**3GPP TSG-CT WG1 Meeting #131-eC1-214165 rev1**

**E-meeting, 19-27 August 2021**

(revision of CP-yyxxxx)

**Source: China Mobile**

**Title: New WID on CT aspects for enabling MSGin5G Service**

**Document for: Approval**

**Agenda Item: 17.1.1**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

# Title: CT aspects for enabling MSGin5G Service

## Acronym: 5GMCRCH

## Unique identifier: *{A number to be provided by MCC at the plenary}*

Potential target Release: Rel-17

## 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Affects:** | UICC apps | ME | AN | CN | Others (specify) |
| **Yes** |  | X | X | X |  |
| **No** |  |  |  |  |  |
| **Don't know** | X |  |  |  |  |

## 2 Classification of the Work Item and linked work items

### 2.1 Primary classification

This work item is a Building Block.

|  |  |
| --- | --- |
|  | Feature |
| X | Building Block |
|  | *Work Task* |
|  | Study Item |

### 2.2 Parent Work Item

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| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| 5GMARCH | SA6 | 890026 | Application Architecture for MSGin5G Service |
|  |  |  |  |

### 2.3 Other related Work Items and dependencies

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| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
| 810014 | Message Service Within the 5G System requirements | Stage 1 requirements of MSGin5G Service |
| 890010 | Study on security aspects of the 5GMSG Service (St1 in Rel16!) | Security aspects of *MSGin5G service* (SA3) |
| 920049 | Enhanced Service Enabler Architecture Layer for Verticals | Stage 2 SEAL enhancements for 5GMARCH are done directly in eSEAL WID |

## 3 Justification

SA1 has introduced the requirements for the MSGin5G Service in TS 22.262.

The 5GMARCH WID in SA6, specifies the application layer architecture, procedures and information flows necessary for enabling deployment of MSGin5G Service over 3GPP networks. The normative 5GMARCH work is captured in release 17 3GPP TS 23.554 and has impacts to the stage-3. The protocol aspects and related APIs of MSGin5G Service need to be specified in CT WGs.

It is proposed to start a two-phased work item for enabling MSGin5G Service in CT WGs:

1. the first phase would be a stage 3 study of the protocol selection (e.g. IMS or non-IMS) to fulfil the KPIs of MSGin5G Service specified in 3GPP TS 22.262 and to fulfil the characteristics of MIoT devices.

2. Once protocol(s) is(are) selected – the solution based on stage 2 work will be directly documented in stage 3 normative phase. The work of stage 3 normative phase including:

- define protocol aspects of the architecture for enabling MSGin5G Service and related APIs based on normative stage 2 specification developed by 3GPP SA6 WG.

- define protocol aspects of the security solutions related to architecture for enabling MSGin5G Service to be developed by 3GPP SA3 WG.

## 4 Objective

1. Study phase

The objective of the study phase is to study the key issues of protocol selection to satisfy the KPIs of MSGin5G Service (e.g. end-to-end latency, max latency of Application-to-Point messaging), and fulfil the characteristics of MIoT devices (e.g. high density connection, flexible mobility, saving power, limited computing capability) and provide solutions for the key issues. Input from other WGs (e.g. security study from SA3) and any further inputs and clarification from SA1 will be considered.

2. Normative phase

Once protocol(s) is(are) selected, define the protocol aspects and related APIs for enabling MSGin5G Service based upon the normative Stage 2 technical specifications developed by SA6 and SA3 WGs.

For CT1, based on normative stage-2 work developed in 3GPP TS 23.554, the expected work includes:

- Stage 3 for MSGin5G-1, MSGin5G-5 and MSGin5G-6 reference point;

For CT3, based on normative stage-2 work developed in 3GPP TS 23.554, the expected work includes:

- CAPIF enhancement for enabling MSGin5G Service;

- APIs for MSGin5G-2, MSGin5G-3 and MSGin5G-4reference points.

## 5 Expected Output and Time scale

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| **New specifications** *{One line per specification. Create/delete lines as needed}* |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |
| *TS* | *24.xxx* | *Enabling MSGin5G Service; Protocol specification* | TSG CT#94 (Dec 2021) | TSG CT#95 (March 2022) | CT1 responsibleRapporteur:Liu, Yue, China Mobile, liuyueyjy@chinamobile.com |
| *TS* | *29.xxx* | *Enabling MSGin5G Service; Application Programming Interface (API) specification; Stage 3* | TSG CT#94 (Dec 2021) | TSG CT#95 (March 2022) | CT3 responsibleRapporteur:Huang, Zhenning, China Mobile, huangzhenning@chinamobile.com |
|  |  |  |  |  |  |

*{Note 1: Only TSs may contain normative provisions. Study Items shall create or impact only TRs.
"Internal TR" is intended for 3GPP internal use only whereas "External TR" may be transposed by OPs.}*

*{Note 2: The first listed Rapporteur is the specification primary Rapporteur. Secondary Rapporteur(s) are possible for particular aspect(s) of the TS/TR. In this case, their responsibility has to be provided as "Remarks".}*

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| --- |
| **Impacted existing TS/TR** *{One line per specification. Create/delete lines as needed}* |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| *{E.g. "22.281"}* | *{Possible values:* *- either free text (e.g. “CS aspects to be removed") - or “Specification to be withdrawn”}* | *{E.g. "TSG#89"}* | *{Free text}* |

## 6 Work item Rapporteur(s)

Liu, Yue, China Mobile, liuyueyjy@chinamobile.com

## 7 Work item leadership

CT1

## 8 Aspects that involve other WGs

The parent feature has linkage to ongoing studies in SA3 and SA5. When normative work progress for these studies, this WID must be evaluated for possible aspects.

## 9 Supporting Individual Members

*{At least 4 supporting Individual Members are needed. There is an expectation that these companies will provide resources to progress the work. Note that having 4 supporting companies is a necessary but not sufficient condition: the usual TSG approval process by consensus is needed for the WID approval.}*

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| Supporting IM name |
| China Mobile |
| CATT |
| China Unicom |
| Convida Wireless LLC |
| Huawei |
| Samsung |
| ZTE |