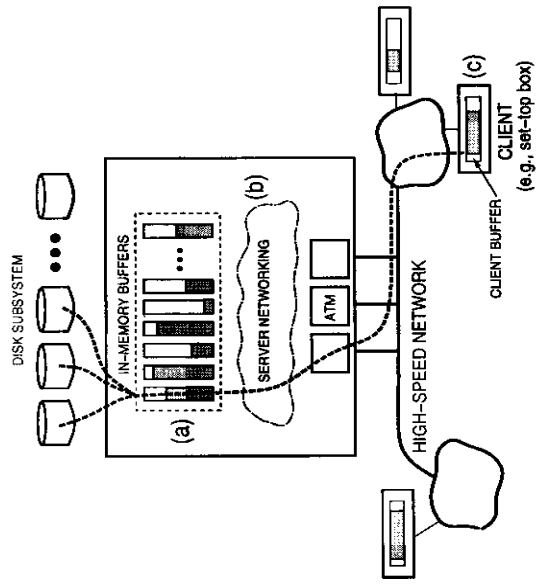


ELEN627 Lecture 6

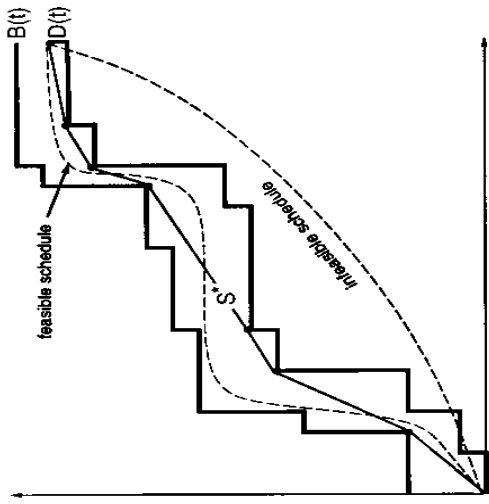
- Review of last class
- Video Smoothing

Video Smoothing

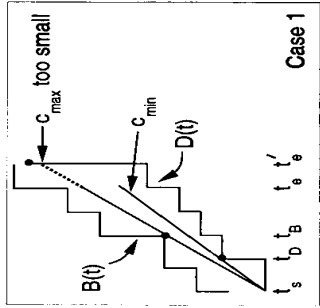
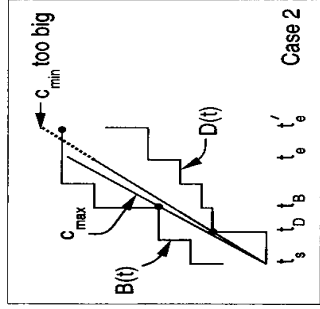
- Works with Stored Media
 - Reduce the variance in sending rates
- "Smooth" data is easier to handle in the network
 - Requires less buffers
 - Easier to provide delay bounds
- Smoothing:
 - Send more data during low rate periods to reduce the rates during high rate periods



Smoothing operation



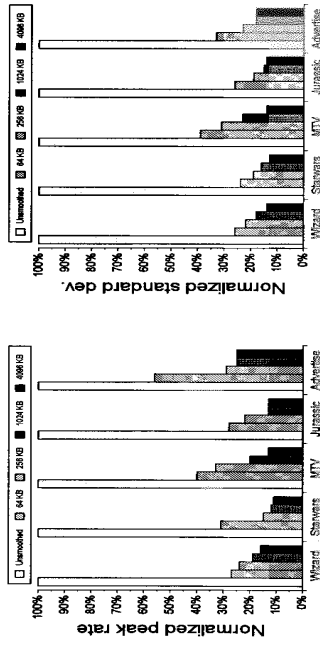
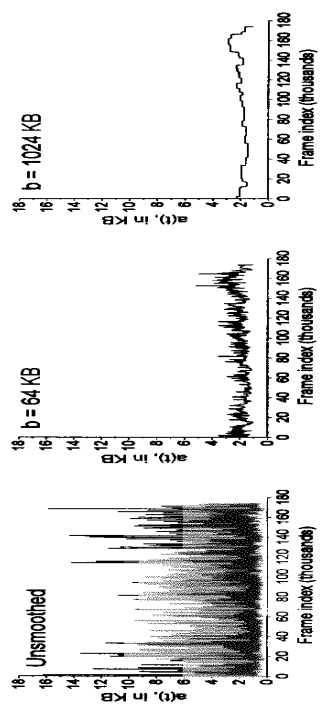
Smoothing operation



Smoothing operation

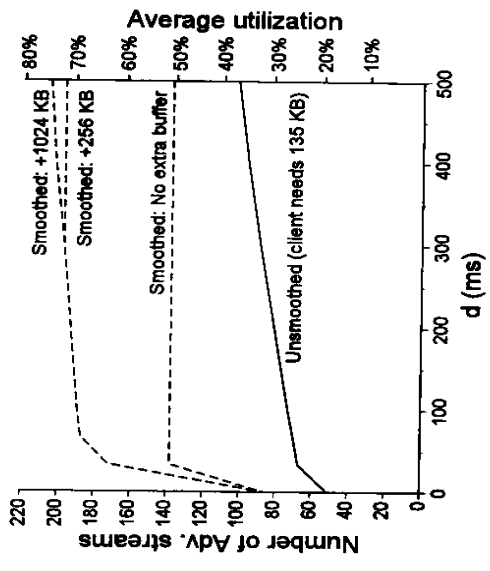
Smoothing

- Various possibilities
 - Minimize the rate variance
 - On-Off smoothing
 - Minimize the number of rate changes



Smoothing performance

Smoothing performance



(a) d ms jitter workloadhead

Smoothing performance