



---

# Testbeam Controls and DAQ 2001

Thoughts

Ideas

Possibilities

Propositions



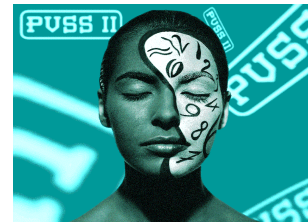
# Testbeam Controls and DAQ 2001

- ◆ Setup/Infrastructure

- Situation and Plans

- ◆ Controls with PVSS

- ◆ Logging



- ◆ Central Data Recording

- ◆ Bookkeeping

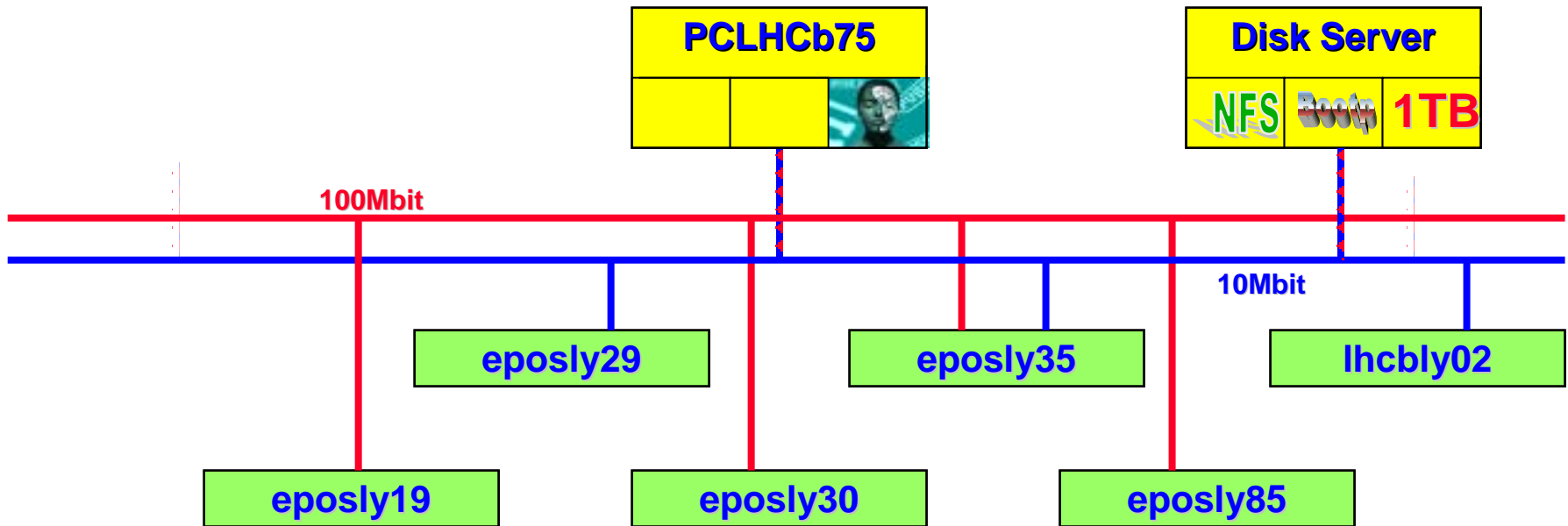


- ◆ Support

- ◆ Conclusions



# Testbeam Layout Today



## Final Setup Model



# Supported Infrastructure

## ◆ Processors (RI Os)

- eposly19,29,30,35,85
- lhcbly02

## ◆ Terminals

- xnal27
- xnlhcb08,18,19,20
- xnonline02,09
- xx7b

are they all used concurrently?

## ◆ PCs

- pclhcb75,76 → T7, T11
- pclhcbxx,yy → X7b
- disk server → X7b
- mish161
- pclhcb10,36,47

## ◆ MACs

- MACEPHL03
- MACLHCB01,02

what is their function?

