**3GPP TSG-SA5 Meeting #134-e *S5-206199***

**Online, , 16th Nov 2020 - 25th Nov 2020**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.275** | **CR** | **0077** | **rev** | **1** | **Current version:** | **16.1.0** |  |
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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:*** | Adding converged charging for supplementary service | | | | | | | | | |
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| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GSIMSCH | | | | |  | ***Date:*** | | | 2020-11-06 |
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| ***Category:*** | **B** |  | | | | | ***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:*** | | Indicating how the converged charging is supported for which supplementary services. | | | | | | | | |
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| ***Summary of change:*** | | Removing the reference to if it is applicable for online, offline or both since this is already included in the table 5.0.1. | | | | | | | | |
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| ***Consequences if not approved:*** | | MMTel AS cannot support converged charging. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.1.1, 5.1.1.2, 5.1.1.3, 5.1.1.4, 5.1.1.6, 5.1.1.8, 5.1.1.10, 5.1.1.11, 5.1.1.12, 5.1.1.13, 5.1.1.14, 5.1.1.15, 5.1.1.16, 5.1.1.17, 5.1.1.18, 5.1.1.19, 5.1.1.21 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Revision of S5-206199 | | | | | | | | |

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| **First change** |

#### 5.1.1.1 OIP charging

The Originating Identification Presentation (OIP) service provides the terminating user with the possibility of receiving trusted (i.e. network‑provided) identity information in order to identify the originating user.

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| **Second change** |

#### 5.1.1.2 OIR charging

The Originating Identification Restriction (OIR) service is a service offered to the originating user. It restricts presentation of the originating user's identity information to the terminating user.

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| **Third change** |

#### 5.1.1.3 TIP charging

The Terminating Identification Presentation (TIP) service provides the originating party with the possibility of receiving trusted information in order to identify the terminating party.

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| **Fourth change** |

#### 5.1.1.4 TIR charging

The Terminating Identification Restriction (TIR) is a service offered to the terminating party which enables the terminating party to prevent presentation of the terminating identity information to originating party.

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| **Fifth change** |

#### 5.1.1.6 CB charging

The Communication Barring (CB)service offers the following services:

- The Incoming Communications Barring (ICB) is a service that rejects incoming communications that fulfil certain provisioned or configured conditions on behalf of the terminating user.

- The Anonymous Communication Rejection (ACR) is a particular case of the ICB service, that allows barring of incoming communications from an anonymous originator on behalf of the terminating user.

- The Outgoing Communication Barring (OCB)is a service that rejects outgoing communications that fulfil certain provisioned or configured conditions on behalf of the originating user.

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| **Sixth change** |

#### 5.1.1.8 CW charging

The Communication Waiting (CW) service enables the application server to indicate to the subscriber, that there is at least one new communication is requested, and that no resources are available for that incoming communication. The user has then the choice of accepting, rejecting or ignoring the incoming communication. The maximum number of communications that may be waiting is a service provider option. If the current number of communications waiting is equal to the maximum, then any new attempted incoming communication request shall be rejected with a busy cause.

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| **Seventh change** |

#### 5.1.1.10 MWI charging

The Message Waiting Indication (MWI) service enables the application server to indicate to the subscriber, that there is at least one message waiting. The indication is delivered to the subscriber's UE after successful subscription to the MWI service as described in the present document.

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| **Eighth change** |

#### 5.1.1.11 CONF charging

The Conference (CONF) service enables a user to participate in and control a simultaneous communication involving a number of users.

CONF Charging for the conference owner could be based on:

- establishment of the conference;

- number of participants;

- duration.

CONF Charging for the conference participants could be based on:

- duration.

The charging of the conference owners and participants is measured by the SIP AS and MRFC handling conference service. For each participant (call leg) a separate charging dialog at the SIP AS is needed.

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| **Ninth change** |

#### 5.1.1.12 CCBS charging

The Completion of Communication to Busy Subscriber (CCBS) service enables user A, encountering a busy destination B, to have the communication completed without the user having to manually initiate a new communication attempt when the destination B becomes not busy.

