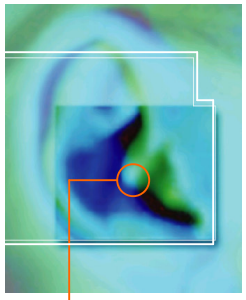

draft-ietf-avt-ilbc-codec-02
draft-ietf-avt-rtp-ilbc-02

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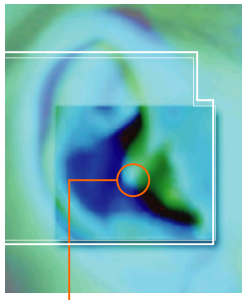
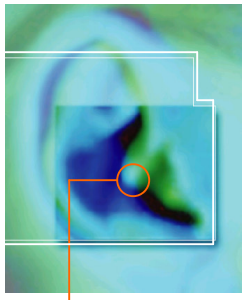


iLBC – IETF work

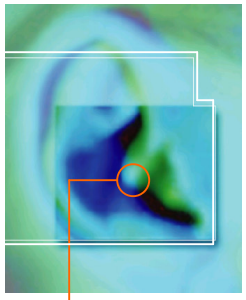
IETF deliverables, (first drafts submitted during Feb-02)

- iLBC codec specification draft
  - draft-ietf-avt-ilbc-codec-02
- iLBC RTP payload format draft
  - draft-ietf-avt-rtp-ilbc-02
- Statement about IPRs in iLBC and its freeware nature



... since the last version (1/3)

- Review of the codec spec draft submitted to WG chairs, reviewers:
  - Peter Vary, Frank Mertz and Christoph Erdmann (RWTH Aachen)
  - Vladimir Cuperman (Niftybox LLC)
  - Thomas Eriksson (Chalmers Univ of Tech)
  - Gernot Kubin (TU Graz)
- Changes/Improvements that reflect feedback from the review
- Other changes
  - couple of bugs and improvements in the source code
  - typos corrected, non US-ASCII exchanged (symbols in formulas, names, ...), formatting corrected (long lines, ...)
- A number of new, interoperable iLBC implementations released by vendors and communities

