**3GPP TSG-SA WG4 Meeting #111-eS4-201472**

**Electronic meeting, 11-20 November 2020**

**Source: TSG SA WG4 Chairman**

**Title: Terms of Reference (ToR) for 3GPP TSG SA WG4 (Codecs)**

**Agenda item: 6**

**Document for: Approval**

# Introduction

Current SA WG4 ToR are available at <https://www.3gpp.org/specifications-groups/sa-plenary/sa4-codec/home>. These were last updated at SA4#86 in October 2015.

3GPP SA#86 tasked SA WGs to update their ToR with a new template (<https://www.3gpp.org/ftp/TSG_SA/TSG_SA/TSGS_86/Docs/SP-191327.zip>). This document proposes such update according to existing SA4 ToR.

Furthermore, this document also proposes modifications to SA4 ToR to reflect its current scope of work. This is provided for consideration by the group.

# Existing SA4 ToRs according to the new template

Note: The text in blue is to be deleted prior to submission to TSG SA.

# Codecs

*Acronym and short name that can be used to identify the WG*

*This will be used in the figure/schema describing the 3GPP structure*

*Example (just for illustration):*

*Acronym: CT WG4*

*Name: Core Network Protocols*

Name: 3GPP TSG SA WG4

Acronym: SA4

Label: Codecs

# Overview

*This part will be published on the 3GPP website to describe the WG*

*This part should provide a brief overview of the current and main activities of the WG*

*This overview should be in a simple and accessible language that makes it easy to understand for everyone*

*Avoid the use of terms like stage 1, stage 2, stage 3 and use instead e.g. service requirements, functional requirements/functional architecture, protocol specification, etc.*

*Avoid as much as possible the use of (too much) acronyms, except when there are well known (e.g. 5G, IP, HTTP, etc.).*

*Example (just for illustration):*

*Inside 3GPP, the main objectives of TSG Core network and Terminal WG4 (CT WG4) are the specification, the enhancement and the maintenance of the protocols within the Core Network for:*

*- Mobility management*

*- Session management*

*- Subscription data management*

*- Location services.*

*CT WG4 is currently responsible of the design and the specifications of the HTTP-based APIs used to access services offered by the network functions to other network functions within the service-based architecture defined for the 5G core network.*

SA WG4 Codec deals with the specifications for speech, audio, video, and multimedia codecs, in both circuit-switched and packet-switched environments. Other topics within the mandate of SA WG4 are: quality evaluation, end-to-end performance, and interoperability aspects with existing mobile and fixed networks (from codec point of view).

# Scope of Responsibilities

*This part is mainly for 3GPP internal purpose*

*This part will not be published on the 3GPP website*

*Instead the following text will be found on the 3GPP website:*

*"The latest terms of reference were approved at TSG#xx in document CP/RP/SP-xxxxxx."*

*including a hypertext link to download the full document approved by the parent TSG.*

*This part should describe the full scope of responsibilities of the WG, in an unambiguous manner.*

*The description of WG responsibilities should be as much as independent of the release, radio access technology, core network type, etc.*

*Example (just for illustration):*

*The TSG CT WG4 is responsible for:*

*- the definition of design principles and guidelines for service-based APIs*

*- …*

*- the definition of requirements related to numbering, addressing and identification*

*- …*

*- the specification of protocols related to mobility management within the Core Network*

*- …*

*- the maintenance of…*

*- …*

*- Etc.*

The responsibilities of WG4 (Codec) are:

1. Development and maintenance of specifications for speech, audio, video, and other media codecs, for media transport and handling including media related session descriptions, and for presentation layer as required to enable services specified for 3GPP terminals and systems.

Note: Other 3GPP Working Groups also have responsibilities for transport.

1. Guidance to other 3GPP groups concerning required QoS parameters and other system implications, including channel coding requirements, imposed by different multimedia codecs in both circuit-switched and packet-switched environments.
2. Speech, audio, video, and multimedia quality evaluation (including new evaluation methods, testing, verification, characterisation, selection criteria).
3. End-to-end performance, including terminal characteristics, of speech, audio, video, and multimedia services.
4. Interoperability aspects with existing mobile and fixed networks from codec and media transport point of view.

These responsibilities are specific to 3GPP multimedia services involving speech, audio, video or other media.

In conducting its work, the Codec WG will strive to specify best possible technical solutions at the same time considering the planned global use of the codecs with flexibility needs imposed by different regional requirements and preferences, including differences in quality/capacity trade-offs.

