**TSG SA Meeting SA#108 SP-25xxxx**

**10 - 13 June, 2025, Prague, Czech Republic**

**Title: IVAS fixed-point Encoder 90% delivery**

**Source: SA WG4**

**Document for: Approval**

**Agenda Item: 4.4 - SA WG4 reporting**

*Abstract: TSG SA is requested to approve the initial Delivery of IVAS fixed-point Encoder, fulfilling at least 90% of the requirements.*

### Introduction

The floating-point code of the IVAS codec was standardized in Rel-18 in TS 26.258 [1]. The task to convert the floating-point code to fixed-point code, eventually targeting TS 26.251 by the IVAS\_Codec\_Ph2 work item, is being done by Ittiam under a contract issued by ETSI. The task is governed by floating-point to fixed-point (FL-to-FX) conversion requirements [2] according to milestones [3] agreed by SA WG4 (SA4).

Deliverables by Ittiam are made to 3GPP Forge [4]. A Delivery of the Encoder was made under the tag <https://forge.3gpp.org/rep/sa4/audio/ivas-basop/-/tags/20250307_Ittiam_Encoder_Release_Subjective_Testing>, which has been the basis for the evaluation by SA4 [5].

A later release, addressing further issues identified by the verification, was made under the tag [https://forge.3gpp.org/rep/sa4/audio/ivas-basop/-/releases/IVAS\_Encoder\_Release\_v3\_13052025](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fforge.3gpp.org%2Frep%2Fsa4%2Faudio%2Fivas-basop%2F-%2Freleases%2FIVAS_Encoder_Release_v3_13052025&data=05%7C02%7Ctomas.toftgard%40ericsson.com%7Cb9ca4b61a47647c4587d08dd98198ca2%7C92e84cebfbfd47abbe52080c6b87953f%7C0%7C0%7C638833957679581558%7CUnknown%7CTWFpbGZsb3d8eyJFbXB0eU1hcGkiOnRydWUsIlYiOiIwLjAuMDAwMCIsIlAiOiJXaW4zMiIsIkFOIjoiTWFpbCIsIldUIjoyfQ%3D%3D%7C0%7C%7C%7C&sdata=s17ge%2FCMGxxY3Hdue2PK9ypaeMx49fRAblMEnIwfBf0%3D&reserved=0), and would be the basis for the upcoming maintenance phase.

For the acceptance of deliverables by Ittiam under the contract with ETSI, agreement by SA4 and approval by TSG SA is required.

### Request

TSG SA is asked to approve the Delivery of the IVAS fixed-point Encoder, fulfilling 90% of the FL-to-FX requirements. As basis for the decision, there is the attached verification report agreed by SA4, with the conclusion that the IVAS fixed-point encoder delivered by Ittiam fulfils 90% of the FL-to-FX requirements and that the corresponding milestone is reached.

### Attachments

Verification of IVAS BASOP Encoder

### References

1. [3GPP TS 26.258](https://www.3gpp.org/ftp/Specs/archive/26_series/26.258/26258-i20.zip): Codec for Immersive Voice and Audio Services (IVAS); C code (floating-point)

1. [SA4aA240038](https://www.3gpp.org/ftp/TSG_SA/WG4_CODEC/3GPP_SA4_AHOC_MTGs/SA4_Audio/Docs/SA4aA240038.zip): Organization of IVAS Characterization Phase rev 1

1. [S4-242160](https://www.3gpp.org/ftp/TSG_SA/WG4_CODEC/TSGS4_130_Orlando/Docs/S4-242160.zip): Status of IVAS fixed-point conversion
2. <https://forge.3gpp.org/rep/sa4/audio/ivas-basop>