**3GPP SA3LI#84e-b *S3i220125***

**eMeeting, 02-04 March 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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:*** | Time of registration/session establishment in Start of Interception related xIRIs | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (Ericsson) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI16 | | | | |  | ***Date:*** | | | 2022-03-03 |
|  |  | | | |  | |  | | |  |
| ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | According to the TS, when an additional warrant is activated on a target UE and the LIPF uses the same XID for the additional warrant, the MDF2 shall be able to generate and deliver the IRI message containing the AMFStartOfInterceptionWithRegisteredUE record to the LEMF associated with the additional warrant without receiving a corresponding xIRI.  Similarly, when an additional warrant is activated on a target UE and the LIPF uses the same XID for the additional warrant, the MDF2 shall be able to generate and deliver the IRI message containing the SMFStartOfInterceptionWithEstablishedPDUSession record and the SMFStartOfInterceptionWithEstablishedMAPDUSession record to the LEMF associated with the additional warrant without receiving a corresponding xIRI.  However, the TS doesn’t specify in a clear way how the time of registration/session establishment of the IRI generated by the MDF shall be filled, especially considering that AMFRegistration, SMFPDUSessionEstablishment and SMFMAPDUSessionEstablishment xIRI do not include the timestamp information in the xIRI payload but only in the related header. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | It is clarified that when the AMFStartOfInterceptionWithRegisteredUE, SMFStartOfInterceptionWithEstablishedPDUSession and SMFStartOfInterceptionWithEstablishedMAPDUSession IRIs are generated by the MDF2, if the MDF2 didn’t receive the time of registration/session establishment value from a previous xIRI of the same type and for the same session, the MDF shall include as time of registration/session establishment the information received respectively in the header of AMFRegistration, SMFPDUSessionEstablishment or SMFMAPDUSessionEstablishment xIRI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Unclear specification, potential mistakes in how to provide time of registration/session establishment in Start of Interception related IRIs. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.2.2.3, 6.2.3.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | S3i220125 | | | | | | | | |

#### \*\*\* FIRST CHANGE \*\*\*

#### 6.2.2.3 Generation of IRI over LI\_HI2

When an xIRI is received over LI\_X2 from the IRI-POI in AMF, the MDF2 shall generate the corresponding IRI message and deliver over LI\_HI2 without undue delay. The IRI message shall contain a copy of the relevant record received in the xIRI over LI\_X2. This record may be enriched with any additional information available at the MDF (e.g. additional location information).

The timestamp field of the psHeader structure shall be set to the time at which the AMF event was observed (i.e. the timestamp field of the X2 PDU).

Table 6.2.2-7 shows the IRI type (see ETSI TS 102 232-1 [9] clause 5.2.10) to be used for each IRI message.

Table 6.2.2-7: IRI type for IRI messages

|  |  |
| --- | --- |
| IRI message | IRI type |
| AMFRegistration | REPORT |
| AMFDeregistration | REPORT |
| AMFLocationUpdate | REPORT |
| AMFStartOfInterceptionWithRegisteredUE | REPORT |
| AMFUnsuccessfulProcedure | REPORT |
| AMFIdentifierAssociation | REPORT |

These IRI messages shall omit the CIN (see ETSI TS 102 232-1 [9] clause 5.2.4).

The threeGPP33128DefinedIRI field in ETSI TS 102 232-7 [10] clause 15 shall be populated with the BER-encoded IRIPayload.

When an additional warrant is activated on a target UE and the LIPF uses the same XID for the additional warrant, the MDF2 shall be able to generate and deliver the IRI message containing the AMFStartOfInterceptionWithRegisteredUE record to the LEMF associated with the additional warrant without receiving a corresponding xIRI. The payload of the AMFStartOfInterceptionWithRegisteredUE record is specified in table 6.2.2-4.

If the MDF2 did not receive from the IRI-POI the value of timeOfRegistration parameter in a previous corresponding AMFStartOfInterceptionWithRegisteredUE for the same registration, the MDF2 shall include in that parameter the time provided in the timestamp previously received in the header of the related AMFRegistration xIRI.

#### \*\*\* NEXT CHANGE \*\*\*

#### 6.2.3.7 Generation of IRI over LI\_HI2

When an xIRI is received over LI\_X2 from the IRI-POI in the SMF or the IRI-POI in the UPF, the MDF2 shall send the IRI message over LI\_HI2 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 MDF (e.g. additional location information).

The timestamp field of the ETSI TS 102 232-1 [9] PSHeader structure shall be set to the time at which the SMF event was observed (i.e. the timestamp field of the xIRI).

Tables 6.2.3-14 shows the IRI type (see ETSI TS 102 232-1 [9] clause 5.2.10) to be used for each record type.

Table 6.2.3-14: IRI type for messages

|  |  |
| --- | --- |
| Record type | IRI Type |
| SMFPDUSessionEstablishment | BEGIN |
| SMFPDUSessionRelease | END |
| SMFPDUSessionModification | CONTINUE |
| SMFStartOfInterceptionWithEstablishedPDUSession | BEGIN |
| SMFUnsuccessfulProcedure | REPORT |
| SMFMAPDUSessionEstablishment | BEGIN |
| SMFMAPDUSessionRelease | END |
| SMFMAPDUSessionModification | CONTINUE |
| SMFStartOfInterceptionWithEstablishedMAPDUSession | BEGIN |
| SMFMAUnsuccessfulProcedure | REPORT |
| PDHeaderReport | REPORT |
| PDSummaryReport | REPORT |

IRI messages associated with the same PDU Session shall be assigned the same CIN (see ETSI TS 102 232-1 [9] clause 5.2.4).

The threeGPP33128DefinedIRI field (see ETSI TS 102 232-7 [10] clause 15) shall be populated with the BER-encoded IRIPayload.

When an additional warrant is activated on a target UE and the LIPF uses the same XID for the additional warrant, the MDF2 shall be able to generate and deliver the IRI message containing the SMFStartOfInterceptionWithEstablishedPDUSession record and the SMFStartOfInterceptionWithEstablishedMAPDUSession record to the LEMF associated with the additional warrant without receiving a corresponding xIRI. The payload of the SMFStartOfInterceptionWithEstablishedPDUSession record is specified in table 6.2.3-4, while the payload of the SMFStartOfInterceptionWithEstablishedMAPDUSession record is specified in table 6.2.3-9. The MDF2 shall generate and deliver the IRI message containing the SMFStartOfInterceptionWithEstablishedPDUSession record for each of the established PDU sessions to the LEMF associated with the new warrant. The MDF2 shall generate and deliver the IRI message containing the SMFStartOfInterceptionWithEstablishedMAPDUSession record for each of the established MA PDU sessions to the LEMF associated with the new warrant.

If the MDF2 did not receive from the IRI-POI the value of timeOfSessionEstablishment parameter in a previous corresponding SMFStartOfInterceptionWithEstablishedPDUSession or SMFStartOfInterceptionWithEstablishedMAPDUSession xIRI for the same session, the MDF2, when generating the SMFStartOfInterceptionWithEstablishedPDUSession or the SMFStartOfInterceptionWithEstablishedMAPDUSession IRI shall include in that parameter the time provided in the timestamp previously received in the header of the related SMFPDUSessionEstablishment or SMFMAPDUSessionEstablishment xIRI.

When the delivery of packet header information is required and approach 2 described in clause 6.2.3.9 is used, the MDF2 shall generate the IRI message and send it over LI\_HI2 without undue delay when xCC is received over LI\_MDF from the MDF3. The MDF2 shall generate packet data header information as described in clause 6.2.3.5.

#### \*\*\* END OF CHANGES \*\*\*