Overview

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

- PC/104-Plus
- LittleBoard 735
- 1 GHz CPU
- Disk: 80 Gbyte IDE
- 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

- **Knoppix 6.7.1 (Linux 3.0.4)**
  - Full-featured command line tools instead of busybox (in DSL)
  - Up-to-date security
  - Compatible with old binaries

- Can be configured as a standalone ingestor/server, or 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**: up-to-date for all satellites
  - Recent changes for calibration updates and stray light information

- **MTSAT**: up-to-date for both satellites

- **POES AVHRR**:
  - Up-to-date for all satellites
  - Unable to test direct reception, although a system is running in Hawaii
SDI-104 Status for Current Satellites

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

- **MSG**:
  - Not available

- **Metop**
  - Not available, although under consideration

- **Suomi NPP**
  - Not available
  - Prototype VIIRS ADDE server
  - McIDAS-V: VIIRS, CrIS, ATMS (under development)
New Geostationary Satellites

- COMS: S. Korean satellite
  - Subpoint: 128° East
  - HRIT format (similar to MTSAT)
  - We don’t expect a signal to be broadcast to US
- Data Center investigating sources of real-time data
Future Geostationary Satellites

- **GOES-R:**
  - Expect an industry-standard delivery (such as CCSDS)
  - SDI-104 is designed and tested for data rates up to 30 Mbits/s
  - GRB test generators expected in the next year