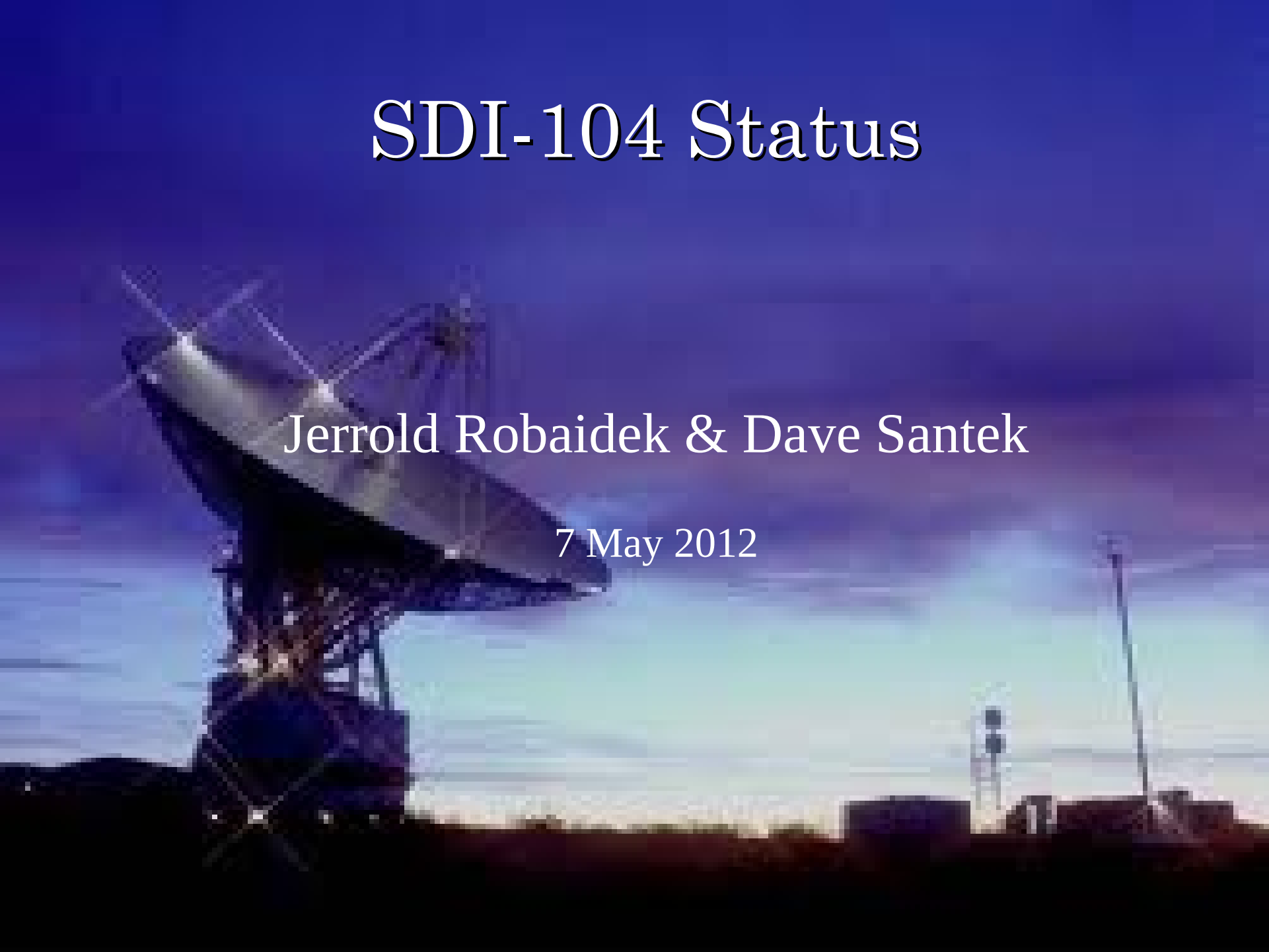
SDI-104 Status



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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