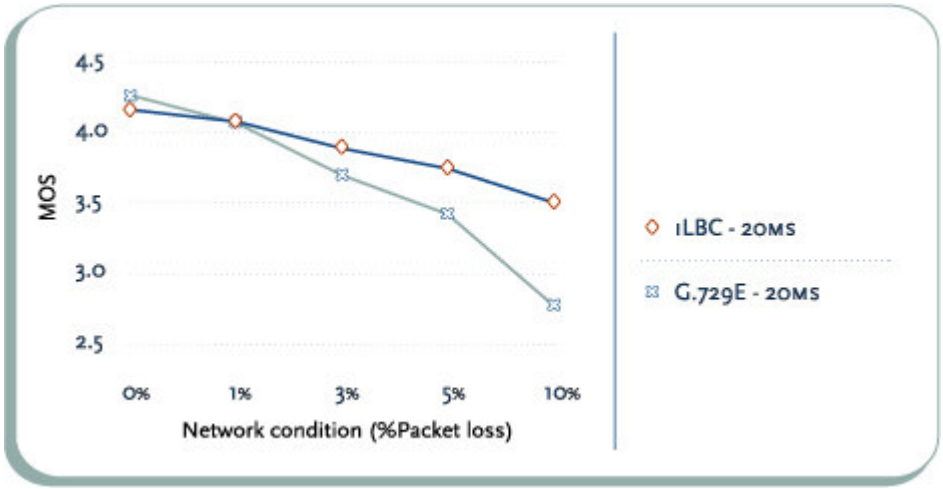


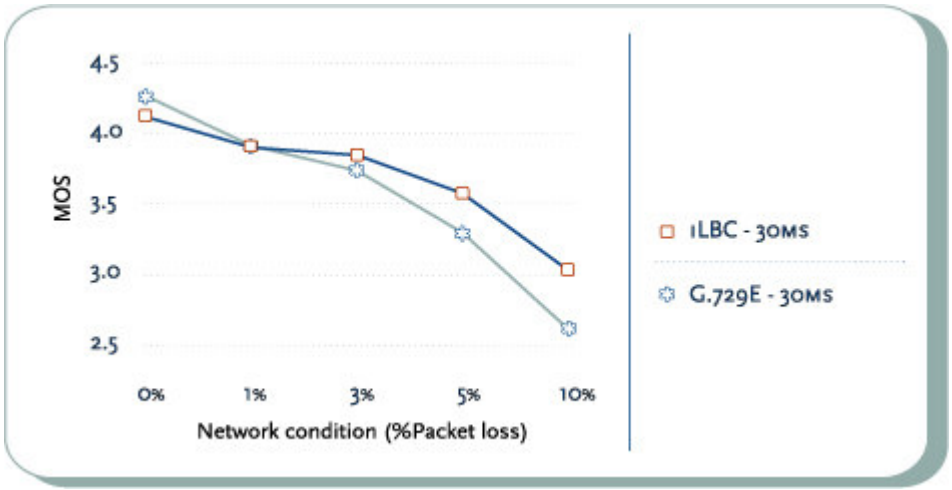
... since the last version (2/3)

- Changes/Improvements that reflect feedback from the review:
  - Generally improved descriptions related to 20 ms mode
  - Sections 2.1, 3.2, 3.2.1, 3.5.3, 3.6.3.1 partly rewritten and improved descriptions
  - Section 3.2.7 BLOCKL corrected
  - Section 3.6.3.2 Gain formula corrected
  - Section 3.6.3.3 clarified search procedure
  - Section 3.6.4 taken out confusing part
  - Section 4.6.3 made consistent with 3.6.4.1 (norm of vector usage etc.)

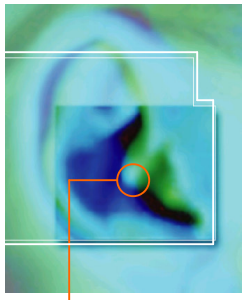
... since the last version (3/3)

- Additional MOS tests performed by independent 3rd party labs:





Source: AT&T labs

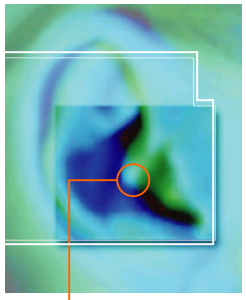


Open issue (RTP Payload Format draft)

- If 20 ms frame size mode is used, remote iLBC encoder SHALL receive “mode” parameter in the SDP "a=fmtp" attribute by copying them directly from the MIME media type string as a semicolon separated with parameter=value, where parameter is “mode”, and values can be 0, 20 or 30 (where 0 stands for support of both frame size modes; 20 stands for preferred 20 ms frame size, etc.). An example of the media representation in SDP for describing iLBC when 20 ms frame size mode is used might be:

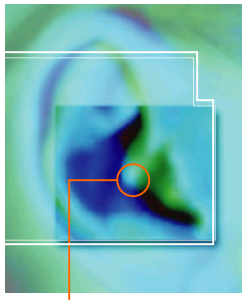
```
m=audio 49120 RTP/AVP 97
a=rtpmap:97 iLBC/8000
a=fmtp:97 mode=20
```

[How to deal with situations when one of the sides ignores “mode” parameter in the fmtp attribute?]



Open Issues (comming features)

- √ Reduction to (52) 50 bytes of payload per 30 ms
- √ Bit packing prepared i optimized for ULP
- √ Complexity optimization related work
- √ 20 ms frame option
- Called off Voice activity detection and comfort noise generation



The Way Forward

- Ready for WGLC !!?

For demo SIP client with iLBC contact:
email/ sip: alan.duric@globalipsound.com

More information on iLBC, source code, implementations, ...
www.iLBCfreeware.org

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