Why Multipath QUIC

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- 3GPP needs to support traffic splitting across multiple accesses for any IP and Ethernet traffic with in-order delivery.
- ATSSS Release 16 work addresses this work:
  - partially for TCP traffic only using MPTCP solutions,
  - it can support traffic splitting for non-TCP traffic (with ATSSS-LL) but cannot guarantee in-order delivery.
- QUIC will be on cellular phones/smart phones and Multipath QUIC is a strong candidate for ATSSS as it builds on the synergies of the QUIC stack, i.e. no need to have yet another protocol stack

Use Cases (1)

- **Hybrid Access Broadband Services:** through simultaneous use of fixed broadband and 3GPP access networks it provides:
  - **Increased Access Capacity:** A subscriber is provided with two access connections to a single premise for the purpose of delivering a higher bandwidth, for either upstream, downstream or in both directions.
  - **Increased WAN reliability:** A subscriber is provided with two access connections to a single premise to improve the availability of access to WAN services.
  - **Faster turn up:** A new fixed access is to be provided to a subscriber premise, but has a longer lead-time than desired. An additional 3GPP access that has a shorter lead-time is delivered to provide the subscriber with service until the fixed access can be provided.

https://www.broadband-forum.org/technical/download/TR-348.pdf

Use Cases (2)

- **Campus/enterprise type of deployment:** A subscriber is simultaneously using both cellular and WLAN connectivity to access the same service and it provides:
  - **For the user:** 1) Increased capacity, 2) Increased coverage and 3) Increased reliability
  - **For the access provider:** 1) Increased capacity, 2) Increased coverage, 3) Increased reliability and 4) Minimized cost

Questions and Comments?