



PEAQ Performance: Audiocoders, Jitterbuffers, GAP-events and an old friend

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Audio Packetloss

- Common
- Sounds Bad

Want to fix – Need test

- How else can we know we have fixed it?
- ...and make sure we don't break it again?

We need...

- For the Test:
 - A way to introduce packetloss in GStreamer
 - A way to measure audio quality
- For the Fix:
 - A way to be notified of packetloss in the decoder
 - A way to conceal a lost packet

We need...

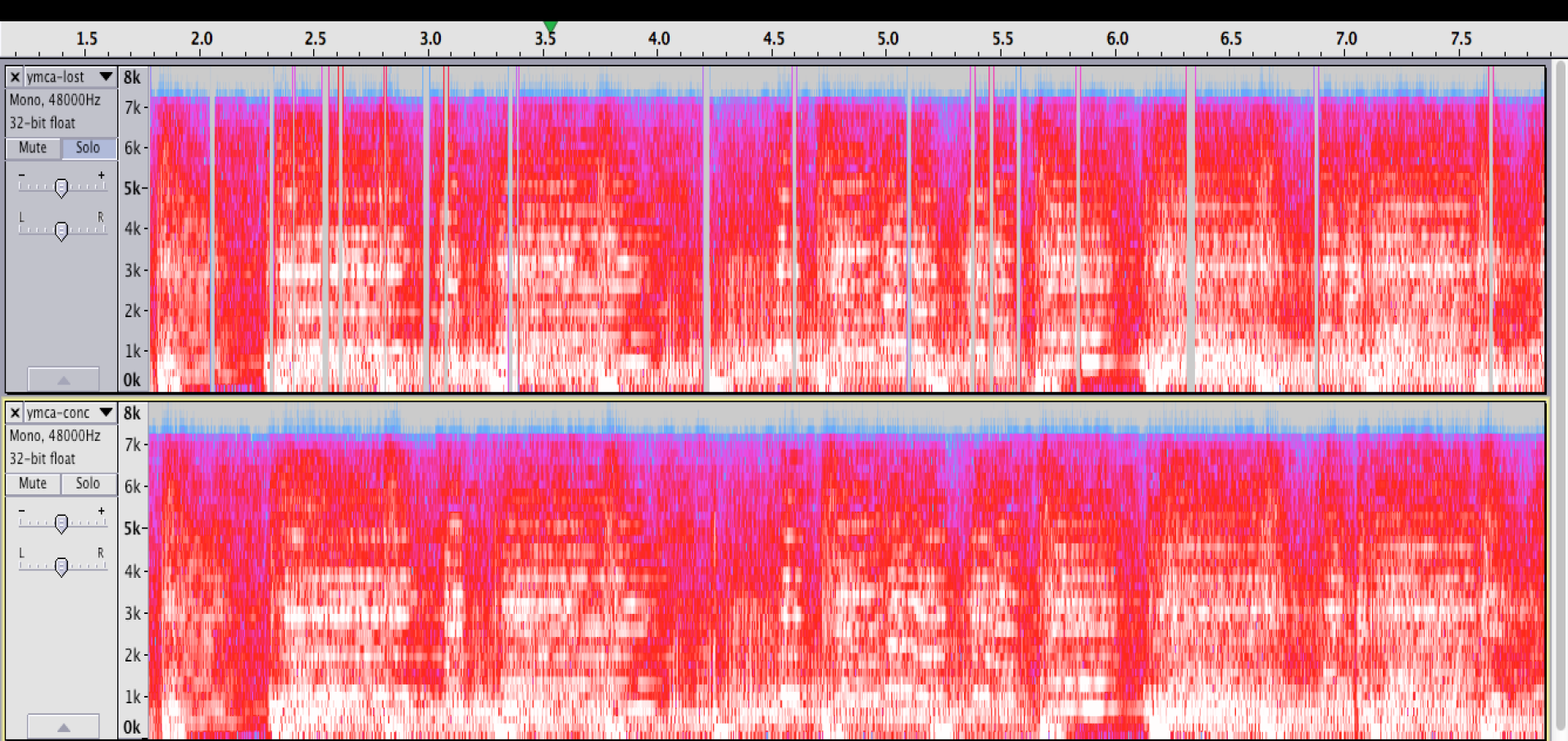
- For the Test:
 - A way to introduce packetloss in GStreamer = NetSim (old friend)
 - A way to measure audio quality = PEAQ
- For the Fix:
 - A way to be notified of packetloss in the decoder = JB + GAP event
 - A way to conceal a lost packet = Built in to G.722.1

Listen: without do-lost and plc

- `audiosrc ! enc ! pay ! netsim drop-probability=0.1 !
rtpjitterbuffer do-lost=0 ! depay ! dec plc=0 ! audiosink`
- `gst-launch-1.0 filesrc location=ymca.wav ! wavparse !
identity sync=1 ! audioconvert ! opusenc ! rtpopuspay !
netsim drop-probability=0.1 ! rtpjitterbuffer do-lost=0 !
rtpopusdepay ! opusdec plc=0 ! osxaudiosink`

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Thanks!

- NetSim:
 - Posted in Bugzilla right now!
- PEAQ:
 - <https://en.wikipedia.org/wiki/PEAQ>
 - <http://www-mmsp.ece.mcgill.ca/Documents/Software/Packages/AFsp/PQevalAudio.html>
- G.722.1 :
 - <http://www.itu.int/rec/T-REC-G.722.1/en>
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