3GPP TSG SA WG5 Meeting 137-e TDoc S5-213339

electronic meeting, online, 10 - 19 May 2021

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **32.274** | **CR** | **0081** | **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:*** | Correcting SMS Result coding | | | | | | | | | |
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| ***Source to WG:*** | Ericsson LM | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2021-05-17 |
|  |  | | | |  | |  | | |  |
| ***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 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 value of SMS result is undefined | | | | | | | | |
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| ***Summary of change:*** | | Adding that it’s applicable for converged charging as well. | | | | | | | | |
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| ***Consequences if not approved:*** | | The interpretation will be undefined which may lead to incorrect charging. | | | | | | | | |
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| ***Clauses affected:*** | | 6.3.1.2 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 32.298 CR 0869 | | |
| ***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 S5-213339. | | | | | | | | |

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| **First change** |

#### 6.3.1.2 Definition of the SMS Information

The components in the SMS Information that are used for SMS charging can be found in table 6.3.1.2.1

Table 6.3.1.2.1: SMS Information used for SMS Charging

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| Information Element | Category | Description |
| SMS Node | OM | Identifies the SMS Node as IP-SM-GW or SMS Router or a combined IP-SM-GW / SMS Router or as SMS-SC. |
| SM Client Address | OM | This field holds the address of the SMS node to which the charging system is connected to. This may be the same as the SMSC Address field. |
| Originator SCCP Address | OC | This field holds the SCCP calling address used to receive the SM at the SMS node. Only present if SMSIP is not used for the inward connection. |
| Originator Received Address | OC | This field holds the original, unmodified address of the originator of the SM, as received by the SMS node, in case address manipulation (such as number plan corrections) have been applied in the SMS node. This is typically an E.164 number or a short-code. Multiple addresses may be carried if additional information is available, e.g. IMSI and E.164 number. |
| Recipient Info | OC | This field holds recipient information for the SM. Each occurrence of this field denotes a different recipient.  Multiple occurrences of this field are allowed in case:  - multiple recipients are associated with the charged event and  - all other charging information is identical for all recipients.  In case the SM contains a Delivery Report, as described in clause 5.3.2.3, this field identifies the recipient of this Delivery Report. This recipient information shall correspond to the originator information of the message that triggered this Delivery Report. (Note 2) |
| Recipient Address | OC | This field holds the address of the recipient of the SM. This is typically an E.164 number or a short-code. Multiple addresses may be carried if additional information is available, e.g. short-code, IMSI, E.164 number, long/short code of the SCS/AS, or external identifier for Device Trigger. |
| Recipient Received Address | OC | This field holds the original, unmodified address of the recipient of the SM, as received by the SMS node, in case address manipulation (such as number plan corrections) have been applied in the SMS node. This is typically an E.164 number or a short-code. Multiple addresses may be carried if additional information is available, e.g. short-code, IMSI, or E.164 number. |
| Recipient SCCP Address | OC | This field holds the SCCP called address used by the SMS node to onward deliver the SM. Only present if SMSIP is not used for the outward connection. |
| SM Destination Interface | OM | This is a structured field containing information describing the interface on which the SM is to be delivered (i.e. the next hop).  In case the charging event is for person to application messaging or for application to application messaging (see clause 5.1.1) this field holds the identification of the application. (See also Note 3) |
| SM Protocol Id | OC | This field holds the TP-PROTOCOL-ID (TP-PID) as defined in TS 23.040 [7]. This field relates to the recipient when charging MT SMS messages as specified in TS 32.240 [2]. |
| SMSC Address | OM | This field holds the address of the SMSC to which the originating or terminating SM is directed to. |
| SM Data Coding Scheme | OM | This field holds the data coding scheme used within the SM. The information to populate this field is obtained from TP-DCS header. |
| SM Message Type | OM | This field identifies the message that triggered the generation of charging information. |
| SM Originator Interface | OM | This is a structured field containing information describing the interface on which the SM was received by the SMS node (i.e. the previous hop)  In case the charging event is for application to person messaging or for application to application messaging (see clause 5.1.1) this field holds the identification of the application. (See also Note 3) |
| SM Protocol Id | OC | This field holds the TP-PROTOCOL-ID (TP-PID) as defined in TS 23.040 [7]. This field relates to the originator when charging MO SMS messages as specified in TS 32.240 [2]. |
| SM Reply Path Requested | OC | This field carries an indication of whether a reply SM to an original SM shall follow the same path as identified by the TP-Reply-Path (TP-RP) flag. |
| SM User Data Header | OC | This field carries the user data header extracted from the user data of the SM. The user data header (TP-UDH) is specified in TS 23.040 [7] |
| SM Status | OC | This field holds the information from the TP-Status field in a Status-Report TPDU. This information is only applicable to delivery report charging procedures or where ECUR is employed. |
| SM Discharge Time | OC | This field holds the time associated with the event being reported in the SM Status field. This information is only applicable to delivery report charging procedures. |
| Number of Messages Sent | OC | Indicates the number of SMSs sent by the IMS application or the total number of short messages when this SM is part of concatenated short message, if applicable. |
| SM Service Type | OC | This field indicates the type of SM service that caused the charging interaction. It is only applicable for SM supplementary service procedures. |
| SM Sequence Number | OC | This field holds the sequence number of this SM within the concatenated short message when applicable. This field is present only in case of concatenated short message.  This field is valid for converged and offline charging. |
| SMS result | C | The field holds the result of the attempted SM transaction, if unsuccessful.  This field is valid for converged and offline charging. |
| SM Device Trigger Indicator | OC | This field holds indication on the device trigger submission to SMS-SC: request, replace or recall. |
| SM Device Trigger information | OC | This field holds the set of information related to SMS transaction for Device Trigger. |
| MTC IWF Address | OC | This field holds the MTC IWF address which originated the device trigger. |
| SM DT Reference Number | OC | This field holds the Reference Number related to the device trigger request, if available. |
| SM Serving Node | OC | This field holds the serving node identity, i.e. SGSN/MME/MSC identity serving the UE, as received from MTC-IWF, if available. |
| SM DT Validity Period | OC | This field holds the validity period of the device trigger request, if available. |
| SM DT Priority Indication | OC | This field holds the priority of the device trigger request, if available. |
| SMS Application Port ID | OC | This field holds the Application Port ID of the triggering application for the device trigger request, if available. |
| MTC IWF Address | OC | This field holds the MTC IWF address used by the SMS-SC for the Mobile Originating message transfer to the SCS/AS. |
| SMS Application Port ID | OC | This field holds the Application Port ID of the Mobile Originating message handled by the SMS-SC. |
| External Identifier | OM | This field holds the External Identifier associated to the sender of the Mobile Originated short message, if available. |

NOTE 1: The case of multi-destinations of SMS refers to SMS and Internet Electronic Mail interworking as specified in clause 3.8 of TS 23.040 [7].

NOTE 2: Implementations vary as to the originator address that is presented to an end user for a Delivery Report. Typically the originator address either identifies the SMS node that generated the Delivery Report or the originator address of a Delivery Report identifies the recipient of the original message that triggered this Report. It is expected that the charging event contains the information presented to the end user.

NOTE 3: There is a distinction between short numbers (as conveyed in originator and/or recipient address fields) and the identification of SM applications (as carried in SM Originator Interface and/or SM Destination Interface). Short numbers are used by end users to address a service of an applications. Multiple short numbers may map to one application capable of multiple services. The identification of an application is how an application is know to the operator.

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| **End of changes** |