CDF-A

PDS M/C Meeting

April 21-22, 2015

Multi-Party Agreement

- Defined by community members from a range of stakeholders.
- Team included:
  - Ed Grayzeck (NASA + GSFC + PDS)
  - Aaron Roberts (NASA + HPDE + GSFC)
  - Jim Thieman (HPDE + SPASE + GSFC)
  - Bob McGuire (GSFC + CDF)
  - Bobby Candey (GSFC + CDF)
  - Ray Walker (PDS/PPI + NSF)
  - Todd King (PDS/PPI + SPASE)

- Reviewed by:
  - Dave Heather (PSA)
  - Baptiste Cecconi (IPDA + LESIA)

CDF-A Specification

- Defines a core set of minimal features of a CDF file for it to be considered archivable.

- Includes extensions for Heliophysics Data Environment (HPDE) and Planetary Data System (PDS).

- Is the guiding document PPI uses when considering archiving of data in the CDF format.

Available at: http://ppi.pds.nasa.gov/doc/CDF-A-Specification-v1.0.pdf

CDF-A Requirements

A CDF file meets a minimum set of requirements for data archiving when:

- The file contents comply with a released version of the CDF format specification.

- The file includes at least a minimum set of metadata, as defined by the ISTP metadata guidelines with SPDF extensions. [3]

- All data variables which are part of the CDF file are included in the same file.

PDS Extensions

The CDF-A requirements and must also meet the following conditions:

- 1. The CDF file must be CDF version 3.4 or later.
- 2. No compression (file or variable).
- 3. No unused records. (No superfluous, non-decodable records)
- 4. No fragmented variables (all data for a variable must be contiguous in the file).
- 5. No sparse variables. All data values are physical (data for all dimensions in a variable are written)
- 6. No virtual (calculated) variables.
- 7. Variables are stored in row majority order.
- 8. Use only "zVariables" for data.