**3GPP TSG-CT WG1 Meeting #136-eC1-223861**

**E-Meeting, 12th – 20th May 2022**

**Source: China Mobile**

**Title: update of the general description**

**Spec: 3GPP TS 24.538 v1.1.0**

**Agenda item: 17.2.30**

**Document for: Agreement**

**1. Introduction**

This pCR is proposed to update of the general description.

**2. Reason for Change**

This pCR is proposed to update of the general description.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.538 v1.1.0.

**\*\*\*\*\*\*\***

**Formatting instructions (remove this section after drafting a pCR)**

This sentence uses 'Normal' style from '3gpp\_70.dot' template, which shall be used for most of the text.

- This sentence uses 'B1' style from '3gpp\_70.dot' template, which shall be used for most of the bullet points.

NOTE: This sentence uses 'NO' style from '3gpp\_70.dot' template, which shall be used for all informative notes.

Editor's note: This sentence uses 'Editor's Note' style from '3gpp\_70.dot' template, which shall be used for all editor's notes.

Table x: This is a caption for a table, which uses 'TH' style from '3gpp\_70.dot' template.

Figure x: This is a caption for a figure, which uses 'TF' style from '3gpp\_70.dot' template.

The text within a Table and a Figure cells shall use either 'TAH', 'TAL' or 'TAC' styles from '3gpp\_70.dot' template.

Styles in 3GPP Specifications

|  |  |
| --- | --- |
| Use this style | For this type of element |
| **Heading 1** | Clause (→ if numbered) |
| **Heading n** | Subclause level nIn exceptional cases, for level 6 or beyond, use **Heading 5** if required in contents list or **H6** if not to appear. → |
| **Heading 8** | Annex title for TS |
| **Heading 9** | Annex title for TR |
| **Normal** | Standard paragraph, Definition |
| **EX** | Reference, Example → |
| **EW** | Symbol, Abbreviation, Example continuation in text → |
| **Bn** | List element level n → |
| **FP** | Free paragraph (left justified) |
| **NO** | Note integrated in the text → |
| **NW** | Note continuation in text → |
| **NF** | Note in figure → |
| **TAN** | Note in table → |
| **TH** | Table title, Figures |
| **TAH** | Heading within table |
| **TAC** | Centred text within table |
| **TAL** | Left justified text within table |
| **TAR** | Right justified text within table |
| **TF** | Figure title |
| **TT** | Contents list title |
| **PL** | Programming language |
| **EQ** | Equation |
| **Header** | Header (portrait and landscape pages) |
| → use "tab" between "item/number" and "text".EXAMPLE: The "tab" is preceding this example text. |

**Please do not create new styles!**

**\*\*\*\*\*\*\***

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

# 4 General description

The MSGin5G Service (message service for MIoT over 5G System) is basically designed and optimized for massive IoT device communication including thing-to-thing communication and person-to-thing communication. The MSGin5G Service provides messaging communication capability in 5GS including the following message communication models:

a) Point-to-Point message;

b) Application-to-Point message/ Point-to-Application message;

c) Group message;

d) Broadcast message.

The MSGin5G Service support the message exchanging between the following UE types:

a) MSGin5G UE:

1) light weight constrained devices (e.g. sensors, actuators) and

2) unconstrained devices with advanced capabilities (e.g. washing machine, micro-ovens).

b) Legacy 3GPP UE.

c) Non-3GPP UE.

The MSGin5G Client contained in the MSGin5G UE communicates with the MSGin5G Server over the MSGin5G-1 interface (see 3GPP TS 23.554 [2]). CoAP specified in IETF RFC 7252 [5] is used as the basic transport protocol of MSGin5G service in this reference point and shall be supported by the MSGin5G Client and MSGin5G Server. For supporting sending/receiving MSGin5G message for the MSGin5G Client contained in constrained device, the transport protocols of MSGin5G-6 interface is also CoAP specified in IETF RFC 7252 [5].

An MSGin5G UE-1 may be constrained devices which do not have enough capability to communicate with MSGin5G Server. If allowed by configuration, an unconstrained device MSGin5G UE-2 may act as an MSGin5G Gateway UE or an MSGin5G Relay UE to MSGin5G UE-1. In this scenario, the MSGin5G UE-1 communicates with the MSGin5G UE-2 over the MSGin5G-5 and/or MSGin5G-6 interfaces (see 3GPP TS 23.554 [2]).

Additionally, the MSGin5G Client(s) may interacts with SEAL Clients over the SEAL-C reference point specified for each SEAL service as specified in 3GPP TS 23.434 [3]. The MSGin5G Server(s) may interacts with SEAL Servers over the SEAL-S reference point specified for each SEAL service as specified in 3GPP TS 23.434 [3]. The interaction between a SEAL Client and the corresponding SEAL Server is supported by SEAL-UU reference point specified for each SEAL service as specified in 3GPP TS 23.434 [3].

By means of using the MSGin5G-1 interface, the following aspects can be provided:

a) MSGin5G UE registration and de-registration towards the MSGin5G Server;

b) MSGin5G message delivery and MSGin5G message delivery status report;

c) Messaging Topic Subscription; and

By means of using the MSGin5G-5 and/or MSGin5G-6 interfaces, the following aspects can be provided:

a) Constrained device registration and de-registration towards the MSGin5G Server by using gateway MSGin5G UE.

b) The exchanging of MSGin5G message and MSGin5G message delivery status report between constrained device and MSGin5G Server by using gateway MSGin5G UE.

The necessary 5GC Network Capabilities, e.g. device triggering, may be used in MSGin5G Service as specified in 3GPP TS 23.554 [2]. The device trigger is delivered to the MSGin5G Client via SCEF/NEF and the Core Network as specified in 3GPP TS 23.502 [x] and is out of scope of this document.

\* \* \* 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 23.554: "Application architecture for MSGin5G Service; Stage 2;".

[3] 3GPP TS 23.434: "Service Enabler Architecture Layer for Verticals".

[4] IETF RFC 7641: "Observing Resources in the Constrained Application Protocol (CoAP)".

[5] IETF RFC 7252: "The Constrained Application Protocol (CoAP)".

[6] 3GPP TS 24.546: "Configuration management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[7] 3GPP TS 29.538: "Enabling MSGin5G Service; Application Programming Interfaces (API) specification; Stage 3".

[8] JSON Schema: " JSON Schema Draft-07", <http://json-schema.org/specification.html>

[9] 3GPP TS 23.304: "Proximity based Services (ProSe) in the 5G System (5GS)".

[10] 3GPP TS 24.544: "Group Management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[11] 3GPP TS 24.545: "Location Management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[12] 3GPP TS 24.546: "Configuration Management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[13] 3GPP TS 24.547: "Identity Management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[14] 3GPP TS 24.548: "Network Resource Management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[x] 3GPP TS 23.502: " Procedures for the 5G System; Stage 2"

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