

# Online Status Report

19-March-98

*Focus on status of outside help*

- **Computing Division Requests**
  - *definitions*
  - *status*
- **Beams Division Requests**
  - *definitions*
  - *status*
- **problems...**
  - *evaluation & comments*
  - *what next?*

## CD Requests: Definitions

- **Data Logger**
  - The process(es) which receive event data from Level 3, appropriately stream the data, and pass into RIP facility.
- **RIP (Data Logger -> FCC path)**
  - The high bandwidth connection from D0 to FCC
  - All the associated control and monitoring
- **GUI interface to Run Control (TAKER)**
  - The user interface (NT resident) for controlling the experiment DAQ
- **Data Distributor and Data Clients (HOIST and EXAMINE)**
  - The infrastructure for the distribution of event data from host (Digital UNIX) to clients (Linux, possibly NT).

## CD Requests: Definitions

- **DAQ via Control Path**
  - The debugging and commissioning tool in which VME-based DAQ components (VRBs) are read via the Control Path.
- **GUI interface to High Voltage control**
  - HV control and monitoring applications for the Control Room
  - Implies some knowledge of HV front end processor implementation
- **Database Support**
  - General expertise in establishing, monitoring, and tuning a database system.
- **UNIX (Digital UNIX, Linux) system management support**
  - Expert support for common system management duties: product releases, backups, etc
  - Strategic system development support

## ... an aside

- **We are interacting with (at least) four departments within the Computing Division:**

- **ODS (Online and Database Systems)**
  - Ruth Pordes, Gene Oleynik
  - DART, Databases
  - *probably the greatest source of expertise and manpower*
  - *have other FT99, CDF commitments*
- **HPCC (High Performance Computing)**
  - Don Petravick
  - RIP (plus HSM, robotics, etc)
  - *need continued dialog with this group as opposed to specific assistance*
- **OSS (Operating System Support)**
  - Dane Skow, Frank Nagy, Wayne Baisley
  - *'CDF/D0 Task Force', so responsible for large number and variety of systems*
- **DHG (Distributed Hardware Group)**
  - Al Thomas
  - Networks, PC support
  - *high bandwidth route to FCC*

## CD Requests: Status

- **Data Logger**
  - Lars Rasmussen has been assigned to task!
- **RIP (Data Logger -> FCC path)**
  - Progressing. Plan will solidify this summer with initial hardware acquisitions.
- **GUI interface to Run Control (TAKER)**
  - Not started, though ODS people making effort to learn Python
  - Believed to be committed to developing based upon DART model
- **Data Distributor and Data Clients (HOIST and EXAMINE)**
  - Existing base of DART products, but specification of D0 modifications has not started - hence no CD signoff on effort

## CD Requests: Status

- **DAQ via Control Path**
  - In progress at Lab D. DART people working on extensions for multiple-crate mode.
  - Clear CD commitment
- **GUI interface to High Voltage control**
  - Not started, awaiting many precursors
  - No CD commitment seen as yet
- **Database Support**
  - Little specific Online activity
  - CD appears committed to Offline efforts
- **UNIX (Digital UNIX, Linux) system management support**
  - Several small requests satisfied
  - Working on Fermilab products installation
  - No clear level of support; no evidence that D0 will 'get' a system manager.

# BD Requests: Definitions

- **Accelerator Console**
  - The D0 Control Room connection to the world of the accelerator, both for control and monitoring
- **Information Exchange**
  - Methods and infrastructure to obtain beam information from the accelerator and feed back running (luminosity, losses, beam position) information
- **Control System tasks**
  - 1553 support within EPICS
  - continued maintenance of legacy Token Ring based front ends

## BD Requests: Status

- **Accelerator Console**
  - No work done
  
- **Information Exchange**
  - No work done
  
- **Control System tasks**
  - Bob Goodwin has been enlisted to write EPICS device control for 1553. This may open the way to eventual replacement of Token Ring systems with EPICS front ends, as already planned for SVX-based subsystems.

## Evaluation & Comments

- **Outside work requests have to be specified in detail**
  - We haven't done this for most projects
- **Major projects depend upon, or we would prefer to be built upon, infrastructure elements built by D0**
  - Client / Server communication package
  - Controls DAQ package
  - edm, d0om
  - COOR, Alarms, Downloading, ...
- **Major projects require significant interaction with D0 users**
  - interaction of EXAMINE data distribution mechanism with trigger scheme, usage modes
  - GUI needs
  - Database needs
  - Accelerator interface needs

## Evaluation & Comments

**We are at the point where  
it is D0 efforts (or lack thereof)  
which are inhibiting progress**

### **Most urgent needs:**

- **Someone to take responsibility for coordinating EXAMINE activities**
  - understand DART capabilities
  - work with Lab D (Silicon), Lab 3 (Fiber Tracker) efforts
  - specify Run II requirements
- **Completion of Client / Server application core**

## What next?

- **More detailed agreement with CD on various projects?**
  - *But may need better specification of project requirements ...*
  - *Need to better understand system management support*
- **Greater commitment needed on D0's part to satisfy immediate needs**
  - *Critical path (within Online schedule) being delayed by inadequate effort*