3GPP TSG SA WG5 Meeting 137-e TDoc S5-213278

electronic meeting, online, 10 - 19 May 2021

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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:*** | Correction on Reference Points for 5GS | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2021-04-30 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | The set of Reference points defined in TS 23.501 clause 4.2.7 includes reference Points to CHF, namely N40 (SMF), N41 and N42 (AMF), therefore it could be interpreted SMSF does not support charging. | | | | | | | | |
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| ***Summary of change:*** | | Introduce reference point representation for SMS Converged charging architecture | | | | | | | | |
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| ***Consequences if not approved:*** | | It could be interpreted SMS charging is not supported in 5G due to partial view of charging architecture. | | | | | | | | |
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| ***Clauses affected:*** | | 3.2, 4.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | | **X** |  | O&M Specifications | | | | TS 32.240 CR#0426 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **First change** |

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

Bsm Reference point for the CDR file transfer from SMS CGF to the BD

Ga Reference point for CDR transfer between a CDF and the CGF.

Nchf Service based interface exhibited by CHF.

N46 Reference point between SMS Node and the CHF.

Rf Offline charging reference point between a 3G network element and the CDF.

Ro Online charging reference point between a 3G network element and the OCS.T4 Reference point used between MTC-IWF and the SMS-SC in the HPLMN.

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| **Next change** |

## 4.4 SMS converged charging architecture

The architectural options for SMS converged charging are depicted in figure 4.4.1 in service-based representation for CHF:



Figure 4.4.1: SMS converged charging architecture

Architectural options of figure 4.4.1 apply to any SMS converged charging architecture of this clause.

The SMS Node for which this architecture applies is the SMSF.

The general architecture components can be found in TS 32.240 [2].

Ga is described in clause 5.2.4 and Bsm in clause 5.2.5 of this document, and Nchf is described in TS 32.290 [19].

Figure 4.4.2 depicts the SMS converged charging architecture for non-roaming in reference point representation:



**Figure 4.4.2: SMS converged charging architecture non-roaming reference point representation**

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| **End of changes** |