**3GPP TSG-SA5 Meeting #140-e *S5-216152***

**e-meeting, 15 - 24 November 2021** Revision of S5-20xxxx

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **32.290** | **CR** | **0173** | **rev** | **1** | **Current version:** | **16.9.0** |  |
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| *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:***  | Clarification on the SMF immediate Report |
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| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** | TEI17 |  | ***Date:*** | 2021-11-22 |
|  |  |  |  |  |
| ***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 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:*** | When the NF Consumer was waiting for the quota grant with rating group response from the CHF, a new trigger with immediate report categorie is triggered for the quota request with the same rating group. In that case, it will be cause the failure handling in CHF. |
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| ***Summary of change:*** | Add the clarification on the service operation of NF Consumer. |
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| ***Consequences if not approved:*** | The conflict resolution of immediate reporting is incomplete. |
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| ***Clauses affected:*** | 5.4.5 |
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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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| **First change** |

### 5.4.5 Trigger Mechanism

There are a number of mid-session service events, defined as triggers, which could affect the rating of the current service usage, e.g. QoS changes or end user location updates. The details for this these triggers are defined in the service specific document (middle tier TS). The relationship between service session and charging session is 1:1.

There are two levels of triggers: service session and rating group. The service session level triggers are applicable for all rating groups within a charging session, whereas a rating group level trigger is only applicable to that rating group. Any limit or threshold set on the service session level is the total limit for the service session including all the rating groups. The behaviour at trigger detection is specified by the middle tier TS.

Triggers enabled or disabled by default by the NF consumer, may be enabled or disabled by CHF in response to the NF consumer.

The CHF may enable one or more triggers at the NF consumer, by including them in the Triggers element. Each Triggers element can only contain one trigger of each type. The omitted triggers in the Triggers element shall be interpreted by the NF consumer as disabled. The enabled and disabled triggers setting at the NF consumer shall remain in effect until another Triggers element is received from the CHF for the service session or rating group. When the NF consumer receives a Triggers element it shall enable all triggers present in the Triggers element and disable all other triggers at the same level. The presence of the Triggers element without any trigger type in a response message allows CHF to disable all the triggers at the NF Consumer for service session or rating group.

NOTE: This removes the need for the CHF to send trigger information in every response message when they have not changed.

Two categories of chargeable events are identified:

- immediate report: chargeable events for which, when occurring, the current counts are closed and sent together with the charging data generated by the NF consumer towards the CHF in a Charging Data Request message. Counts indicating zero usage may be reported. New counts are started by the NF consumer.

- deferred report: chargeable events for which, when occurring, the current counts are closed and stored together with the charging data generated by the NF consumer. Counts indicating zero usage may be included. The stored counts will be sent to the CHF in next a Charging Data Request message. New counts are started by the NF consumer.

CHF may change the category of one or more triggers by using the Triggers element containing category information in the response message.

For the rating group: the rating group level triggers and category take precedence over the service session level triggers and category.

If there is a request for quota management outstanding for a rating group i.e., the request has not been responded to, any new request for quota management for the same rating group should be postponed until after the response has been received.

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| **End of change** |