

# Deepspace IP

## IETF-118 Side Meeting #2

Marc Blanchet  
[marc.blanchet@viagenie.ca](mailto:marc.blanchet@viagenie.ca)

# 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/sidemeetingietf1>

# Agenda

- IP forwarding in deep space, implementation: Jean-Philippe Dionne
- Routing update, Dean Bogdanovic
- DNS in mostly isolated networks: Marc Blanchet
- COAP in space: Carlos Gomez Montenegro
- QUIC deep space analysis project: Juan Fraire
- TAPSCE Hackathon/Careful Resume: Émile Stephan
- QUIC FEC and Additional Addresses: François Michel, Maxime Piraud
- recap of key issues discussed on the deepspace mailing list
- next steps

# Topics

- recap of key issues discussed on the deepspace mailing list
  - IP addressing and late binding
  - Routing and contact plans
  - Transport
  - Applications and related protocols

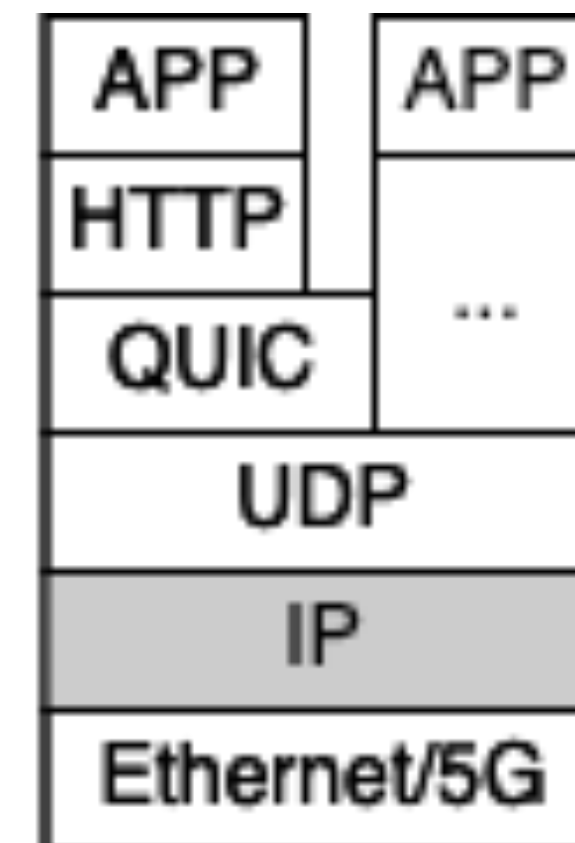
# Next Steps

- For the group:
  - interim virtual meeting between now and next IETF?
  - BOF request for IETF 119?
  - New drafts/revisions of current drafts?
  - ?

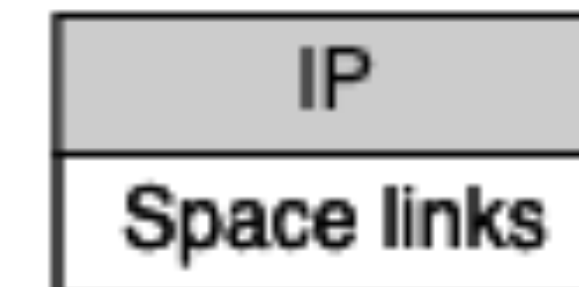
# Backup

# Proposed Architecture in One Slide

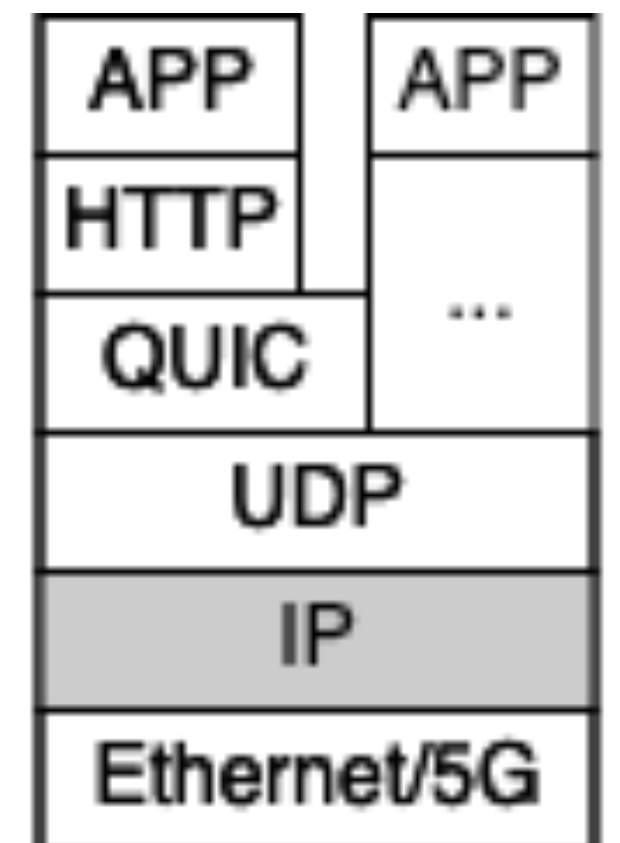
- Target: use the IP protocol stack end to end.
  - [draft-many-deepspace-ip-assessment](#)
- Key items:
  - IP forwarding: need to store packets when routes/links are down
  - IP routing: static, « simple » or TVR/Contact plans.
  - QUIC: need a profile (modify timers, cc algo, ...) ([draft-huitema-quic-in-space](#))
    - UDP also
  - HTTP: no change, careful settings of some headers
  - Applications (and protocols): careful settings of timers
  - DNS: no change, BCP for proper deployment ([draft-many-dnsop-dns-isolated-networks](#))
  - Network Management: RESTCONF/Yang
  - Security: QUIC, ACLs,...



Earth Internet



Deep space



Celestial body  
surface/orbit