## ◆ HPs

- hplb01,02,03

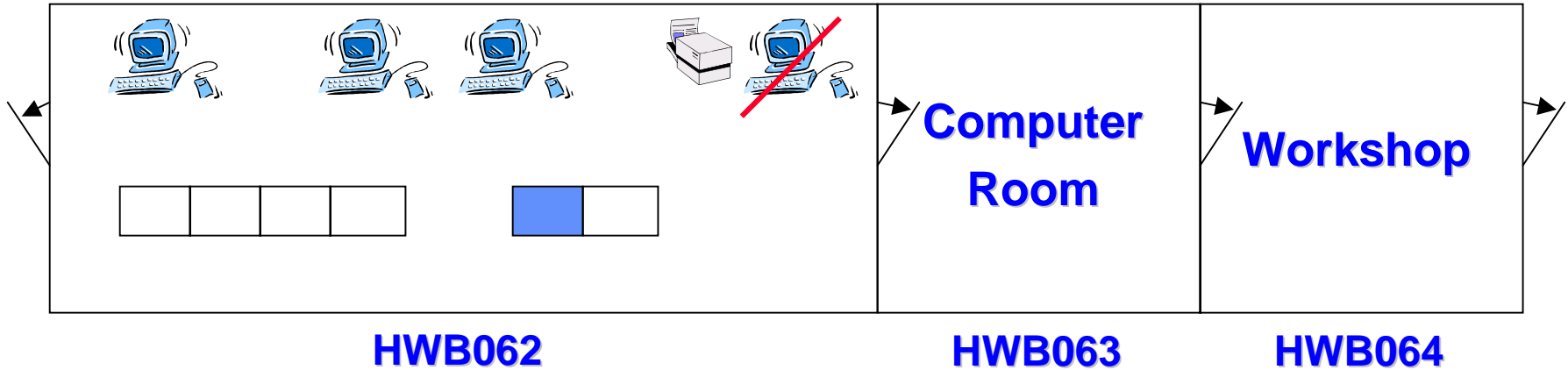
## ◆ Printers

- B157-EPT7-HP
- B180-HWB62

to be phased out asap



# X7 - Barracks 062/063/064

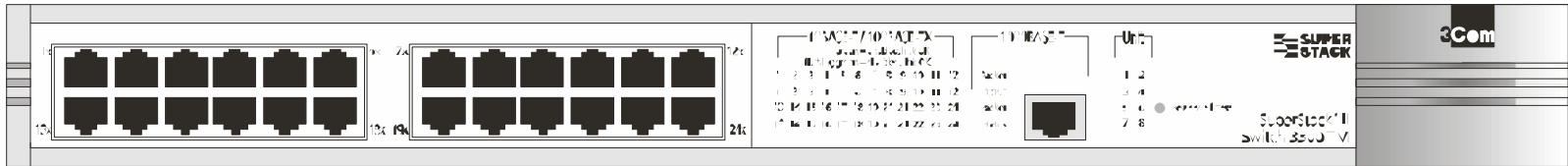
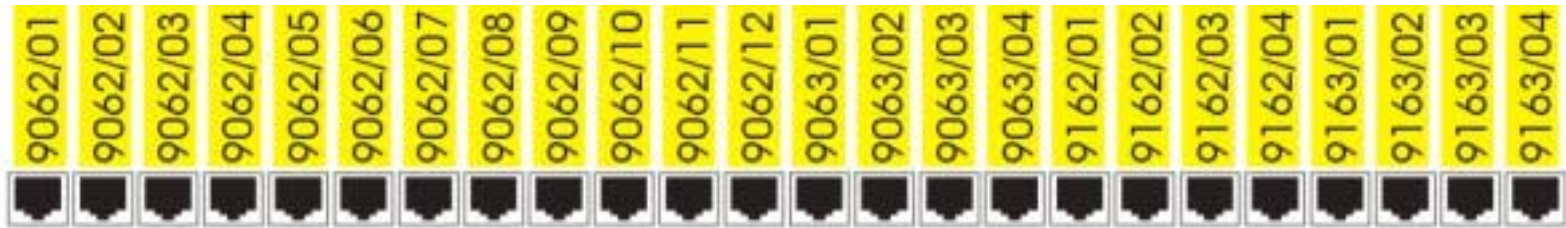


## ◆ Main LHCb testbeam DAQ/Controls facilities

- main controls PC
- disk server
- solid network (1 Gbit disk server - 100Mbit RIOs)
  
- also “backbone” for east hall operations



# Network Infrastructure X7





# Accounts - Present Situation

## ◆ LHCb-Testbeam Support “owns” these “old” accounts:

- VERTEXTB, LHCBINTR, LHCBOTT, LHCBPS, LHCBECA, LHCBCAL, LHCBMUON, LHCBTB
- open to AFS, NOVELL, PLUS and TAPES

formerly  
David Steele

new!

## ◆ Newly created are:

- LHCBVELO as replacement for VERTEXTB
- LHCBMU2 as requested
- LHCBRICH as “spare”

## ◆ New machines (LINUX) use AFS authentication



- ◆ New system as shown by Richard
  - cascade stages control
- ◆ Commissioning of first system
  - VELO
- ◆ Other Controls???
- ◆ Beam Control???
- ◆ Environmental Logging???

**Done!**



# Central Data Recording

## ◆ Central Data Recording in CASTOR

- central CERN service
- easily accessible
- "automatic" backup (writing to two separate tapes)



## ◆ Triggered by script

## ◆ Automatic entry in bookkeeping database



# Data Management System

## ◆ WWW-ready

- ORACLE database
- similar to MC bookkeeping

## ◆ Database

- suitable for all data
  - keeps track of files
  - independent from recording program
- restrictable
- browsable

## ◆ Logged Data

- Run number
- Recording Program
  - Name
  - Version
- Detector Setup
- Type Information
  - Data
  - Event
- First/Last/Number of Events
- File Location Information
  - Data
  - Logfile
- Environmental Information
  - Beam (if available)



# Testbeam DAQ Support

- ◆ Central hardware
- ◆ Cascade Stages Control
- ◆ Other controls?
- ◆ Environment logging?
- ◆ Data Flow
  - Recording: Central Data Recording (CASTOR, DMS)
  - Monitoring? user tasks running on DAQ system?
- ◆ New website  
<http://cern.ch/LHCb-Testbeam>
- ◆ New account  
[\*\*LHCb-Testbeam.Support@cern.ch\*\*](mailto:LHCb-Testbeam.Support@cern.ch)



# Conclusions

---



# Stager interface

- ◆ **There are two modes of migration/recall:**
  - **explicit:**
    - `stagein -M /castor/cern.ch/user/b/ baud/test /tmp/test`
    - `stagewrt -M /castor/cern.ch/user/b/ baud/test1 /tmp/test1`
    - `stageout -M /castor/cern.ch/user/b/ baud/test2 /tmp/test2`
    - ...
    - `stageput /tmp/test2`
  - **implicit:**
    - `stageout -M /castor/cern.ch/user/b/ baud/test2 /tmp/test2`
    - ...
    - `stageupdc /tmp/test2`
- ◆ **Checking if a file resides on disk**
  - `stageqry -M /castor/cern.ch/user/b/ baud/test`
- ◆ **Removing a file from disk pool**
  - `stageclr -M /castor/cern.ch/user/b/ baud/test`