EEE 598 / CSE 591 ST: Multimedia Quality of Service Networking

http://www.fulton.asu.edu/~mre/eee598_fa08.pdf

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Instructor: Martin Reisslein
Office: GWC 411A
Tel: (480) 965-8593
Email: reisslein@asu.edu

Time: 8:35 - 9:50 am MW, SCOB 105

http://www.fulton.asu.edu/~mre

Pre-requisite: Open to all Undergraduate and Graduate Students with background in elementary networking (e.g., EEE459, CSE434)
Or instructor approval

Description: Peer-to-peer (P2P) file exchange and distributed multimedia application have recently emerged as the "killer" applications in the Internet. P2P file exchange and SMS are limited to download and playback of multimedia files and wireless exchange of short alphanumeric messages, respectively. The streaming (as opposed to download and play) of multimedia to wireless terminals, such as laptops and PDAs, is widely expected to be the next "killer" application of the Internet.

This course examines the emerging networking technologies as well as the remaining roadblocks for the support of multimedia streaming to (and from) wired and wireless terminals. Particular emphasis will be paid to Quality of Service (QoS) supporting networking mechanisms for high quality multimedia.

- Protocols for Multimedia Networking: RTP/RTCP, RTSP, SAP, SIP
- Resource Allocation Paradigms: Best-Effort, IntServ (RSVP), DiffServ (SLAs)
- Characteristics and Requirements of Multimedia, Impact of Losses
- Overview of Wireless Link Characteristics
- Adaptation Techniques: FEC, ARQ, Replication and Caching

Enrollment: This course is offered in two formats:
- Distance Learning: web based video streaming, sign up through the ASU Center for Professional Development (CPD), see http://cpd.asu.edu for the distance learning format.
- Traditional On-Campus Classroom Meetings

Readings: Selected Papers from networking journals and conference proceedings (e.g., Proceedings of *IEEE Infocom*, *ICC*, *Globecom*, *ACM Mobicom*)

Grading: There is no formal exam (midterm, final)
Topic exploration paper and professional presentation
Paper critiques/reviews
Class attendance and participation