Options for Repair of Streaming Media

Colin Perkins <c.perkins@cs.ucl.ac.uk>
Department of Computer Science
University College London
Gower Street
London WC1E 6BT
Scope of the draft

- Summary of network loss characteristics
- Survey of loss mitigation schemes
  - FEC (parity/redundancy/etc...)
  - Retransmission (SRM, etc... latency, control traffic)
  - Interleaving (approximate repair, latency...)
- Recommendations for use in various scenarios
  - Latency vs. quality
  - Repair overhead
  - Use of FEC
Changes since last meeting

- Expanded discussion of congestion control
  - Layered coding (RLM/RLC/etc...)
  - Multiplicativemrate decrease, additive increase
- Discussion of ‘reasonable’ operating point
  - TCP equivalent throughput
  - \[ T = \frac{s \cdot c}{RTT \sqrt{p}} \]
  - Approximate upper bound on the loss rate applications should be designed to tolerate.
- Assorted small fixes, clarifications, etc.