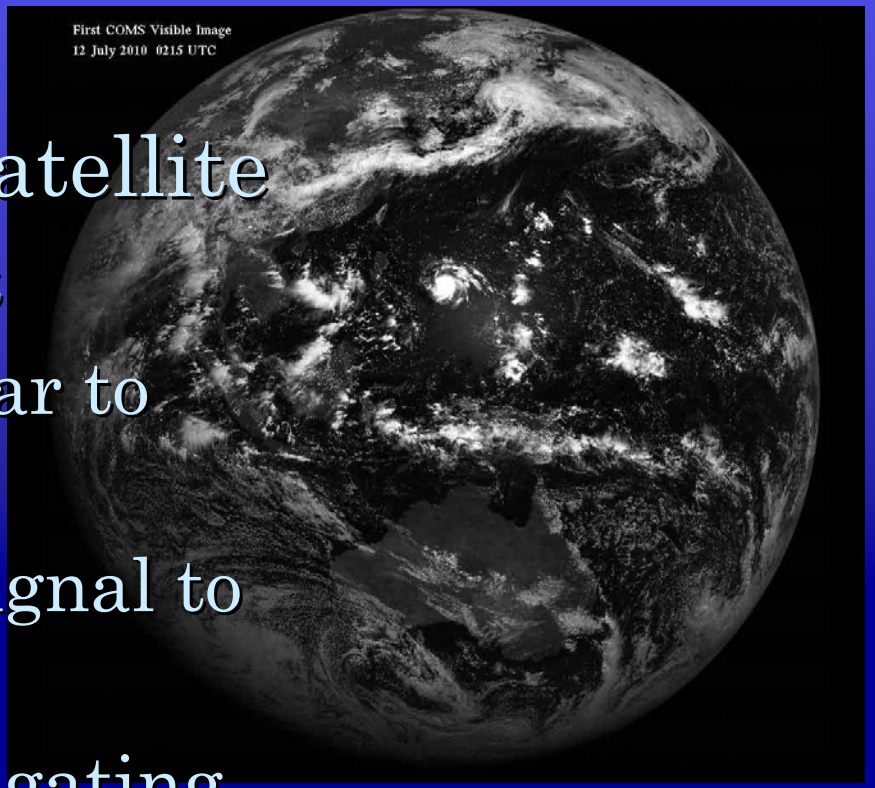
- GOES: up-to-date for all satellites
  - Recent changes for calibration updates and stray light information
- MTSAT: up-to-date for both satellites
- POES AVHRR:
  - Up-to-date for all satellites
  - Unable to test direct reception, although a system is running in Hawaii

SDI-104 Status for Current Satellites

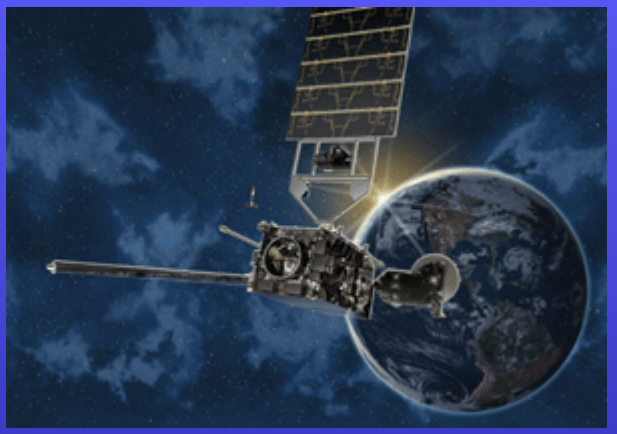
- FY-2: Chinese geostationary
  - Ingestor in use in Japan
- MSG:
  - Not available
- Metop
  - Not available, although under consideration
- Suomi NPP
  - Not available
  - Prototype VIIRS ADDE server
  - McIDAS-V: VIIRS, CrIS, ATMS (under development)

New Geostationary Satellites

- COMS: S. Korean satellite
  - Subpoint: 128º 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