When user A requests the CCBS supplementary service, the network monitors for destination B becoming free again.

When destination B becomes free again, the network waits a short time in order to allow the resources to be re-used for originating a communication. If the resources are not re-used by destination B within this time, the network automatically recalls user A.

When user A accepts the CCBS recall, the network automatically generates a CCBS call to destination B.

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| **Tenth change** |

#### 5.1.1.13 CCNR charging

The Completion of Communications on No Reply (CCNR) service enables user A, encountering a destination B which does not answer the communication (No Reply), to have the communication completed without the user having to manually initiate a new communication attempt when the destination becomes not busy after having initiated and completed a new communication.

When user A encounters a destination B which does not answer the communication (No Reply), user A can request the CCNR supplementary service.

When user A requests the CCNR supplementary service, the network monitors for destination B becoming not busy after having initiated and completed a new communication.

When destination B becomes not busy after having initiated and completed a new communication, the network waits a short time (as defined by the destination B idle guard timer) in order to allow the resources to be reused for originating a communication. If the resources are not reused by destination B within this time, the network automatically recalls user A.

When user A accepts the CCNR recall, then the network automatically generates a CCNR call to destination B.

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| **Eleventh change** |

#### 5.1.1.14 FA charging

Flexible Alerting (FA) causes a call to a "Pilot Identity" to branch the call into several legs to alert several termination addresses (FA group members) simultaneously. Additional calls may be delivered to the FA Pilot Identity at any time. The first leg to be answered is connected to the calling party. The other call legs are abandoned.

The FA group, identified by the "Pilot Identity" consists of a list of FA group members alerted through their the public addressable identity.

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| **Twelfth change** |

#### 5.1.1.15 MCID charging

The Malicious Communication Identification (MCID) service enables an incoming communication to be identified as malicious and registered.

The Network shall register the communication related information (such as Terminating Identity Information, Originator Identity Information, Local Time and Date…), which shall be kept under Network Operator's control (i.e. not available to the terminating entity nor the originating entity).

This service has two modes: permanent mode and temporary mode. The permanent mode is active for all incoming communications, and the temporary mode is active only for the incoming communications declared by the served user.

The MCID service can be invoked during the active phase of the communication, or after the active phase for a limited period (but never after communication termination) by the served user, or, automatically invoked during the alerting phase.

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| **Thirteenth change** |

#### 5.1.1.16 CAT charging

The Customized Alerting Tone Service (CAT) service is an operator specific service by which an operator enables the subscriber to customize the alerting tone which is played to the calling party.

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| **Fourteenth change** |

#### 5.1.1.17 CUG charging

The Closed User Group (CUG) service enables users to form groups of members, whose communication profile is restricted for incoming and outgoing communications. Members of a specific CUG can communicate among themselves but not, in general, with users outside the group.

Specific CUG members can have additional capabilities that allow them to initiate outgoing communications to users outside the group, and/or to accept incoming communications from users outside the group. Specific CUG members can have additional restrictions that prevent outgoing communications to other members of the CUG or prevent incoming communications from other members of the CUG.

A specific user may be a member of one or more CUGs.

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| **Fifteenth change** |

#### 5.1.1.18 PNM charging

The Personal Network Management (PNM) service allows a user to manage his UEs in regard to terminating services according to preferences set by the user, capabilities and availabilities of devices. Charging for the "PN UE redirection" functionality of the defined PNM service, is considered in the scope of MMTel supplementary service charging and applies to the active UE the terminating services are delivered to.

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| **Sixteenth change** |

#### 5.1.1.19 CRS charging

The Customized Ringing Signal (CRS) service is an operator specific service by which an operator enables the subscriber to customize the ringing signal which is played to the called party.

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| **Seventeenth change** |

#### 5.1.1.21 AoC charging

The Advice of Charge (AoC) service allows the served user to be provided with MMTel service charging information related to:

- AoC at communication set-up time (AoC-S);

- AoC during the communication (AoC-D);

- AoC at the end of the communication (AoC-E).

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| **End of changes** |