An update on Streaming Video Alliance

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Streaming Video Alliance

- Steaming Video Alliance is a collaborative ecosystem comprising of content publishers, content distributors, network service providers and technology vendors to address over-the-top streaming media delivery
- The collective experience and expertise of the members typically results in Alliance documenting and publishing best practices, guidelines to improve interoperability and ensure a consistent end-user experience
- Equally important is that Alliance relies on the IETF for all aspects around protocols supporting streaming media and thus establishing a loopback into the IETF

Video Streaming and The COVID-19 Effect

- Comcast's[1] streaming and web video consumption is up 38%
  - Comcast reported peak traffic is up 32% overall between March 1 to March 30
- AT&T[2] reports a 28% jump in core network traffic(single day in April and as compared to pre stay-at-home daily average traffic)
  - Video accounted for nearly half of all mobile network traffic, while social networking and web browsing remain the highest percentage (almost a quarter each) of overall mobility traffic
- Verizon[3] has reported similar trends with video traffic up 36% over an average day (pre COVID-19).
  - The top three applications by usage on Verizon's wireless network[2] in March were YouTube, Facebook and Instagram

What about the Streaming experience?

Sources:

1. https://www.cnbc.com/2020/04/03/streaming-wars-on-hold-during-quarantine-as-free-content-takes-over.html
2. https://about.att.com/pages/COVID-19.html
3. https://www.fiercetelecom.com/telecom/verizon-u-s-network-usage-starts-to-normalize-as-subscribers-settle-into-new-routines

Yes, there is a room for Improvement

- **Best Practices for Reducing Live Streaming Latency**
  - This project looks at all the points of potential latency within a streaming video workflow (glass-to-glass), examines where fault may lie, and proposes recommendations to remedy potential latency.
- **Recommendations for Mitigating Latency in Streaming VR Video Workflows**
  - A lab-based approach to examining where latency might occur in streaming VR video workflows (including the HMD and other end-point devices) that may cause unwanted viewing experiences (i.e., nausea).
- **Technical Evaluations and Measurements**
  - This project will test the recommendations made in the Best Practices for Reducing Live Streaming Latency document in a lab environment to make further optimizations to the best practices for mitigating latency.

And potential for some IETF direction

Potential Work Under Consideration

- **TCP Stack Optimization Best Practices**
  - Recommendations for TCP stack optimizations for streaming video.
- **Network Scaling Recommendations for Streaming Video Architectures**
  - An analysis of the result of the COVID-19 "sudden scale" on streaming video infrastructure and recommendations to improve network resiliency and scalability.
- **Content Pre-positioning in In-Home Storage**
  - A look at how streaming video distributors could utilize in-home storage to pre-position content so that playback is local and leveraging recommendation engines to push content in anticipation of demand.

Alliance groups are evaluating several other projects that may kick-off this year

streaming video alliance

Note: these projects have not been approved by Alliance groups as of yet and, hence, are not listed on our Projects webpage.

Potential New Working Groups

- **CDN Interoperability (Open Caching sub-group)**
  - A new sub-group addressing best practices and technical specifications for CDN interoperability
- **Player**
  - A working group focusing on player technical challenges, recommendations, and specifications.

Working groups under consideration to address critical streaming video topics

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THANKS !

If you have questions or require more information, don’t hesitate to contact me