Question(s):	8, 10/16	Geneva, 14 - 25 March 2011

LIAISON STATEMENT

Source:	Rapporteurs Q8/16, Q10/16
Title:	LS to IETF CODEC WG on speech and audio coding standardization

LIAISON STATEMENT

For action to:	**IETF CODEC WG**
For comment to:	**-**
For information to:	**ITU-T Q7/12**
Approval:	**Agreed to at the ITU-T SG 16 meeting (Geneva, 14-25 March 2011)**
Deadline:	**1 November 2011**

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ITU-T SG 16 thanks IETF CODEC WG for the information on the progress of the ongoing work related to speech and audio coding. The idea of working in a collaborative fashion where technologies of different codec proposals are merged together is a process which is often used in ITU-T. Most of the recently standardized codecs in ITU-T results from such collaborative efforts conducted in an optimization phase and they have led to codecs outperforming the targets which were initially set out.

We understand that the process that you have followed is different to that in ITU-T, where performance requirements and objectives in terms of bit rates, audio bandwidths, quality, and complexity, are specified in a document known as "Terms of Reference" (ToR). Well known standard reference codecs are used as references for quality performance. An advantage of this approach is that the formulation and the agreement of the ToR (essentially freezing the performance targets) takes place well before anything else in the process, including development of the codec and listening test formulation. Without doing this, the technology proponents may formulate and modify the ToR as they go along, and fair technological competition and/or collaboration for the qualification and selection process would be somewhat less transparent.

Given the process that the IETF Codec WG has used in developing Opus, we feel it is all the more important that formal performance characterisation is carried out prior to WGLC. This quality performance assessment requires the selection of suitable testing methodologies, careful design of

test plans and open and transparent analysis of the results. Currently, the experts in ITU-T SG 12 consider that subjective quality assessment based upon formal listening tests in at least two languages remains the most appropriate manner to evaluate codec performance and to guarantee suitability of codecs for international use.

We understand that performance requirements for Opus are broadly outlined in draft-ietf-codec-requirements-02. However, we feel that this document lacks some necessary detail. For example, it is not clear what performance assessment methodologies will be used to check whether these IETF WG codec requirements are met.

We would like to stay informed about the progress of Opus and would welcome IETF to use the expertise of ITU-T for review of the methodology to be used to check whether the Opus codec meets the quality performance requirements for its intended applications, and analysis of the subsequent results prior to a WGLC. This can be done via the contact points, or the related ITU email reflector which can be freely subscribed: wp3audio@yahoogroups.com.

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