# Annex (informative):

*Any additional relevant information, including:*

*- coordination with other 3GPP WGs*

*- coordination with other SDO/MRP (e.g. ITU (-T, -R), IETF, GSMA, TC SCP, etc.)*

In conducting its work, the SA WG4 will regularly communicate with other 3GPP WGs, and also with other SDOs and industry groups that work on codecs and multimedia aspects like e.g. ISO/IEC JTC 1/SC 29 (MPEG), DASH-IF and ITU-T Study Groups 12 and 16.

# Proposed updated SA4 ToRs according to the new template

Note: The text in blue is to be deleted prior to submission to TSG SA.

# Multimedia Codecs, Systems, and Services

*Acronym and short name that can be used to identify the WG*

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*Acronym: CT WG4*

*Name: Core Network Protocols*

Name: 3GPP TSG SA WG4

Acronym: SA4

Label: Multimedia Codecs, Systems, and Services

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*Example (just for illustration):*

*Inside 3GPP, the main objectives of TSG Core network and Terminal WG4 (CT WG4) are the specification, the enhancement and the maintenance of the protocols within the Core Network for:*

*- Mobility management*

*- Session management*

*- Subscription data management*

*- Location services.*

*CT WG4 is currently responsible of the design and the specifications of the HTTP-based APIs used to access services offered by the network functions to other network functions within the service-based architecture defined for the 5G core network.*

SA WG4 Multimedia Codecs, Systems, and Services deals with the specifications of codecs for speech, audio, video, graphics and other emerging media types for extended realities (XR) and gaming, as well as the system and delivery aspects of such content. This includes definition of content delivery protocols, formats for unicast, multicast and broadcast streaming, cloud and edge compute architectures, media APIs, multimedia telephony media handling, terminal acoustics requirements and performance testing, end-to-end service performance, objective and subjective quality testing, Quality of Experience metrics, definition of traffic characteristics for media services, and reporting for all services involving media aspects.

# Scope of Responsibilities

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*- the definition of requirements related to numbering, addressing and identification*

*- …*

*- the specification of protocols related to mobility management within the Core Network*

*- …*

*- the maintenance of…*

*- …*

*- Etc.*

The responsibilities of WG4 (Multimedia Codecs, Systems, and Services) are:

1. Development and maintenance of specifications of codecs speech, audio, video, graphics and other newly emerging media types, as well as the transport and handling of such media including related session descriptions and content delivery;
2. Definition of streaming unicast and multicast/broadcast media services, interfaces and media APIs, media profiles, content delivery protocols, quality of experience metrics and reporting and media-centric cloud and edge compute architectures;
3. Guidance to other 3GPP groups concerning required QoS parameters, traffic characteristics and other system implications, imposed by different multimedia codecs, systems and service needs;
4. Speech, audio, video, and multimedia quality evaluation (including new evaluation methods, testing, verification, characterisation, selection criteria);
5. Supporting third-party media services and applications to benefit from 3GPP defined system and radio functionalities by providing suitable network and client interfaces/APIs;
6. End-to-end performance, including terminal characteristics, of speech, audio, video, and multimedia services;
7. Interoperability aspects with existing mobile and fixed networks from codec and media transport point of view.

These responsibilities are specific to 3GPP multimedia services involving speech, audio, video, graphics or other media including but not limited to multimedia telephony, mission critical services, multimedia unicast and multicast / broadcast streaming, content delivery, cloud and edge compute architectures, online gaming, as well as emerging services for extended realities (XR) and artificial intelligence (AI).

In conducting its work, the Multimedia Codecs, Systems, and Services WG will strive to specify best possible technical solutions at the same time considering the planned global use of the codecs and other technologies with flexibility needs imposed by different regional requirements and preferences, including differences in quality/capacity trade-offs.

# Annex (informative):

*Any additional relevant information, including:*

*- coordination with other 3GPP WGs*

*- coordination with other SDO/MRP (e.g. ITU (-T, -R), IETF, GSMA, TC SCP, etc.)*

In conducting its work, the SA WG4 will regularly communicate with other 3GPP WGs, and also with other SDOs and industry groups that work on codecs and multimedia aspects like e.g. ISO/IEC JTC 1/SC 29, DASH-IF, IETF and ITU-T Study Groups 12 and 16.

# Proposal

The group is kindly requested to review the proposed updates to SA4 ToR. Approved updates will then be submitted to TSG SA.