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

**Title: ISAR Pdoc on Testing Aspects** **for Phase/Track 2/a, v0.1.0**

**Agenda Item: 14.10**

**1. Introduction**

This Permanent Document describes test plan aspects for the selection testing of IVAS specific ISAR solutions targeted in Phase/Track 2/a of the ISAR work [1]. It covers the organization of the selection tests and the relevant processing and test plan aspects.

## 2 Organization of tests

Working assumption: The selection tests of the IVAS specific ISAR solution will be organized as in-house tests. This is based on the following confirmed prerequisites:

* Number of listening experiments suitable for in-house testing: 4 (confirmed)
* Applicable test methodology: BS.1534 (confirmed)
* Number of candidate solutions suitable for in-house testing: 2 (confirmed)

Availability of suitable cross-checkers with no stake in candidate solution under test (confirmed)

# 3 Processing and test plan aspects

## 3.1 Key Elements

The following bullets constitute key elements of a of the processing and a test plan for IVAS specific split renderer solutions.

* Test methodology
	+ BS.1534 (Mushra)
* Difference scenario between assumed and actual end-device poses
	+ Static within range [+-20 degrees]
	+ Dynamic within range [+-20 degrees]
		- Sinusoidal [0.25 Hz]
		- Triangular [0.5 Hz]
		- Real, i.e., derived from real head tracker trajectories with
* DOF
	+ 1-DOF (yaw)
	+ 2-DOF (yaw, pitch)
	+ 3-DOF (yaw, pitch, roll)
* Rendering simulation
	+ Trajectory nullification [2]
	+ Unguided end-device pose
* Audio material
	+ Categories
		- Clean and noisy speech, music, critical audio items
	+ Number of items per experiment
		- [12]
	+ Item selection and allocation to experiments
		- Done by Audio SWG
* Test item generation:
	+ Selected audio items
	+ Processed simulating combo of
		- Difference scenarios (Static, dynamic sinusoidal, dynamic triangular)
		- DOF cases (1-3 DOF)
		- Rendering simulations (trajectory nullification/unguided)
* Requirement on cross-checker
	+ Demonstrably not technology contributor of system under test that is exposed by the experiment
* Experiments
	+ 4+4 experiments in-house by proponent repeated by cross-checker
		- Experiment 1: Testing against performance requirement for HOA3
			* Hidden reference: Native coding system (IVAS@512kbps rendered to post renderer pose)
			* LP7 anchor: Hidden reference, 7Khz LP filtered
			* 0-DOF native transcoding reference (IVAS@512kbps binaurally rendered to pre-renderer pose, IVAS stereo coded@256kbps)
			* System 1 under test
			* System 2 under test
		- Experiment 2: Testing against performance requirement for MASA
			* Hidden reference: Native coding system (IVAS@512kbps rendered to post renderer pose)
			* LP7 anchor: Hidden reference, 7Khz LP filtered
			* 0-DOF native transcoding reference (IVAS@512kbps binaurally rendered to pre-renderer pose, IVAS stereo coded@256kbps)
			* System 1 under test
			* System 2 under test
		- Experiment 3: Testing against performance requirement for MC 7.1.4
			* Hidden reference: Native coding system (IVAS@512kbps rendered to post renderer pose)
			* LP7 anchor: Hidden reference, 7Khz LP filtered
			* 0-DOF native transcoding reference (IVAS@512kbps binaurally rendered to pre-renderer pose, IVAS stereo coded@256kbps)
			* System 1 under test
			* System 2 under test
		- Experiment 4: Testing against performance requirement for ISM-4
			* Hidden reference: Native coding system (IVAS@512kbps rendered to post renderer pose)
			* LP7 anchor: Hidden reference, 7Khz LP filtered
			* 0-DOF native transcoding reference (IVAS@512kbps binaurally rendered to pre-renderer pose, IVAS stereo coded@256kbps)
			* System 1 under test
			* System 2 under test
* Systems under test
	+ System 1:
		- Proponent: Dolby Sweden AB, Ericsson LM, Fraunhofer IIS, Nokia Corporation, NTT, Orange, Panasonic Holdings Corporation, Philips International B.V., Qualcomm Incorporated, VoiceAge Corporation
		- Main contributors to system under test that is exposed by the experiment: [Dolby, Fraunhofer IIS]
	+ System 2:
		- Proponent: Huawei
		- Main contributors to system under test that is exposed by the experiment: [Huawei]
* Lab assignment
	+ In-house labs
		- Experiment 1: [tba]
		- Experiment 2: [tba]
		- Experiment 3: [tba]
		- Experiment 4: [tba]
	+ Cross-check labs
		- Experiment 1: [tba]
		- Experiment 2: [tba]
		- Experiment 3: [tba]
		- Experiment 4: [tba]

# References

[1] Tdoc S4-240403: Work Plan for the ISAR v0.5.0

[2] Tdoc S4-240254: Trajectory Nullification for Binaural Renderer Evaluation, Fraunhofer IIS

1. Stefan Bruhn, Dolby Sweden AB; email: stefan.bruhn@dolby.com [↑](#footnote-ref-1)