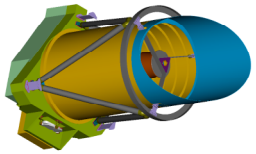
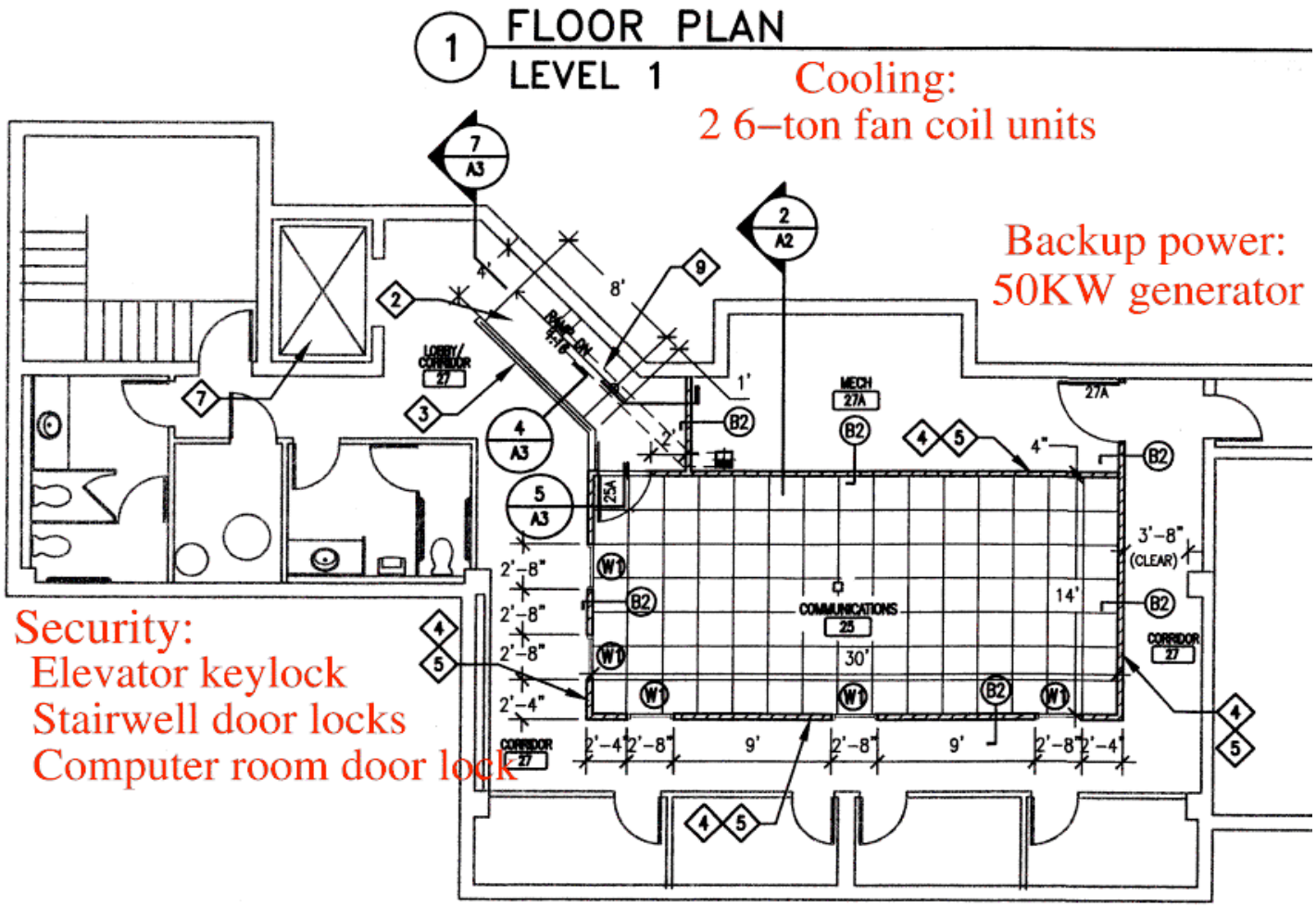


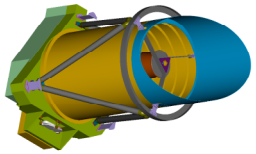
The HiROC and HiCAT

Joe Plassmann, Planetary Image Research Laboratory

Oct 13 2004

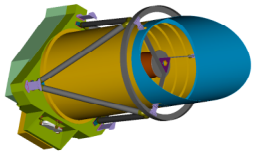
HiROC Computer Facility





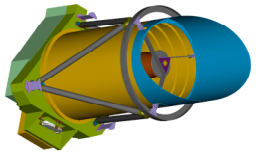
Facility details

- FM200 fire control system.
- Computer floor is 6 inches of concrete covered with static dissipative tile.
- Clipped drop ceiling.
- Designed for 3 sets of 4 72U racks, 3 12KVA UPSs
- Maximum power dissipation in room is 45KW (12 tons cooling spec'ed), redundant chilled water coolers.
- 240 Category 6 network connections throughout building
- 24 pair "fiber triangle" in between Kuiper Space Sciences and CCIT. Tested at 10Gb/sec.



