

Title: “CFDP in Delay-Tolerant Networking”
Author: Scott Burleigh, NASA Jet Propulsion Laboratory
Contact information: Scott Burleigh
Jet Propulsion Laboratory, m/s 179-206
4800 Oak Grove Drive
Pasadena, CA 91109
(818) 393-3353
Focus issues addressed: Space and ground communication architectures
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Abstract:

The proposed Interplanetary Internet (IPN) architecture is now recognized as a special case of a general communications model that has been termed “Delay-Tolerant Networking” (DTN). The design of the CCSDS File Delivery Protocol (CFDP) standard is less modular and less readily scalable than the DTN model, but it anticipates that architecture in many respects. Even after a fully functional IPN has been deployed, moreover, CFDP will likely remain one of the most important applications operating on the delay-tolerant Interplanetary Internet.

In this presentation we offer an overview of the DTN model and a brief discussion of CFDP’s probable role in the IPN. Specific topics include:

- Motivation for the DTN model
- Fundamental architectural principles of the DTN model
- Structural elements of the DTN model
- Applying the DTN model to interplanetary communications in the IPN
- DTN structural elements in the design of CFDP
- Integrating CFDP into the IPN