**Source:** **Ericsson LM**

**Title: Proposed updates of IVAS\_Codec\_Ph2 time plan v0.0.1**

**Document for: Discussion and Agreement**

**Agenda Item: 7.5**

**Introduction**

At TSG SA#104, the IVAS\_Codec\_Ph2 work item was approved [1]. An initial work/time plan has been submitted to the present meeting [2]. In this contribution, amendments to the initial time plan are proposed. The proposed updates include the milestones for the IVAS fixed-point conversion as agreed in [3], but also contains further suggestions for discussion.

**Proposal**

It is proposed take the suggestions outlined in Annex A into consideration for the time plan of the IVAS\_Codec\_Ph2 work item. Revision marks are made against the initial time plan in [2].

**References**

[1] Tdoc SP-241000: New WID on EVS Codec Extension for Immersive Voice and Audio Services, Phase 2

[2] TDoc S4-241496: Timeplan for IVAS\_Codec\_Ph2 Work Item v0.0.1

[3] TDoc SA4aA240038: Organization of IVAS Characterization Phase – rev 1

## Annex A – Proposed updates to IVAS\_Codec\_Ph2 time plan (rev. of [2])

# 1 Introduction

The IVAS\_Codec\_Ph2 work item has been approved at the SA plenary #104 in document SP-241000. The work item has the following objectives:

1. A fixed-point C-code to be part of TS 26.251 having:
   * Same functionalities and equivalent performance as the floating-point C-code in TS 26.258.
   * Full interoperability with floating-point C-code in TS 26.258.
   * Comparable complexity as the floating-point C-code in TS 26.258.

This includes verification of 3rd party delivered code and necessary adaptation to the latest version of TS 26.258. This might include some alignment of floating-point C-code in TS 26.258.

1. Characterization of the IVAS codec based on the floating-point and fixed-point C-codes, and documentation of characterization results into TR 26.997.
2. Enhancements to codec conformance test procedures and criteria.
3. Definition of relevant tiers of functionality to be implementable on a wide range of UEs with different capabilities, balancing user experience and implementation complexity/cost.
4. Enhancements to the RTP payload format and SDP negotiation, including split rendering operation.
5. Update relevant system and service specifications.

# 2 Timeplan

The timeplan for the execution of the IVAS\_Codec\_ph2 work item objectives is proposed in the following table.

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| --- | --- |
| Meeting | Objectives |
| ~~TSG SA#104  (18~~~~th~~ ~~– 21~~~~st~~ ~~June 2024)~~ | ~~IVAS\_Codec\_Ph2 Work Item approved by SA Plenary~~ |
| SA4#129-e (16th – 23rd August 2024, online) | Agree on initial time plan |
| 31st August 2024 | Delivery of IVAS fixed-point Decoder and Renderer by Ittiam to SA4, fulfilling the FL-to-FX requirements |
| Audio SWG call, TBD | Review progress of the fixed-point code conversion |
| 30th September 2024 | Delivery of IVAS fixed-point Encoder by Ittiam to SA4, fulfilling the FL-to-FX requirements, covering the following operation modes:Mono (EVS)ISM (core coder)StereoMCT |
| Audio SWG call, TBD | Review progress of the fixed-point code conversion |
| 31st October 2024 | Delivery of IVAS fixed-point Encoder by Ittiam to SA4, fulfilling the FL-to-FX requirements, covering the following operation modes:MASASBAParametric modes |
| Audio SWG call, TBD | Review progress of the fixed-point code conversion |
| SA4#130(18th – 22nd November 2024) | Verification and Agreement by SA4 on Delivery by Ittiam of IVAS fixed-point Decoder and Renderer, fulfilling the FL-to-FX requirements |
| 30th November 2024 | Delivery of complete IVAS fixed-point Encoder by Ittiam to SA4, fulfilling the FL-to-FX requirements, including the following operation modes:Combined formats |
| Audio SWG call, TBD | Review progress of the fixed-point code conversion |
| TSG SA#106(10th – 12th December 2024) | Approval by TSG SA (SA#106) of Delivery of IVAS fixed-point Decoder and Renderer, fulfilling the FL-to-FX requirements, based on agreement in SA4 |
| SA4#131(17th – 21st February 2025) | Verification and Agreement by SA4 on Delivery by Ittiam of IVAS fixed-point Encoder, fulfilling the FL-to-FX requirementsFinalization of IVAS characterization permanent documents, including:IVAS-7b Processing Plan for Characterization PhaseIVAS-8b Test Plan for Characterization Phase |
| TSG SA#107(12th – 14th March 2025) | Approval by TSG SA (SA#107) of Delivery of IVAS fixed-point Encoder, fulfilling the FL-to-FX requirements, based on agreement in SA4 |
| SA4#131-bis-e(7th – 11th April 2025) | Verification of IVAS fixed-point C-code for TS 26.251 having  * + Same functionalities and equivalent performance as the floating-point C-code in TS 26.258.   + Full interoperability with floating-point C-code in TS 26.258.   + Comparable complexity as the floating-point C-code in TS 26.258.  Note: This includes necessary adaptation to the latest version of TS 26.258 on top of the delivery by Ittiam and might include some adaptation of the floating-point C-code in TS 26.258.Decision on launching characterization tests |
| April – May 2025 | IVAS characterization testing |
| SA4#132(19th – 23rd May 2025) | Characterization test results available for analysisAgreement on TS 26.251 (IVAS fixed-point C-code)Agreement on characterization test results to be incorporated into TR 26.997Agreement on relevant CRs for:Enhanced conformance procedures and criteriaDefinition of relevant tiers of functionality to be implementable on a wide range of UEs with different capabilities, balancing user experience and implementation complexity/costEnhancements to the RTP payload format and SDP negotiation, including split rendering operation  * Agreement on CRs for update of relevant system and service specifications |
| TSG SA#108  (10th – 13th June 2025) | TS 26.251 (IVAS fixed-point C-code), for approvalCR to TR 26.997 on IVAS Codec characterization, for approvalCR to TS 26.114 on enhanced support for the IVAS Codec, for approvalCR to TS 26.117 with reference to TS 26.251, for approvalCR to TS 26.119 on enhanced support for the IVAS Codec, for approvalCR to TS 26.250 with definition of relevant tiers for implementation of IVAS, for approvalCR to TS 26.252 on enhanced conformance procedures and criteria, for approvalCR to TS 26.253 on enhanced RTP Payload Format and SDP negotiation, including split rendering operationPotential CR to TS 26.258 on alignment between floating-point code and fixed-point code in TS 26.251, for approval |