**3GPP TSG-SA5 Meeting #137e S5-213249rev1**

**electronic meeting, online, 10 - 19 May 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  | **32.240** | **CR** | **0424** | **rev** | **1** | **Current version:** | **16.2.0** |  |
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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:***  | Clarify the charging data configuration |
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| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | SA5 |
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| ***Work item code:*** | TEI16 |  | ***Date:*** | 2021-04-25 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | The IE and CDR parameter description tables in the middle tier TSs specify the Mandatory (M), Conditional (C) and Operator provisionable (OC or OM) designations. If the paraments are not required by the operator considering the private and security reason, the parameters will not be reported. |
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| ***Summary of change:*** | Add the description for the case of the parameters are not required. |
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| ***Consequences if not approved:*** | The parameter description is unclear. |
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| ***Clauses affected:*** | 5.4 |
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|  | **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 ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

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| **First change** |

## 5.4 Charging data configuration

Charging interface applications are specified for Rf and Ro in TS 32.299 [50], for Nchf in TS 32.291[58], for Ga in TS 32.295 [54] and for Bx in TS 32.297 [52] and TS 32.298 [51]. The middle tier TSs determine per domain / service /subsystem which of the reference points exist as open interfaces and which of them are internal to integrated NEs (see charging architecture mapping discussion in clause 4.5). In accordance with these prerequisites, the content of charging events, i.e.Information Element (IE), and CDRs, i.e. CDR parameter, is also specified in the middle tier TSs on all the open network interfaces that exist in the respective domain / subsystem / service. The rules governing the presence of IEs or CDR parameters on these interfaces are summarized in this clause. A logical diagram illustrating the possible presence requirements for IEs / CDR parameters ("field categories") is shown in figure 5.4.1.



Figure 5.4.1: Logical diagram illustrating the different parameter categories

The IE and CDR parameter description tables in the middle tier TSs specify the Mandatory (M), Conditional (C) and Operator provisionable (OC or OM) designations. The category of an IE or CDR parameter can have one of two primary values:

**M** This parameter is **M**andatory and shall always be present in the event / CDR.

**C** This parameter shall be present in the event / CDR only when certain Conditions are met. These Conditions are specified as part of the parameter definition.

All other parameters are designated as Operator provisionable **(O)**. Using network management functions or specific tools provided by an equipment vendor, operators may choose if they wish to include or omit the parameter from the charging event / CDR. Once omitted, this parameter is not generated in an event / a CDR. To avoid any potential ambiguity, the CTF / CDF / CGF shall be able to provide all these parameters. Only an operator can choose whether or not these parameters should be generated in their system, i.e. included in the charging event / CDR.

Those parameters that the operator configures to be present are further divided into mandatory and conditional categories:

**OM** This is a parameter that, if provisioned by the operator to be present, shall always be included in the events / CDRs. In other words, an OM parameter that is provisioned to be present is a mandatory parameter.

**OC** This is a parameter that, if provisioned by the operator to be present, shall be included in the events / CDRs when the specified conditions are met. If provisioned by the operator not to be present, shall not be included in the events / CDRs even the specified conditions are met. In other words, an OC parameter that is configured to be present is a conditional parameter.

The IE and CDR parameter tables provide a brief description of each charging event / CDR in the corresponding middle tier TSs. The full definitions of the CDR parameters, sorted by the CDR parameter name in alphabetical order, are provided in TS 32.298 [51].

The following principles apply for Information Element (IE) and CDR parameter category across the specifications:

- Category for IEs common between the middle tier TSs (stage 2) and TS 32.290 [57]: IE category in the middle tier TSs takes precedence;

- IE category in the middle tier TSs takes precedence over the corresponding IE stage 3 category and syntax in TS 32.291[58] and TS 32.299[50].

- CDR parameter category in the middle tier TSs takes precedence over the corresponding ASN.1 field syntax in TS 32.298 [51].

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| **End of change** |