Overview

- SDI Design
  - Hardware configuration
  - Software configuration
- Satellites signals and SDI-104 availability
Hardware Configuration

- PC/104-Plus
- 1 GHz CPU
- Boot from compact flash
- Ethernet: 10/100/1000 BaseT
- Connectors for monitor and keyboard
- Mounted in 2U rack box
Hardware Configuration

Data rates up to 30 Mbits/s

- Connectors:
  - D15P
  - BNC

- Configuration:
  - Single ended (TTL)
  - RS422 (differential)

- Data types
  - NRZ-L, NRZ-M, NRZ-S
  - Jumper configurable
Software Configuration

- Linux
- Ingestor software modified slightly from previous SDI systems
- ADDE server software is unchanged
- Can be configured as a standalone ingestor/server, or to write data to an external disk (via NFS, for example)
Event Notification

- Notifications are dependent on signal type:
  - Image start (not for POES)
  - Image end (not for GVAR Imager)

- Three types of notifications:
  - Send an email
  - Write notification to a file (log messages)
  - Run a program or script
SDI-104 Status for Current Satellites

- **GOES**: no change; adapting servers for the final two GVAR satellites
- **MTSAT**: 
  - HiRID format: no longer available
  - HRIT format: modifications for rapid scan
- **POES Relay** 
  - Current through NOAA-19
  - Unable to test direct reception
SDI-104 Status for Current Satellites

- **FY-2C**: Chinese geostationary
  - Ingestor in use in Japan

- **MSG**: not available, although we are investigating hardware and software needed to receive

- **Metop**
  - Current satellite does not have direct broadcast
  - SSEC does not have a direct readout station, but we may in the future
SDI-104 Status for Current Satellites

- Meteosat-5 and -7: not available
- DMSP: not available
Future Polar Satellites

We are monitoring the status and data delivery of future polar orbiting satellites NOAA-N’, NPP, and NPOESS. We expect these to have a Direct Broadcast mode and are investigating having SDI-104s available.
Future Geostationary Satellites

We are monitoring the status and data delivery of GOES-R. We expect it will use an industry-standard delivery (such as CCSDS), which the SDI-104 can ingest. Also, the SDI-104 handles data rates up to 30 Mbits/s.