**TSG-SA WG4 Meeting #126 S4-232015**

**Chicago, 13 – 17 November 2023 revision of S4-231824**

**Agenda item: 9.9**

**Source: Apple (Rapporteur)**

**Title: [FS\_HEVC\_Profiles] Draft Work Plan**

**Version: 0.0.5**

**Document for Discussion and agreement**

# 1 Introduction

During SA#100 the new “Feasibility Study on new HEVC profiles and operating points” was approved in SP-230540. This document provides an updated work plan to conduct the study.

# 2 Objective

The objectives of the study are copied from the SID here as reference:

This study aims to:

1. Identify and gather the opportunities for improving HEVC-based services. This will include documentation of motivating use cases and scenarios. Use cases and scenarios include (listed in priority):
2. Potentially improving compression performance to tackle the resurgence of stereoscopic 3D video content, in the context of recent successful 3D movie releases.
3. Potentially improving network performance related to exploding adaptive streaming traffic.
4. Addressing the demands for very high-quality image/video prosumer applications and gaming/screen content sharing.
5. Gather HEVC based solutions to address each opportunity. This will also include relevant existing HEVC profiles that are not included in 3GPP specifications today. In particular, the following solutions, in order of priority, have been identified and will be studied:
	1. HEVC Multiview profiles,
	2. HEVC Scalable profiles, and
	3. HEVC 4:4:4 (up to 10 bits) capable profiles.

Other solutions may also be included, if identified, at a later stage.

Each solution will also identify relevant interoperability and system level aspects to potentially support such new profiles.

1. Define a methodology to investigate and document the pros and cons of the proposed solutions for each key issue including performance results, complexity and implementation aspects, etc. Two of the possibilities are:
	1. Reusing existing suitable performance results for this purpose.
	2. If there is need to do a tool characterization work on the lines of TR 26.955, this will be done using the Scenario Template provided in Annex A of TR 26.955.
2. Conclude on the relevancy of each solution for the key issues and propose a way forward, also identifying if any new normative work would be justified.

This study will be done in collaboration with other organizations as needed, e.g. MPEG, CTA WAVE, 5G-MAG, DASH-IF etc.

# 3 Schedule for Video SWG Telcos

Following video SWG telcos are immenent:

* Nov??th, 2023, 15:00 – 17:00 CEST, submission deadline: Nov?th 1630 CEST.
* Dec?th, 2023, 15:00 – 17:00 CEST, submission deadline: Dec?th 1630 CEST.
* Jan?th, 2024, 15:00 – 17:00 CEST, submission deadline: Jan?th 1630 CEST.

# 4 Proposed Time and Work Plan

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| Meeting | Work Item on “Feasibility Study on new HEVC profiles and operating points” |
| SA4#124 (22 - 26 May, Berlin, Germany) | * Agree work item in S4-231104.
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| SA#100 (Jun 12 - 16 2023, Taipeh, Taiwan) | * Approve work item in SP-230540.
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| 3GPP SA4 Video SWG Telco (June 20th, 2023, 15:00 – 17:00 CEST) | * Workplan.
* Skeleton new TR.
* Submission deadline: June 19th 1630 CEST
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| 3GPP SA4 Video SWG Telco (June 27th, 2023, 15:00 – 17:00 CEST) | * Revised workplan, skeleton new TR.
* Initial (p)CR for the scenario#1: background, previous related work, motivation to be addressed etc.
* Submission deadline: June 26th 1630 CEST
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| 3GPP SA4 Video SWG Telco (July 25th, 2023, 15:00 – 17:00 CEST) | * (p)CRs for
	+ the scenarios: background, previous related work, motivation to be addressed etc.
	+ introduction to the solutions.
	+ evaluation criteria for the solutions.
	+ gather available evaluations.
* Submission deadline: July 24th 1630 CEST.
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| 3GPP SA4 Video SWG Telco (August 1st, 2023, 15:00 – 17:00 CEST) | * Progress (p)CRs for the solutions.
* Gather evaluation criteria and methodology (item 3 in the objectives of the study) for the scenarios.
* Gather available evaluations.
* Submission deadline: July 31st 1630 CEST.
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| SA4#125 (21 - 25 August, Gothenburg, Sweden) | * Conclude on evaluation criteria and methodology for all scenarios, by deciding which methodology from objective#3 (3.a. or 3.b.) is to be used.
* Progress other related (p)CRs, prioritize evaluation for scenario#1 and scenario#2.
* Communicate with other 3GPP working groups and external organizations, on need basis
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| 3GPP SA4 Video SWG Telco (October 24th, 2023) | * Progress (p)CRs for the solutions.
* Gather evaluation criteria and methodology (item 3 in the objectives of the study) for the scenarios.
* Gather available evaluations.
* Submission deadline: October 24th 1630 CEST.
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| 3GPP SA4 Video SWG Telco (October 31st, 2023) | * Progress (p)CRs for the solutions.
* Gather evaluation criteria and methodology (item 3 in the objectives of the study) for the scenarios.
* Gather available evaluations.
* Submission deadline: October 31st 1630 CEST.
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| SA4#126 (13 - 17 November, Chicago, IL United States) | * (p)CRs on
	+ evaluations for scenarios.
	+ start documentation of conclusions, prioritize for scenario#1 and scenario#2.
* Communicate with other 3GPP working groups and external organizations, on need basis
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| 3GPP SA4 Video SWG Telco (Nov?th, 2023) | * Progress (p)CRs for the solutions.
* Complete evaluation criteria and methodology, and document available evaluations for the remaining scenarios.
* Draw conclusions on scenarios
* Submission deadline: Nov?th 1630 CEST.
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| 3GPP SA4 Video SWG Telco (Dec?th, 2023) | * Progress (p)CRs for the solutions.
* Complete evaluation criteria and methodology, and document available evaluations for the remaining scenarios.
* Draw conclusions on scenarios
* Submission deadline: Dec?th 1630 CEST.
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| 3GPP SA4 Video SWG Telco (Jan?th, 2024) | * Progress (p)CRs for the solutions.
* Draw conclusions on scenarios
* Submission deadline: Jan?th 1630 CEST.
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| SA4#127 (29 January - 2 February, Sophia Antipolis, FR) | * Complete evaluations and conclusions on solutions.
* Endorse work item summary.
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| SA#103 (Mar 9 - 12 2023, EU, EU) | * Agree work item summary.
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