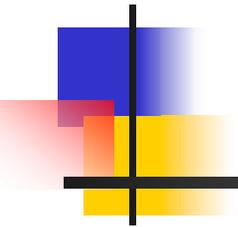


# Site Network Project

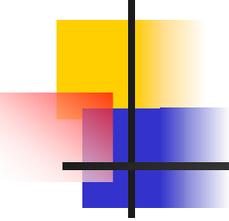


Phil DeMar  
February 19, 2003

# Network Projects versus Network Operations

The Motherhood slide...

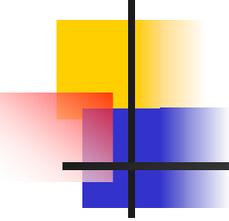
- Network support falls into two basic areas of effort:
  - Operational support / maintenance, and troubleshooting:
    - ➔ The highest priority
  - Upgrade & enhancement of network facilities & services:
    - ➔ Continuous...
    - ➔ Consumes the major part of time & effort
    - ➔ Includes technology tracking & testing/evaluation activities
    - ➔ Consists of many projects, varying in scope, complexity, & cost
- This presentation covers active network projects with significant effort/cost, or impact on the network



# Core Network Projects

---

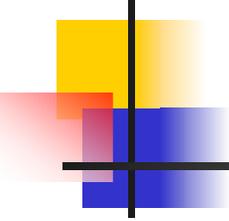
- Currently, no active projects on core facilities:
  - Core network = FCC & WH core routers, border router
  - FCC core component upgraded last fall:
    - ➔ 2nd fabric-enabled 6509 deployed on FCC2E
- Core network projects looming on the horizon:
  - Border router replacement planned for this summer:
    - ➔ Higher gigabit ethernet port count & thruput capacity required
    - ➔ Need to ensure we don't break NetFlow, Auto-blocker, etc
  - WH & FCC core routers due for processor\switch fabric upgrades later this FY



# FCC Network Projects

---

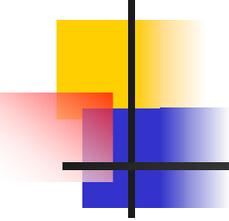
- CD LAN (FCC offices) upgrade nearly completed:
  - Migration of FCC2 offices to 100Mb/s done
  - Issue of FCC1E & a few FCC3 offices on 10Mb/s cable remains; need \$\$\$ to upgrade them...
- Moving toward 1000B-T support in computer rooms
  - Copper GigE module on order for FCC2 6509
  - Could support 1000B-T on FCC1 now; no requests yet...
- Planning network support for SDSS move to FCC
  - Modest sized SDSS FCC switch is planned (Cat 4506)



# WH Network Projects

---

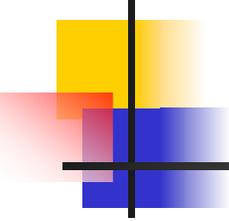
- **Fiber-to-the-desktop (10Mb/s desktops --> 100Mb/s)**
  - CD/SDSS areas inventoried & waiting for budget:
    - ➔ WH6E, WH7W, WH8E cost = \$23k {WH9W already done...}
    - ➔ WH9X (CMS area) cost = \$22k {addtl fiber needed...}
  - Requests from other Divisions / Sections:
    - ➔ PPD miniBoone offices (WH10E) request received; inventoried
    - ➔ Model for other Div/Sec; they pay office end (~\$325/office)
- **Working on enhanced wireless in Auditorium:**
  - Four (or more) APs in time for Lepton/Photon conf.
  - Also working on coverage in lobby area



# Security-related Network Projects

---

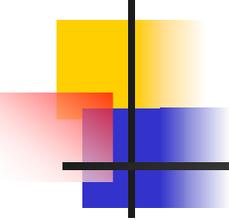
- Working on Network Management LAN:
  - Would restrict access to core network devices/servers
  - Network users wouldn't notice any change
  - Initial implementation: isolated LAN btwn FCC & WH8
- Testing MAC address-keyed DHCP service
  - In anticipation of requiring registration for DHCP addr.
- Planning & strategizing on support of a multi-tier network security architecture:
  - Subnet 5 (in FCC...) is a prototype firewall protected LAN



## Misc. Other Network Projects...

---

- Migration of site-wide Johnson building controls system to facility network:
  - Isolated vLAN created covering much of the site
  - 31 locations in total; scheduled to migrate 2/week
  - Expect to get all but 5 done in this FY
- Fixed Target area network upgrades continue:
  - Moving 6 Meson area sites to dedicated fiber back to EAD
  - Only a couple FT locations (TPL, PAB) still using shared infrastructure



## Misc. Other Network Projects (cont.)

---

- VDSL in Village being deployed where needed
  - Roughly 40 bldgs have 5Mb/s LAN connectivity
    - ➔ But need to alleviate 5Mb/s wireless bottleneck w/ fiber
  - Investigating options for sites that don't have available phone lines