Low-Delay Codec: Activity

• Project aim:
  – Transmit audio with very low latency (<10 ms)
  – High-quality speech and music

• Features:
  – From ~32 kbps for speech, ~48 kbps for music
  – Good quality stereo at 128 kbps
  – Small footprint
Low-Delay Codec: Challenges

• Very short frames (<10 ms)
  – Poor frequency resolution, leakage
  – Very few bits for meta information (every bit counts)
• Patents, patents, patents
• Math-intensive
Low-Delay Codec: Dependencies

• Libraries in use:
  – No dependency
  – But reusing Timothy's entropy coding code

• Projects that *would* depend on us:
  – Pulseaudio
  – VoIP apps
  – Software for remote live performances
Low-Delay Codec: Next Steps

- Find a good name
- Lots of things to add
  - Psycho-acoustics/bit allocation
  - Multi-channel support (for N>2)
- Finalise bit-stream over the next 12 months
- Convert code to fixed-point