Special session title: Networked Video

Organizers:
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Abstract

Multimedia–an integrated and interactive presentation of speech, audio, video, graphics, and text–have become a major driving force behind today's information technology that merges practices of communication, computing, and information processing into an interdisciplinary field. However, to achieve a high level of acceptability and proliferation of multimedia over heterogeneous IP-based networks like the Internet and wireless networks, several key requirements need to be satisfied:

- *Easy adaptability to bandwidth variations*,
- *Robustness to data losses,*
- *Support for bandwidth and device scalability,* since various clients may be connected at different data rates and request transmissions that are optimized for their respective connections and capabilities,
- *Limited power requirements* for portable wireless video devices.

The papers in this special session present a variety of solutions to cope with these challenges, including joint source-channel coding techniques, efficient media streaming and synchronization strategies, streaming solutions using path diversity, multimedia traffic modeling and shaping for efficient network utilization, efficient packetization and scheduling strategies, Power-optimized multimedia coding and transmission solutions.

Program

1. Avideh Zakhor (UC Berkeley), "Path Diversity for Multimedia Streaming over Packet Switched Networks"
2. Susie Wee, John Apostolopoulos, Sumit Roy, Wai-tian Tan (Hewlett Packard Labs), "Research and Design Challenges for Mobile Streaming Media Content Delivery Networks (MSM-CDNs)"
3. Amy R. Reibman and Vinay Vaishampayan (AT&T Labs – Research), "Quality monitoring for compressed video subjected to packet loss"
4. Thomas Stockhammer (Technical University of Munchen, Germany), "Is Scalable Video Coding beneficial for Wireless Video Applications?"
5. Bernd Girod, J. Chakareski, Y. Liang, M. Kalman, E. Setton, R. Zhang (Stanford University), "Video streaming with diversity"
6. Haitao Zheng (Lucent Research), "Optimizing Wireless Video Transmission by Cross Layer Design"
7. Jacco Taal, Ivaylo Haratcherev, Koen Langendoen, Inald Lagendijk (Delft University of Technology), "Quality of Service controlled adaptive Video Coding over 802.11 wireless links"
8. Marco Fumagalli (CEFRIEL, Milan, Italy), Phoom Sagetong, Antonio Ortega (USC, Los Angeles, CA, USA), "Estimation of Erased Data in a H.263 Coded Stream by Using Unbalanced Multiple Description Coding"
9. Jie Chen (Brown University), "Anti-bursty Packet Loss and Adaptive Noise Filtering Design for Streaming Video"
10. Tsuhan Chen (Carnegie Mellon University), "Joint Source-Channel Rate Shaping for Wireless Video"
11. Shengjie Zhao, Zixiang Xiong, Xiaodong Wang (Texas A&M University), "Optimal Power Allocation for Wireless Video Over CDMA Networks"
12. Xiaofeng Xu (Polytechnic University), Mihaela van der Schaar (Philips Research), Santhana Krishnamachari, S. Choi, Yao Wang (Polytechnic University), "Adaptive Error Control for Fine-Granular-Scalability Video Coding over IEEE 802.11 Wireless LAN"

Submission deadlines

Initial paper submission: February 1st, 2003 (Note that both initial and final papers are subjected to the same page limit as regular papers.)

Final paper submission: March 31st, 2003.