Using Multicast for Large-Scale Live Streaming over the Internet

Side Meeting: Wed, Nov 5 @ 11:00-12:30

McGill

Side Meeting Purpose

- Live streaming events with tens of millions of viewers are now routine, and pushing the limits of CDNs and SPs
  - Tyson-Paul fight- 65M viewers… and 85k complains, 2 lawsuits
  - Thurs Night Football- 25% of all Internet traffic on Thurs Nights
  - IPL/WC Cricket- 60M viewers for Champions Trophy Final on Mar 2025
  - Network capacity must plan for peaks, not avg
- Live Streaming is not the same as On-Demand Video
  - Latency, join rates
- Multicast Solutions exist in different worlds
  - Layer 3: TreeDN (SSM + AMT)
  - Layer 4+: UDP for ULL, mQUIC
  - …but there is little awareness between each world

Side Meeting Agenda

- Goal: bring together in same room folks from different worlds to discuss the challenges of using multicast for internet live streaming to discuss what works and what's missing
  - Primary focus on transport and application layers (eg, reliability, ABR, encryption, etc)
- Agenda (Wed, Nov 5 @ 11:00-12:30 in McGill)
  - Multicast: A bad idea who's time has come?
    - Lenny Giuliano, 10 min
  - Streaming Multicast Evolution: From MPEG-TS to HTTP/CMAF to MPEG-H MMT
    - Omar Ramadan, 20 min
  - Multicast for ULL, in-venue live streaming at Aircast
    - Sanjay Gupta/Craig Horobin, 20 min
  - Open Discussion
    - 40 min