3 (destination end point indicated in the LI\_T3 trigger).

As described in clause 7.12.5.1, the CC-POI may reside in the IMS-AGW, TrGW, IM-MGW, the MRFP or the LMISF.

For IMS Data Channel LI, the CC-POI may reside in the MF or DC-AS dependent upon the scenario.

\*\*END OF THIRTEENTH CHANGE\*\*

\*\*START OF FOURTEENTH CHANGE\*\*

#### 7.12.7.1 General

When an xIRI is received over LI\_X2 from the IRI-POI, the MDF2 shall send the IRI message over LI\_HI2 according to clause 5.5.2 of the present document without undue delay.

The IRI message shall contain a copy of the relevant record received from LI\_X2. The record may be enriched by other information available at the MDF2 (e.g. additional location information).

The ETSI TS 102 232-1 [9] *@LI-PS-PDU.pSHeader.timeStamp* field shall be set to the time present in the timestamp field of the xIRI.

The *@LI-PS-PDU.payload.iRIPayloadSequence.iRIContents.threeGPP33128DefinedIRI* field of the LI\_HI2 message shall be populated with the BER-encoded *IRIPayload* as described in ETSI TS 102 232-7 [10] clause 15.

IRI messages associated with the same IMS session shall have the same CIN (see ETSI TS 102 232-1 [9] clause 5.2.4).

The *@LI-PS-PDU.payload.iRIPayloadSequence.iRIType* (see ETSI TS 102 232-1 [9] clause 5.2.10) shall be included and coded according to table 7.12.7.1-1.

Table 7.12.7.1-1: IRI type for IRI messages

|  |  |
| --- | --- |
| Record type | IRI Type |
| IMSMessage | REPORT |
| StartOfInterceptionForActiveIMSSession | REPORT |
| IMSCCUnavailable | REPORT |
| IMSDataChannelSetup | REPORT |
| IMSDataChannelModification | REPORT |
| IMSDataChannelTermination | REPORT |

\*\*END OF FOURTEENTH CHANGE\*\*

\*\*END OF MAIN DOCUMENT CHANGES\*\*

\*\*START ATTACHMENT CHANGES\*\*

START OF CHANGE 1

---a/33128/r18/TS33128Payloads.asn  
+++b/33128/r18/TS33128Payloads.asn

@@ -278,7 +278,12 @@ XIRIEvent ::= CHOICE

278 278 uDMProSeTargetAuthentication [160] UDMProSeTargetAuthentication,

279 279

280 280 -- IP Packet Report, see clause 6.2.3.9.5

281 - iPIRIPacketReport [161] IPAccessPDU.IPIRIPacketReport

281 + iPIRIPacketReport [161] IPAccessPDU.IPIRIPacketReport,

282 +

283 + -- IMS events, see clause 7.12.4.2, continued from tag 107

284 + iMSDataChannelSetup [162] IMSDataChannelSetup,

285 + iMSDataChannelModification [163] IMSDataChannelModification,

286 + iMSDataChannelTermination [164] IMSDataChannelTermination

282 287 }

283 288

284 289 -- ==============

@@ -538,9 +543,14 @@ IRIEvent ::= CHOICE

538 543

539 544 -- UDM events, see clause 7.2.2.3, continued from tag 124

540 545 uDMProSeTargetIdentifierDeconcealment [159] UDMProSeTargetIdentifierDeconcealment,

541 - uDMProSeTargetAuthentication [160] UDMProSeTargetAuthentication

546 + uDMProSeTargetAuthentication [160] UDMProSeTargetAuthentication,

542 547

543 548 -- Tag 161 is reserved because there is no equivalent IP Packet Report in IRIEvent.

549 +

550 + -- IMS events, see clause 7.12.4.2, continued from tag 107

551 + iMSDataChannelSetup [162] IMSDataChannelSetup,

552 + iMSDataChannelModification [163] IMSDataChannelModification,

553 + iMSDataChannelTermination [164] IMSDataChannelTermination

544 554 }

545 555

546 556 IRITargetIdentifier ::= SEQUENCE

@@ -4272,6 +4282,36 @@ IMSCCUnavailable ::= SEQUENCE

4272 4282 sDPState [2] OCTET STRING OPTIONAL

4273 4283 }

4274 4284

4285 + -- See clause 7.12.4.2.X for details of this structure

4286 + IMSDataChannelSetup ::= SEQUENCE

4287 + {

4288 + targetIdentity [1] IMPU,

4289 + callingIdentity [2] IMPU OPTIONAL,

4290 + calledIdentity [3] SEQUENCE (SIZE (1..MAX)) OF IMPU OPTIONAL,

4291 + sessionEventNotification [4] SBIType OPTIONAL,

4292 + mediaInstructionData [5] SBIType OPTIONAL

4293 + }

4294 +

4295 + -- See clause 7.12.4.2.Y for details of this structure

4296 + IMSDataChannelModification ::= SEQUENCE

4297 + {

4298 + targetIdentity [1] IMPU,

4299 + callingIdentity [2] IMPU OPTIONAL,

4300 + calledIdentity [3] SEQUENCE (SIZE (1..MAX)) OF IMPU OPTIONAL,

4301 + sessionEventNotification [4] SBIType OPTIONAL,

4302 + mediaInstructions [5] SBIType OPTIONAL

4303 + }

4304 +

4305 + -- See Clause 7.12.4.2.Z for details of this structure

4306 + IMSDataChannelTermination ::= SEQUENCE

4307 + {

4308 + targetIdentity [1] IMPU,

4309 + callingIdentity [2] IMPU OPTIONAL,

4310 + calledIdentity [3] SEQUENCE (SIZE (1..MAX)) OF IMPU OPTIONAL,

4311 + sessionEventNotification [4] SBIType OPTIONAL,

4312 + mediaInstructionData [5] SBIType OPTIONAL

4313 + }

4314 +

4275 4315 -- =========

4276 4316 -- IMS CCPDU

4277 4317 -- =========

END OF CHANGE 1

\*\*END OF ATTACHMENT CHANGES\*\*

\*\*END OF ALL CHANGES\*\*