SDI-104 Status

Dave Santek
SDI-104 Program Manager
25 October 2010
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:**
  - Moving from DSL to Knoppix (Debian) in 2011*

- 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:** up-to-date for all satellites
  - Server changes were required to account for GVAR block changes for GOES-14 and -15
- **MTSAT:** up-to-date for both satellites
- **POES:**
  - 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-2C**: Chinese geostationary
  - Ingestor in use in Japan

- **MSG**:
  - Not available, although it is under consideration

- **Metop**
  - Current satellite does not have direct broadcast in our area
  - 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

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

- COMS: Korean satellite
  - Subpoint: 128° East
  - HRIT format (similar to MTSAT)
  - We don’t expect a signal to be broadcast to US
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.