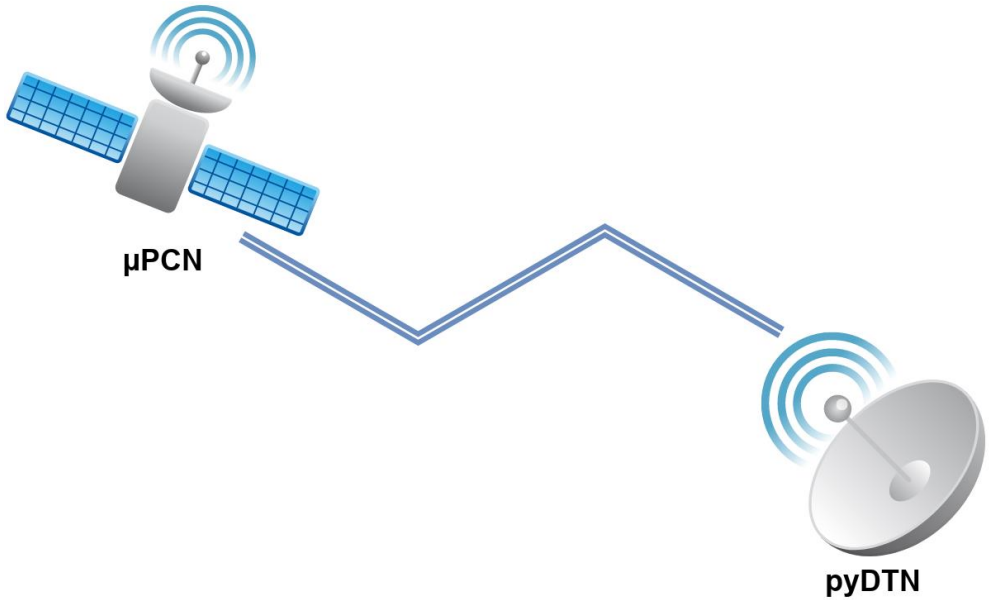
Internet in Space
DTN - Delay Tolerant Networking

- IETF 101 Hackathon
- 17-18 March, 2018
- London

x-works

µPCN



Hackathon Plan

- Check whether µPCN referential implementation meets:
  - draft-ietf-dtn-bpbis - Bundle Protocol v7
  - RFC-7242 - DTN TCP Convergence-Layer Protocol

- Problems to be solved:
  - Bundle encoding/decoding – does draft provide enough info? Yes.
  - Create easy to use API – can we have REST? Done, Postman.
  - Reproducibility – can we easily test? Done, Docker containers.

- How?
  - By creating alternative pyDTN implementation talking to µPCN

Key Results

- New ideas proposed by Telco operators
  - Bundle Protocol was originally designed for Space comm.
  - Telco operators proposed use cases also on Earth
  - E.g. providing delay tolerant peer-to-peer data network in developing countries
- New code – pyDTN
- New inter-op testing:
  - Found issue: µPCN uses special header not meeting draft
  - Solution: Replaced by RFC-7242 DTN TCPCL protocol
- Demo

Wrap Up

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