Sensing and Opportunistic Delivery of Ubiquitous Video in Health Monitoring, On-Campus and Social Network Applications

Question: If you submitted a paper to Movid '13/MMSys '13/ Mobisys '13/... what would you address? Why? Why not?

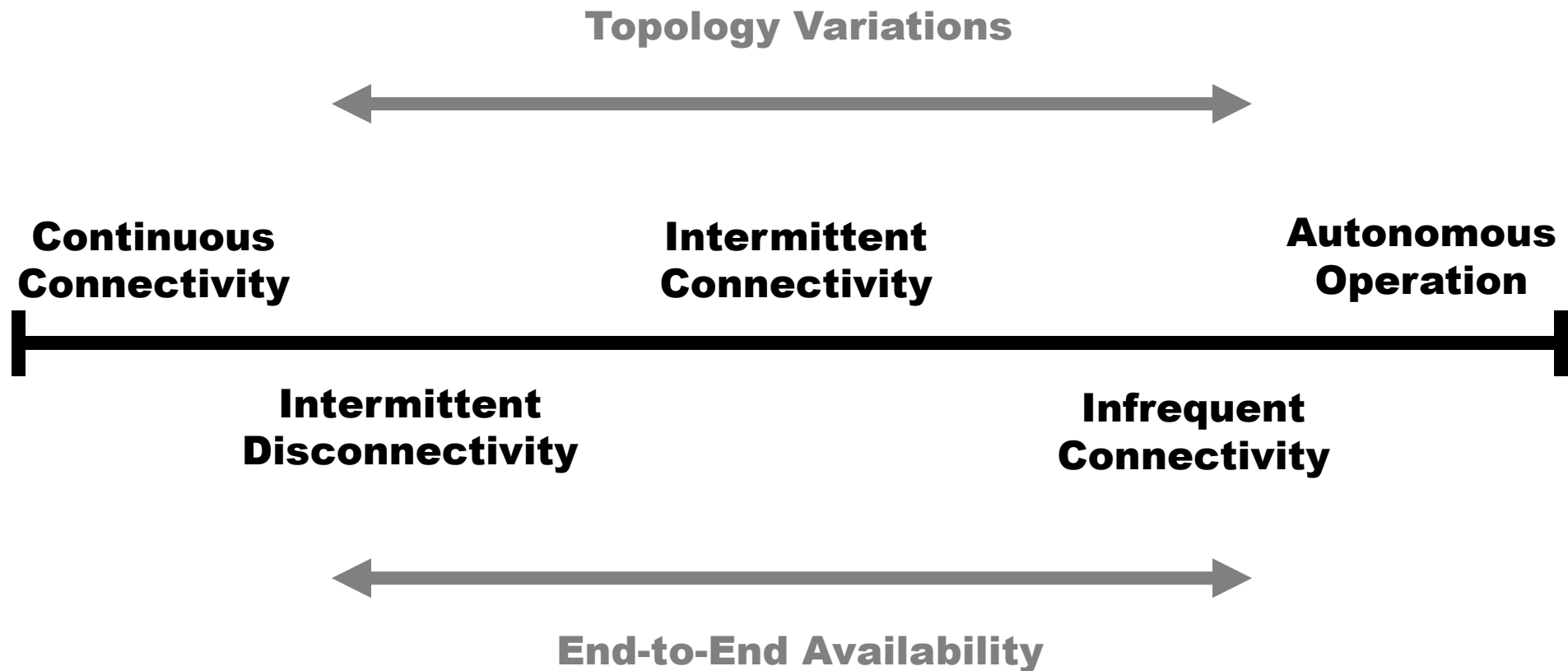## Kevin C. Almeroth

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Focus on the Data

- What, when, how, and where is it _generated_

- What, when, how, and to where it gets _transmitted_

- What, when, and how it gets _consumed_

- Consistent with broader trends

- MoVid narrows the focus somewhat: mobile & video
  - Focused further to: health monitoring, on-campus and social network apps

Categorizing the Multitude of Directions

- Improving efficiency of the last mile

  - Work is tracking evolution in L2 protocol standards (e.g., 802.11n)

- Work at the network layer

  - Dealing with mobility and intermittent connectivity (e.g., DTN)

- Work at the transport layer

  - How to evolve beyond UDP and TCP (e.g., RDRA)

The Spectrum of Connectivity Possibilities

Topology Variations

Continuous Connectivity

Intermittent Connectivity

Autonomous Operation

Intermittent Disconnectivity

Infrequent Connectivity

End-to-End Availability

My Proposed MoVid Paper

- ## Campus video
  - Focus on campus side (for monitoring) and not student video
    - Though would be interesting to also consider student-generated content
  - Make assumptions about availability of back-end connectivity

- ## Goal
  - Improve delivery efficiency by targeting any one of the layers
    - Messing with TCP, integrating FEC, integrating L2 behavior

- ## Injecting some realism
  - Use network studies to justify environmental decisions
  - Easy enough to build actual deployments
  - A reasonable paper really needs to advance the state-of-the-art in content generation and consumption