Deep Space IP

IETF 121, Dublin, Ireland

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Agenda

- Administrativia
- Deep Space IP short introduction
- News and BOF
- Earth-Mars Communication Windows Usage Study, Marc Blanchet
- Quinn Workbench Update, Adolfo Ochagavia
- NETCONF Over QUIC, Adolfo Ochagavia
- SPACE - Scalable Pubsub, Asymmetric and CachEd transport for Deep Space communications, Suhas Nandakumar
- IPv6+ Network Architecture for Deep space, Yihan Zhu

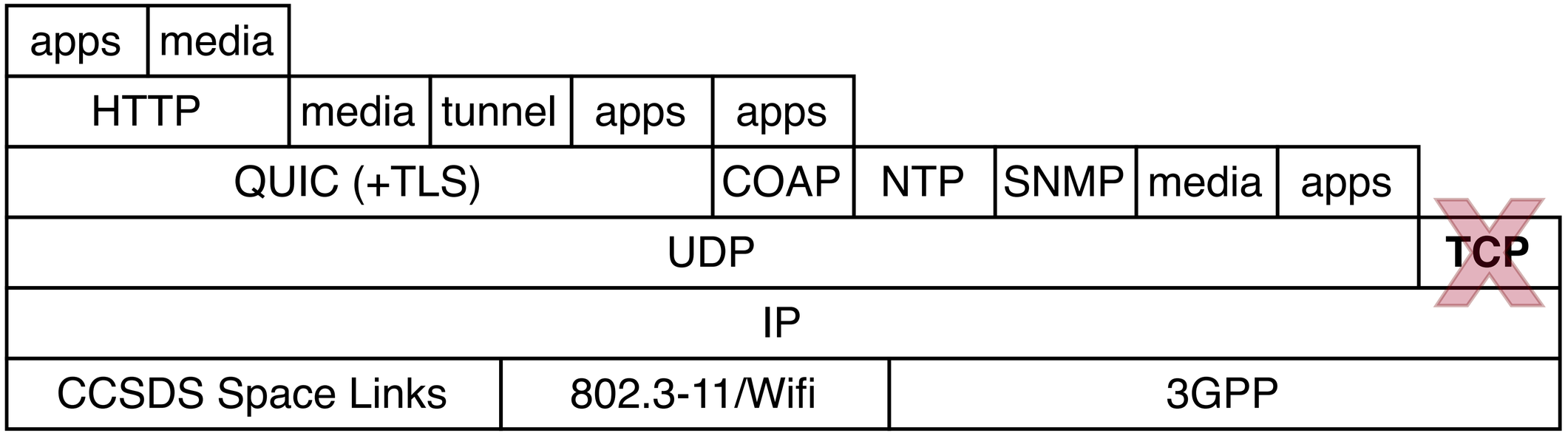
Administrativia

- Meeting under IETF Note Well
- Group Mailing list: deepspace@ietf.org
  - Subscribe at: https://www.ietf.org/mailman/listinfo/deepspace
- Group web site (using GitHub Pages):
  - https://deepspaceip.github.io/
  - Repo for slides, meeting notes, drafts, projects, issues, …
  - If interested in contributing, send me a note.
- QUIC in space Slack sub-channel under quicdev.slack.com main channel (send me a note if you want to join)
- This meeting remote access: https://ietf.webex.com/meet/sidemeetingietf2

What is Deep Space IP?

- Context: Deep space communications has specific characteristics, such as long delays and disruptions
- Goal: Using the Internet Protocol suite in deep space, as an alternative to the Bundle Protocol
- Work: Investigating how to profile the IP protocols and apps to make them work in deep space
- Key considerations:
  - IP forwarding: on an intermediate node facing intermittent connectivity, do not drop but instead store IP packets when there is no entry to destination in the forwarding table (same requirement as bundle storage in forwarders)
  - Transport profile (how to run QUIC in this context, but others too)
  - Network services: routing, network management, time distribution, …
  - Applications and Application protocols profiling (set larger timers…)
- More information in draft-many-deepspace-ip-architecture/ and draft-many-deepspace-ip-assessment/

Deep Space IP Protocol Stack



News

- Published since last IETF:
  - draft-many-deepspace-ip-architecture
  - draft-many-deepspace-quic-profile
  - draft-many-deepspace-dns-isolated-networks
  - draft-ietf-netconf-over-quic. (Adopted by the NETCONF wg)
- Discussions at SCHC wg on using header compression for deep space
- BOF:
  - Discuss the formation of a working group
  - Direction is to start with a few key work items
  - Thursday 7th, 13h00-15h00, Wicklow Hall 2B (and meetecho for remote)