Liaison Statement  
To: 3GPP SA WG4  
For Information  
Source: IETF CODEC Working Group, Real-Time Applications and Infrastructure Area (RAI)  
Date: November 9, 2010

Speech and Audio Coding Standardization

The IETF codec work continues to make progress, and we wanted to give 3GPP an update on our activities.

The codec working group has recently adopted a codec specification as a working group item. This means that the working group has achieved consensus around an approach, and we will use this as the basis of our final deliverable. Rather than selecting amongst the candidate codecs which were submitted for consideration, we followed a collaborative process. The experts got together, took the best ideas from each of their proposals, and combined them to form a new codec. This codec uses a hybrid of the LPC-based SILK codec and the MDCT-based CELT codec. SILK is used to encode the low frequency bands, and CELT the higher frequency bands. The resulting codec does an excellent job across a wide range of inputs, from speech to music. Indeed, initial MUSHRA tests – while not broad enough to be conclusive – showed that the combined codec performed better than either SILK or CELT alone.

The new codec is called Opus. The draft of the specification can be found HERE [<http://datatracker.ietf.org/doc/draft-ietf-codec-opus/>]. As always, the IETF welcomes input from 3GPP participants to help make this codec the best it can be.

Given the group consensus around this approach, the chairs believe that work on Opus may complete ahead of schedule. We will provide an updated liaison statement once the working group announces a working group last call (WGLC). WGLC is the point at which the working group believes the document is complete, and ready to be submitted for final approval by the Internet Engineering Steering Group (IESG).

In addition to the codec itself, the working group has been finalizing the requirements document [<http://datatracker.ietf.org/doc/draft-ietf-codec-requirements/>], which is also a formal working group item. The group is also producing a guidelines document, which describes the process of standardization. The group is converging around [<http://datatracker.ietf.org/doc/draft-valin-codec-guidelines/>], which is on target to be adopted as a working group item in the next few weeks.

Sincerely,

Jonathan Rosenberg

Co-Chair, CODEC Working Group