**Source: Editor[[1]](#footnote-1)**

**Title: IVAS codec development overview (IVAS-1)**

**Version: 1.2.0**

**Agenda Item: 7.5**

# **1. Scope**

This document presents an overview of the EVS Codec Extension for Immersive Voice and Audio Services (IVAS) development within 3GPP TSG SA4. The development was initiated at SA4 #94, approved at SA#77 in September 2017 and the Work Item was described in SP-170611. The codec specifications were completed in Release-18 with floating-point C reference code, and the fixed-point reference code is targeted for Release-19 under the WID SP-241000 that was approved at SA#104 in June 2024.

Section 2 of this document describes a set of permanent IVAS codec project documents.

# **2. IVAS Permanent Project Documents**

The standardisation of the IVAS codec will be documented in a series of permanent project documents each assigned with a responsible editor. They contain the most important guidelines, rules and decisions. The names of the documents are given below with a list of proposed editors.

This list is an initial list and will be developed and added to throughout the IVAS Project.

**Document name Doc. Number Editor**

1) Overview IVAS-1 Huan-yu Su - IVAS Co-rapporteur
 (hs@qosound.com)

2) Project plan IVAS-2 Imre Varga - IVAS Co-rapporteur
 (ivarga@qti.qualcomm.com)

 Project plan IVAS-2b Huan-yu Su – IVAS Rapporteur

 (su.huanyu@huawei.com)

3) Performance requirements IVAS-3 Stefan Bruhn
 (stefan.bruhn@dolby.com)

4) Design constraints IVAS-4 Huan-yu Su
 (hs@qosound.com)

5) Selection rules for selection phase IVAS-5 Imre Varga - IVAS Co-rapporteur
 (ivarga@qti.qualcomm.com)

6) Deliverables for selection phase IVAS-6 Stefan Bruhn

 (stefan.bruhn@dolby.com)

7) Processing plan for selection phase IVAS-7a Tomas Toftgard

 (tomas.toftgard@ericsson.com)

 Processing plan for characterization phase IVAS-7b Tomas Toftgard

 (tomas.toftgard@ericsson.com)

8) Test plan for selection phase IVAS-8a Milan Jelinek

 (Milan.Jelinek@USherbrooke.ca)

 Test plan for characterization phase IVAS-8b Milan Jelinek

 (Milan.Jelinek@USherbrooke.ca)

9) Collection of example usage scenarios IVAS-9 Lasse Laaksonen

 (lasse.j.laaksonen@nokia.com)

10) BASOP verification IVAS-10 Erik Norvell

 (erik.norvell@ericsson.com)

11) Non-be conformance IVAS-11 Rishabh Tyagi

 (Rishabh.Tyagi@dolby.com)

**IVAS-1** gives an *overview* of the IVAS codec development programme. (This document is IVAS-1.)

**IVAS-2** gives a detailed *time* *schedule*of the overall development programme.

**IVAS-2b** gives a detailed time plan for IVAS\_Codec\_Ph2 work item.

**IVAS-3** describes *performance requirements* for immersive voice and audio service quality.

**IVAS-4** describes *codec design constraints*. These are a set of mandatory requirements for the IVAS codec. They cover items such as limits for implementation complexity and transmission delay and give some restrictions for the applicable bit-rates.

**IVAS-5** contains a set of *codec selection rules* for the selection phase. In the selection phase, the optimal IVAS codec is then chosen. The selection will be based on the rules given in IVAS-5.

**IVAS-6** defines the *deliverables* which the codec proponents have to deliver for the selection phase. The selection will be carried out only on the codecs for which the full set of deliverables as defined in IVAS-6 have been correctly and in time provided for consideration to 3GPP TSG SA4.

**IVAS-7a,b** describe the *processing plans* for the selection and the characterization tests.

**IVAS-8a,b** describe the *test plans* for the selection and the characterization phases.

**IVAS-9** provides a collection of example usage scenarios.

**IVAS-10** documents the BASOP verification status and results.

**IVAS-11** describes the conformance procedure for non-bit-exact implementation.

1. Huan-yu Su – Huawei Technologies Co Ltd [↑](#footnote-ref-1)