

Guidelines for proposed codec Working Group

draft-valin-codec-guidelines-02.txt

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Introduction

- This is how we propose to do codec work within the IETF if a WG is formed
 - Starting point for defining the final procedure
 - Not overriding standard IETF procedures
- Just a summary: for details, refer to the draft
- This is not the requirements
 - Refer to draft-valin-codec-requirements-02.txt

Proposed Process

- 0) Not a rubber-stamping exercise – contributors must cede change control to the IETF
- 1) Identify requirements
- 2) Solicit codec contributions as input (with IPR disclosure)
- 3) Iteratively improve requirements based on received contributions
- 4) Evaluation contributions strengths, weaknesses of whole codec and parts

Proposed Process (cont.)

- 5) Choose starting point for development, based on one or more codecs (no final decision)
- 6) Iteratively improve/rewrite/replace each component of the codec. Any kind of change is allowed provided it helps meet the requirements. Any interested party can contribute to the development.
- 7) Collaboration with other WGs (transport, AVT, SIP, etc)
- 8) Characterization of final codec

Evaluation, Testing, Characterization

- Continuous testing (during development)
 - Informal tests
 - Objective measurements
- Testing by 3rd parties (“Internet community”)
 - Encourage 3rd parties to implement work-in-progress
 - Includes a wide range of conditions
- Formal characterization of final codec
 - Quality evaluation
 - Packet loss robustness evaluation

Specification/Conformance

- Specify behavior required for interoperability
- Complete reference implementation corresponding to the “best known implementation”
- No mandated “bit exact” definitions except where needed for interoperability reasons
 - Provide conformance testing tools
 - Provide test vectors

Intellectual Property

- Should be easily distributable, with as few restrictions as possible. Subject to BCP 78 and BCP 79:

“In general, IETF working groups prefer technologies with no known IPR claims or, for technologies with claims against them, an offer of royalty-free licensing”.

- Goal is to have royalty-free (RF) technology
 - Should be distributable without fees or special conditions/restrictions

Intellectual Property (cont)

- We understand that RF cannot be guaranteed
- However, we can maximise the odds
- Given the choice between two technologies, the proposed WG shall prefer unencumbered technology
 - Seek RF licenses when possible
 - Use alternate technology when a license cannot be obtained
 - Use technology that is 20+ years old

Relationship with Other SDOs

- Other SDOs doing audio codecs:
 - ITU-T SG 16
 - MPEG
 - ETSI
 - 3GPP
 - 3GPP2
- No natural monopoly on audio codecs
- Cooperation with other SDOs welcome

Relationship with Other SDOs (cont)

- “Uncoordinated Protocol Development Considered Harmful” <http://tools.ietf.org/html/draft-iab-mpls-tp-uncoord-harmful-00>

“[T]he IAB considers an essential principle of the protocol development process that only one SDO maintains design authority for a given protocol, with that SDO having ultimate authority over the allocation of protocol parameter code-points; defining the intended semantics, interpretation, and actions associated with those code-points”.

- No harm done here
 - No code-point collision, no label collision
 - Signaling technologies for codec negotiation
 - Transport protocols designed to support any codec