**3GPP SA3LI#88-e-a S3i230089**

**eMeeting; January 23-27, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **33.127** | **CR** | **204** | **rev** | **1** | **Current version:** | **17.7.0** |  |
|  | | | | | | | | |
| *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:*** | Corrections to fix incorrect use of SM-SC term | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3-LI (Nokia, Nokia Shanghai Bell, Ministère Economie et Finances) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LI17 | | | | |  | ***Date:*** | | | 2023-01-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | ***F*** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | Few diagrams have used the term SMS-SC instead of the correct term SM-SC. Few paragraphs also have the same error. | | | | | | | | |
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| ***Summary of change:*** | | Diagrams that have SMS-SC are corrected to show SM-SC. Paragraphs that have SMS-SC are corrected to show SM-SC. | | | | | | | | |
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| ***Consequences if not approved:*** | | Specification will have undefined functional name. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.9.3.1, 7.9.3.4, 7.9.4.1, 7.11.3.1, 7.11.3.4, 7.11.4.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | S3i230032 | | | | | | | | |

### \*\* First Change \*\*

#### 7.9.3.1 Background

Device triggering is the means by which an AF sends information to the UE via the NEF to trigger the UE to perform application specific actions that include initiating communication with the AF (see TS 23.502 [4] clause 4.13.2 and TS 29.522 [31] clause 4.4.3).

The device trigger request is authorized by NEF by submitting the GPSI of the UE to the UDM. After successful authorization, NEF forwards the Device trigger request with the SUPI of the UE to the corresponding SM-SC to be delivered to that UE. The 5GS architecture for Device triggering is presented in figure 7.9-2.

The device trigger may be recalled or replaced by the AF if the UE is not reachable at the time the AF has delivered the device trigger to the UE.

Figure 7.9-2: 5GS architecture for device triggering

### \*\* Next Change \*\*

#### 7.9.3.4 IRI events

The IRI-POI present in the NEF shall generate xIRI, when it detects the following specific events or information related to the device triggering service:

- Device trigger.

- Device trigger replacement.

- Device trigger cancellation.

- Device trigger report notification.

The device trigger xIRI is generated when the IRI-POI present in the NEF detects that a device trigger has been received from an AF and is delivered to the SM-SC for the target UE.

The device trigger replacement xIRI is generated when the IRI-POI present in the NEF detects that a device trigger replacement has been received from an AF and delivered to the SM-SC to replace previously submitted device trigger message which is not yet delivered to the target UE.

The device trigger cancellation xIRI is generated when the IRI-POI in the NEF detects that a device trigger cancellation has been received from an AF and delivered to the SM-SC to recall previously submitted device trigger which is not yet delivered to the target UE.

The device trigger report notification xIRI is generated when the IRI-POI present in the NEF detects that a device trigger report is returned to the AF with a cause value indicating the trigger delivery outcome (e.g. succeeded, unknown or failed and the reason for the failure).

### \*\* Next Change \*\*

#### 7.9.4.1 Background

An MSISDN-less MO SMS is sent by a UE without MSISDN as originator and received by a third party application as destination (i.e. AF) via SM-SC and NEF as presented in figure 7.9-3. MSISDN-less means that the GPSI of the UE is not an MSISDN but an External Identifier which form is username@realm. MSISDN-less MO-SMS service allows MSISDN-less UE to send small data to an AF using SMS-MO. The SMS-MO received by the SM-SC through MO submission procedure as defined in TS 23.040 [50], is directly forwarded to the NEF for further transfer to the recipient AF (see TS 23.502 [4] clause 4.13.7 and TS 29.522 [31] clause 4.4.10).

The NEF queries the UDM with the SUPI of the UE, obtains the corresponding GPSI of the UE sending the SMS, and forwards it to the AF including the GPSI (i.e. external identifier) of the originating UE.

Figure 7.9-3: 5GS architecture for MSISDN-less MO SMS

### \*\* Next Change \*\*

#### 7.11.3.1 Background

Device triggering is the means by which an SCS/AS sends information to the UE via the SCEF to trigger the UE to perform application specific actions that include initiating communication with the SCS/AS (see TS 23.682 [33] clause 5.2 and TS 29.122 [32] clause 4.4.6).

The device trigger request is authorized by SCEF by submitting the MSISDN or External Identifier of the UE to the HSS. After successful authorization, SCEF forwards the Device trigger request with the IMSI of the UE to the corresponding SM-SC to be delivered to that UE. The EPS architecture for NIDD is presented in figure 7.11-2.

The device trigger may be recalled or replaced by the SCS/AS if the UE is not reachable at the time the SCS/AS has delivered the device trigger to the UE.

Figure 7.11-2: EPS architecture for device triggering

### \*\* Next Change \*\*

#### 7.11.3.4 IRI events

The IRI-POI present in the SCEF shall generate xIRI, when it detects the following specific events or information related to the device triggering service:

- Device trigger.

- Device trigger replacement.

- Device trigger cancellation.

- Device trigger report notification.

The device trigger xIRI is generated when the IRI-POI present in the SCEF detects that a device trigger has been received from an SCS/AS and is delivered to the SM-SC for the target UE.

The device trigger replacement xIRI is generated when the IRI-POI present in the SCEF detects that a device trigger replacement has been received from an SCS/AS and delivered to the SM-SC to replace previously submitted device trigger message which is not yet delivered to the target UE.

The device trigger cancellation xIRI is generated when the IRI-POI in the SCEF detects that a device trigger cancellation has been received from an SCS/AS and delivered to the SM-SC to recall previously submitted device trigger which is not yet delivered to the target UE.

The device trigger report notification xIRI is generated when the IRI-POI present in the SCEF detects that a device trigger report is returned to the SCS/AS with a cause value indicating the trigger delivery outcome (e.g. succeeded, unknown or failed and the reason for the failure).

### \*\* Next Change \*\*

#### 7.11.4.1 Background

An MSISDN-less MO SMS is sent by a UE without MSISDN as originator and received by a third party application as destination (i.e. SCS/AS) via SM-SC and SCEF. MSISDN-less means that the UE has a subscription without MSISDN but an External Identifier which form is username@realm. MSISDN-less MO-SMS service allows MSISDN-less UE to send small data to an SCS/AS using SMS-MO. The SMS-MO received by the SM-SC through MO submission procedure as defined in TS 23.040 [50], is directly forwarded to the SCEF for further transfer to the recipient SCS/AS (see TS 23.682 [33] clause 5.15).

The SCEF queries the HSS with the IMSI of the UE, obtains the corresponding External Identifier of the UE sending the SMS, and forwards the SMS to the SCS/AS including the External Identifier of the originating UE.

Figure 7.11-3: EPS architecture for MSISDN-less MO SMS

### \*\* End of all Changes \*\*