

# Requirements for an Internet Video Codec

draft-maxwell-videocodec-requirements-00.txt

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# Introduction

- Proposed technical requirements for a video codec working group should one be created
- Currently includes a *basic* set of requirements, mostly the subset of things that required little discussion
- Has a focus on goals not specific mechanisms
- This is a strawman draft for bashing
  - Bash early, bash often

# Applications

- Live video streaming
- Video on demand
- Point-to-point video calls
- Video conferencing
- Telepresence
- Teleoperation
- Remote software services

# Constraints of the Internet

- The codec must:
  - Be bandwidth efficient
  - Support recovery from packet loss
  - Support random access (seeking)
  - Support interactive latencies
  - Flexible bandwidth vs quality trade-off

# Requirement details

- “Better than”
  - Theora
  - VP8
- Source controlled VBR
- Smooth adaptation across the whole supported quality/bandwidth range
  - Potentially with on-the-fly resolution changes if needed to accomplish this

# Comments so far

- Requirements for mechanisms for reducing bitrate burstiness
  - e.g. periodic intra refresh, distinctive access points
- Fast channel switching
- Multicore scaling