**3GPP TSG-SA5 Meeting #146Bis-e *S5-231116***

Electronic meeting, 16 - 19 January 2023

**Source: Ericsson**

**Title: Adding use case requested units and quota management indication**

**Document for: Approval**

**Agenda Item: 7.5.2**

# 1 Decision/action requested

**Include the proposed changes in TR 28.826.**

# 2 References

[1] 3GPP TR 28.826: " Study on Nchf charging services phase 2 improvements and optimizations"

# 3 Rationale

The description of how requested units and quota management indication is to be used is unclear especially at suspended quota management.

# 4 Detailed proposal

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| **First change** |

### 5.3.1 General

A rating group is not defined in the context of SBI, it is however defined in TS 32.299 [8] as the same as the rating group of RFC 4006 [13] obsoleted by RFC 8506 [14] and linked to the charging key defined in TS 23.203 [10], the corresponding spec for SBI is TS 23.503 [3]. In TS 23.503 [3] the charging key is defined as "information used by the CHF for rating purposes".

The rating group gathers a set of services that is subject to the same cost and rates. One rating group can contain several rates if all rates are applicable to all services belonging to the rating group and if quota is granted it can be consumed by all services, belonging to the rating group, equally. How a service is identified is dependent on the network function.

This means that the cost and rates can be determined by the rating group but not the consumption rate of the quota i.e., how fast quota is used by the services belonging to the same rating group, and in the extension how much quota that should be reserved for a specific request.

The specification TS 32.290 [12] describe the flows with the requested units included. While the quota management indication (QMI) and its handling and relationship to other information like requested service units, used service units, and rating groups is sometimes described in the domain, subsystem, and service level specifications.

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| **First change** |

#### 5.3.2.x Use Case #3x: Switching between online and offline

A user has four services on going (A, B, C, and D), the CTF determines that these three services belong to three different RGs (service A belongs to RG 1, service B belongs to RG 2, and services C and D belongs to RG 3), service A is always offline, B is always online, C can only switch from online to offline, and D can switch from online to offline and back. The user later terminates C and then D, and after a while starts E which can switch from online to offline and back and also belong to RG 3.

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### 5.3.3 Potential charging requirements

**REQ-3GPPCH-ER-01** The 5G system should support the enhancement of input to CHF rating based on the QoS information.

**REQ-3GPPCH-ER-02** The 5G system should support the enhancement of input to CHF rating based on the Service ID information.

**REQ-3GPPCH\_ER-0x:** The 5G system should support reporting type of quota management used for used unit.

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| **First change** |

### 5.3.4 Key issues

**Key Issue #3a:** Identification and classification of information which can be used as the input to CHF rating.

**Key Issue #3b:** Identify the Network Functions which can provide the input to support the CHF rating.

**Key Issue #3c:** Determine the interaction to support the enhancement of input to CHF rating.

**Key Issue #3x:** How to report QMI when switching back and forth between online and offline, and interpretation of missing used and requested units.

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| **End of changes** |