**3GPP TSG-CT WG4 Meeting #98eC4-20xxxx**

**E-Meeting, 02nd – 12th June 2020 *Revision of C4-203186***

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **29.338** | **CR** | **0035** | **rev** | **1** | **Current version:** | **15.1.0** |  |
|  |
| *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:***  | Support of SMS in 5G |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | 5GS\_Ph1-CT |  | ***Date:*** | 2020-06-05 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-15 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | Diameter interfaces for S6c between HSS and SMS-GMSC/SMS Router, for SGd interface between MME and SMS-IWMSC/SMS-GMSC/SMS Router are also applicable to UDM and SMSF in 5G, refer to definition in 4.4.2.1 Architecture to support SMS over NAS of 3GPP TS 23.501.The specification shall be extended to support the SMS over NAS in 5G. |
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| ***Summary of change:*** | Support of S6c and SGd interface in SMS in 5GS. |
|  |  |
| ***Consequences if not approved:*** | Misalignment with stage2.SMS in 5GS can not be supported. |
|  |  |
| ***Clauses affected:*** | 1, 2, 4.1 |
|  |  |
|  | **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:*** |  |

\* \* \* First Change \* \* \* \*

# 1 Scope

The present document defines the Diameter-based interfaces specific to SMS when they are used in conjunction with the "SMS in MME" architecture specified in 3GPP TS 23.272 [2] or for SGSN supporting EPS interfaces, or the" SMS in 5GS" architecture specified in 3GPP TS 23.501 [x]. It comprises:

- the Diameter application for the S6c interface between the HSS/UDM and the central SMS functions (SMS-GMSC, SMS Router) ;

- the Diameter application

- for the SGd interface between the MME/SMSF, the SMS-IWMSC, the SMS-GMSC and the SMS Router.

- for the Gdd interface between the SGSN, the SMS-IWMSC, the SMS-GMSC and the SMS Router.

For the purpose of supporting SMS in 5GS, the UDM may implement the requirements specified in the present specification for HSS, with the following modification:

* "HSS" is to be replaced with "UDM".

\* \* \* Next Change \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.272: "Circuit Switched (CS) fallback in Evolved Packet System (EPS); Stage 2".

[3] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".

[4] 3GPP TS 29.272: "Evolved Packet System (EPS); Mobility Management Entity (MME) and Serving GPRS Support Node (SGSN) related interfaces based on Diameter protocol".

[5] 3GPP TS 29.229: "Cx and Dx interfaces based on the Diameter protocol; Protocol details".

[6] IETF RFC 2234: "Augmented BNF for Syntax Specifications: ABNF".

[7] Void.

[8] IETF RFC 5516: "Diameter Command Code Registration for the Third Generation Partnership Project (3GPP) Evolved Packet System (EPS)".

[9] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[10] 3GPP TS 29.173: "Location Services (LCS); Diameter-based SLh interface for Control Plane LCS".

[11] 3GPP TS 33.210: "3G security; Network Domain Security (NDS); IP network layer security ".

[12] IETF RFC 4960: "Stream Control Transport Protocol".

[13] ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[14] 3GPP TS 29.329: "Sh Interface based on the Diameter protocol; Protocol details".

[15] 3GPP TS 29.336: "Home Subscriber Server (HSS) diameter interfaces for interworking with packet data networks and applications".

[16] 3GPP TS 23.003: "Numbering, addressing and identification".

[17] 3GPP TS 23.204: "Support of Short Message Service (SMS) over generic 3GPP Internet Protocol (IP) access; Stage 2".

[18] 3GPP TS 23.682: "Architecture enhancements to facilitate communications with packet data networks and applications".

[19] IETF RFC 7944: "Diameter Routing Message Priority".

[20] IETF RFC 6733: "Diameter Base Protocol".

[x] 3GPP TS 23.501:"System Architecture for the 5G System".

\* \* \* Next Change \* \* \* \*

## 4.1 Introduction

The SMS in MME architecture is described in 3GPP TS 23.272 [2] and the SMS in 5GS architecture is described in 3GPP TS 23.501 [x], have specified the reference points S6c and SGd.

The clause 4 addresses Diameter aspects which are common to S6c, SGd and Gdd.

\* \* \* End of Changes \* \* \* \*