Multi-path Streaming: Is it Worth the Trouble?

USC UNIVERSITY OF SOUTHERN CALIFORNIA | IMSC Integrated Media Systems Center

INTEGRATED MEDIA SYSTEMS CENTER
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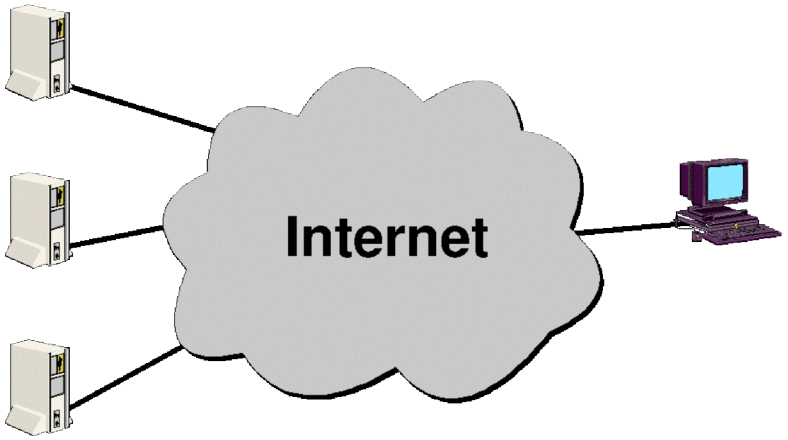

BRIEF DESCRIPTION OF DEMONSTRATION

Quality of service in delivery of continuous media over the Internet is still relatively poor and inconsistent. Although many such applications can tolerate some degree of missing information, significant losses degrade an application's QoS. In this presentation we demonstrate the potential benefits of mitigating this problem through the exploitation of multiple paths existing in the network between a sender and a receiver of continuous media.

UNIQUE OR DISTINGUISHING CHARACTERISTICS RELATIVE TO STATE-OF-THE-ART

- Theoretical characterization of benefits under a variety of metrics such as loss rates, throughput, delays, burst-length distributions, auto-correlations, and cross correlations.
- Application level solution: no explicit knowledge of network state or topology and no network or transport protocol support needed.

APPLICATIONS

- Better quality of service in continuous media streaming over the Internet.

RECENT HIGHLIGHTS, LEVEL OF DEVELOPMENT, UPCOMING MILESTONES

- Insite demonstration (2002)

UNDERLYING TECHNOLOGIES

- Investigate benefits of streaming from multiple servers simultaneously.
- Evluation through analytical models, simulation, measurements over domestic and international links, and prototype implementation.

LIST OF PUBLICATIONS, REFERENCES, URLs

- *"Multi-path Continuous Media Streaming: What Are the Benefits?"* submitted for publication.
- IMSC Internet Multimedia Lab Web site at http://bourbon.usc.edu/iml

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