**3GPP TSG- Meeting #**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *For* [***HELP***](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:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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 canbe 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-12 (Release 12)Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | There is currently no Stage 2 text in TS 33.127 for Multi-Access PDU session intercept at the SMF. This contribution clarifies Stage 2 requirements for CCDelivery and xIRI generation when a UE establishes an MA-PDU session |
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| ***Summary of change:*** | Modify clause 3.3 to include MA PDU definition. Modify clause 6.2.3.6 to add multi-ingress DN points in a single access PDU session. Addition of clause 6.2.3.X to define the Stage 2 requirement for MA PDU xCC delivery and add clarifications to xIRI generation at the SMF for MA PDU. |
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| ***Consequences if not approved:*** | CSPs will not be able to meet their regulatory obligations. |
|  |  |
| ***Clauses affected:*** | 3.3, 6.2.3.6, 6.2.3X (new) |
|  |  |
|  | **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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

Start of Changes

Start of First 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].

5GC 5G Core Network

5GS 5G System

ADMF LI Administration Function

AMF Access and Mobility Management Function

AS Application Server

AUSF Authentication Server Function

BBIFF Bearer Binding Intercept and Forward Function

BSS Business Support System

CC Content of Communication

CP Control Plane

CSI Cell Supplemental Information

CSP Communication Service Provider

CUPS Control and User Plane Separation

DN Data Network

E-CSCF Emergency – Call Session Control Function

GPSI Generic Public Subscription Identifier

HMEE Hardware Mediated Execution Enclave

HR Home Routed

IBCF Interconnection Border Control Functions

IMS-AGW IMS Access Gateway

IM-MGW IM Media Gateway

IP Interception Product

IRI Intercept Related Information

LALS Lawful Access Location Services

LBO Local Break Out

LEA Law Enforcement Agency

LEMF Law Enforcement Monitoring Facility

LI Lawful Interception

LI CA Lawful Interception Certificate Authority

LICF Lawful Interception Control Function

LI\_HI1 Lawful Interception Handover Interface 1

LI\_HI2 Lawful Interception Handover Interface 2

LI\_HI3 Lawful Interception Handover Interface 3

LI\_HI4 Lawful Interception Handover Interface 4

LIID Lawful Interception Identifier

LIPF Lawful Interception Provisioning Function

LIR Location Immediate Request

LI\_SI Lawful Interception System Information Interface

LI\_T1 Lawful Interception Internal Triggering Interface 1

LI\_T2 Lawful Interception Internal Triggering Interface 2

LI\_T3 Lawful Interception Internal Triggering Interface 3

LI\_X0 Lawful Interception Internal Interface 0

LI\_X1 Lawful Interception Internal Interface 1

LI\_X2 Lawful Interception Internal Interface 2

LI\_X3 Lawful Interception Internal Interface 3

LI\_X3A Lawful Interception Internal Interface 3 Aggregator

LMF Location Management Function

LMISF LI Mirror IMS State Function

LMISF-CC LMISF for the handling of CC

LMISF-IRI LMISF for the handling of IRI

LTF Location Triggering Function

MANO Management and Orchestration

MA PDU Multi-Access PDU

MDF Mediation and Delivery Function

MDF2 Mediation and Delivery Function 2

MDF3 Mediation and Delivery Function 3

MRFP Multimedia Resource Function Processor

N9HR N9 Home Routed

N3IWF Non 3GPP Inter Working Function

NFV Network Function Virtualisation

NFVI Network Function Virtualisation Infrastructure

NFVO Network Function Virtualisation Orchestrator

NPLI Network Provided Location Information

NR New Radio

NRF Network Repository Function

NSSF Network Slice Selection Function

OSS Operations Support System

PAG POI Aggregator

PCF Policy Control Function

P-CSCF Proxy - Call Session Control Function

PEI Permanent Equipment Identifier

PGW PDN Gateway

PGW-U PDN Gateway User Plane

POI Point Of Interception

PLMN Public Land Mobile Network

PTC Push to Talk over Cellular

S8HR S8 Home Routed

SIRF System Information Retrieval Function

S-CSCF Serving - Call Session Control Function

SMF Session Management Function

SMSF SMS-Function

SUCI Subscriber Concealed Identifier

SUPI Subscriber Permanent Identifier

TF Triggering Function

TrGW Transit Gateway

UDM Unified Data Management

UDR Unified Data Repository

UDSF Unstructured Data Storage Function

UPF User Plane Function

VNF Virtual Network Function

VNFC Virtual Network Function Component

xCC LI\_X3 Communications Content

xIRI LI\_X2 Intercept Related Information

End of First Change

Start of Second Change

6.2.3.6 Network topologies

The SMF shall provide the IRI-POI functions in the following network topology cases:

* Non-roaming case.
* Roaming case, in VPLMN.
* Roaming case, in HPLMN.
* Non-3GPP access case, in the PLMN where N3IWF resides.

When the target UE has multiple PDU sessions active, the generation and delivery of xCC for each PDU session shall be done independently, each with separate correlation information.

When a target UE's PDU session involves multiple Data Network (DN) connections, the generation and delivery of xCC shall be done in such a way that:

* All applicable user plane packets are captured and delivered.
* Duplicate delivery of CC is suppressed to the extent possible.
* All UP data flows from multiple DN ingress points are correlated to a single access PDU session.

A PDU session may involve more than one UPFs. In that case, the CC-TF present in the SMF shall determine which UPF(s) is (are) more suitable to provide the CC-POI functions adhering to the above requirements. Furthermore, independent of which UPF is used to generate the xCC, the CC delivered from the MDF3 shall be correlated to the IRI messages related to the PDU session.

End of Second Change

Start of Third Change

#### 6.2.3.X Multi-Access PDU (MA PDU) Specific

The IRI-POI present in the SMF shall generate xIRI, for MA PDU sessions when it detects events or information as in clause 6.2.3.3., with the following clarifications:

* The PDU session establishment xIRI for an MA PDU session is generated when an UE request type of MA PDU session is received at the SMF (for one or more access types), or a when a single access type initial establishment is *Network-Upgrade-Allowed* and the SMF chooses to establish an MA PDU session.
* The PDU modification xIRI is used when an MA PDU Session is generated when a single access type is released or added to the MA PDU session. Additionally, an xIRI is generated if a mid-session upgrade to MA PDU session is requested by the UE.
* The PDU session release xIRI for an MA PDU session is generated when the entire PDU session is released from all access types.

When the target UE is accessing the 5GS via a Multi-Access PDU (MA PDU) Session, requirements in Clause 6.2.3.6 apply with the following clarifications. The generation and delivery of xCC shall be done in such a way that:

- Allows for the identification, reporting, and correlation of each UP data flow associated with a specific PDU session access type while suppressing duplicate delivery of CC to the extent possible.

- Allows for correlation of the single access PDU session to the MA PDU session, upon upgrade.

End of Third Change

End of All Changes