HiCAT hardware support during ATLO

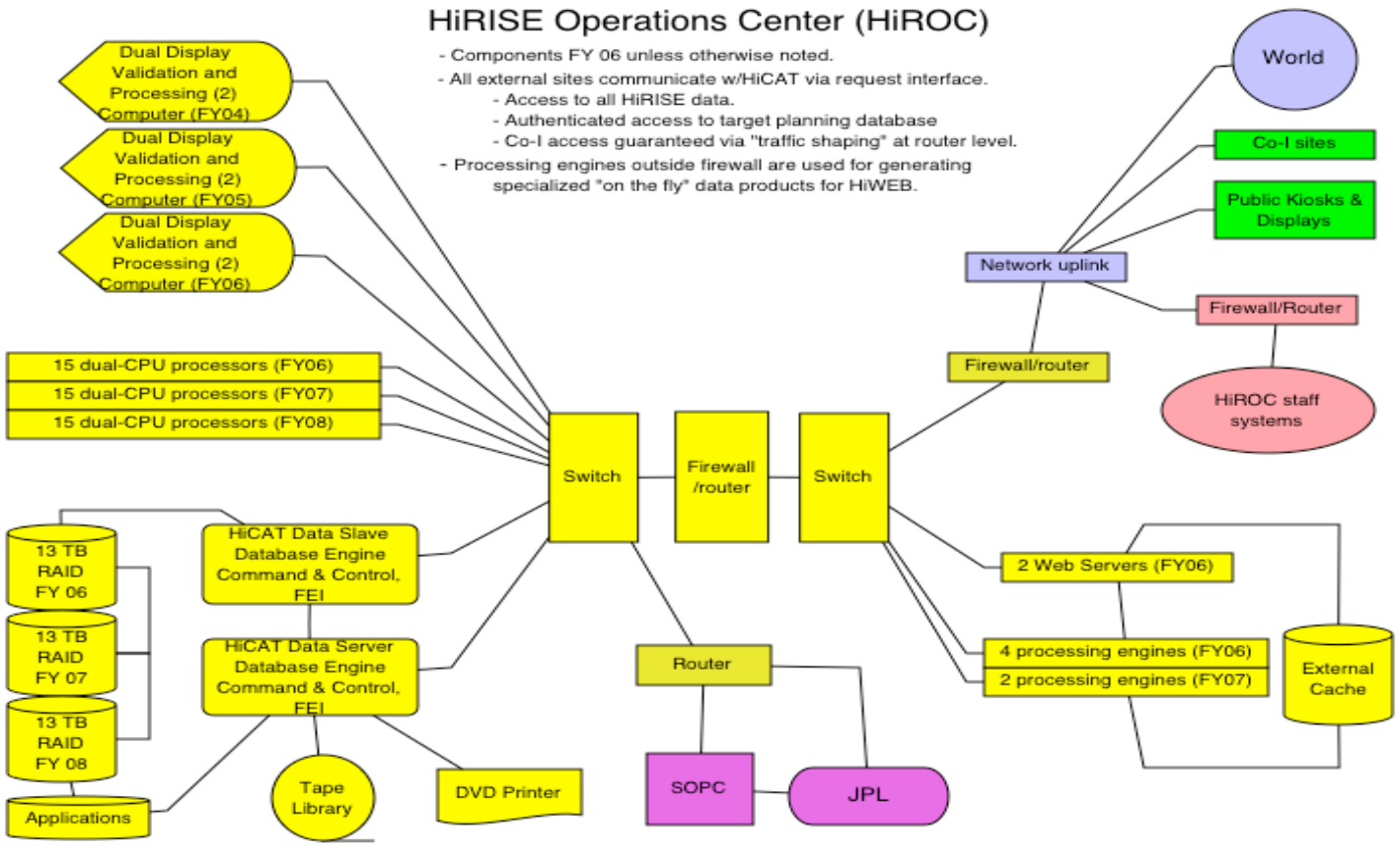
- PIRL (Planetary Image Research Laboratory) computing facilities presently used for testing of HiCAT.
- MySQL server running on Sun Enterprise 3500.
- New MySQL server to be installed on SunFire V210 dedicated to HiRISE.
- 2TB SATA array available for data storage, catalogs, locally attached to Sunfire system, dedicated to HiRISE.



HiCAT Support during Ops

- Dual database servers attached to Fiber SAN.
- Catalog backed up on mirrored RAID array, working image possibly completely in memory on HiCAT servers.
- 1Gb (at least) connection to internal network. Trunked?
- Fully redundant failover operation.
- Access to HiCAT catalog server via filter application to provide extra security?
- Remote backup site?

The HiROC


HiRISE Operations Center (HiROC)
- Components FY 06 unless otherwise noted.
- All external sites communicate w/HiCAT via request interface.
- Access to all HiRISE data.
- Authenticated access to target planning database
- Co-I access guaranteed via "traffic shaping" at router level.
- Processing engines outside firewall are used for generating specialized "on the fly" data products for HiWEB.
Dual Display Validation and Processing (2) Computer (FY04)
Dual Display Validation and Processing (2) Computer (FY05)
Dual Display Validation and Processing (2) Computer (FY06)
15 dual-CPU processors (FY06)
15 dual-CPU processors (FY07)
15 dual-CPU processors (FY08)
13 TB RAID FY 06
13 TB RAID FY 07
13 TB RAID FY 08
Applications
HiCAT Data Slave Database Engine Command & Control, FEI
HiCAT Data Server Database Engine Command & Control, FEI
Tape Library
DVD Printer
Switch
Firewall /router
Switch
Router
SOPC
JPL
World
Co-I sites
Public Kiosks & Displays
Network uplink
Firewall/Router
Firewall/router
HiROC staff systems
2 Web Servers (FY06)
4 processing engines (FY06)
2 processing engines (FY07)
External Cache