

ODS Debriefing

- 3 relatively disjoint department
 - Online for experiments
 - Database Systems
 - Globally Distributed Computing
- Group leaders are ALL new – department structure in place starting April 2002.

Online for experiments – Run II

■ **D0**

- Supporting ODS supplied components – csl, data logger, etc. Jerry/Dehong
- Basic online integration problem solving - Jerry
- L3 supervisor (maintenance mode now) – Dinker
- Removing ourselves from 24x7 support with Maartens resignation
- L3 Linux kernel support – Dave Slimmer
- Interact with: Stu Fuess, Gordon Watts, Ron Rechenmacher

■ **CDF**

- Supporting Merlin and Software Event builder (Luciano)
- Supporting CDF “custom” VxWorks kernel (Dinker).
- Support Slow control global pages (Margherita)
- Support of Icodile: slow control -> oracle transfer program (Margherita)
- Interact with – Frank Chlebana, Bill Badgett, Steve Hahn

■ **Front Ends**

- Vxworks kernels for 300 run II nodes (David/Dinker)
- Camac – still in use both at CDF/D0 (Dave Slimmer)
- Interact with – Geoff Savage, Frank Chlebana, Jim Patrick

■ **Configuration/Tools**

- SRT (Bruce)
- Insure/purify (Bruce)
- Kai/Totalview (Bruce)
- DORTE (Dave R.)
- Interact with: Amber Boehnlein, Art Kreymer, Liz Sexton, Alan Jonckheere, + user base)

■ **Test Beams/Test Stands**

- ESD – CDF/SVX D0. Vxworks boot home (David Berg/Dinker)
- SVX Test Stand Software (Steve Nahn at Yale)
- BTeV Pixel test beam Gui – Dehong under DAQ effort led by Milan
- BTeV Pixel test beam sysadmin support – (Dave S.)
- Pixel PCI test card software (Dave S.)
- CKM PCI test card software (Dave S.)
- Interact with: Rick Mahlum, Ted Zmuda, Gabriele Chiodini, Dario Menasce, Bill Haynes)

■ **ODE (In use by P907)**

- Message passing (Luciano)
- Error Logger (Luciano)
- Run Control (Bruce)
- Configuration (Dave S.)
- Interact with: Ron Solz, Dave Asner

■ **BTeV**

- Keeping DAQ afloat for reviews (Margaret)
- DAQ interface to RTES (Margaret)
- Software application framework for Vanderbilt boards (David B)
- Framework for ESE DSP prototype boards (Dinker)
- Interact with: Joel Butler, Klaus Honscheid, Mark Bowden, Jim Kowalkowski, Vince Pavlicek

Online for Experiments - Up and coming

- Run IIA
 - Rewrite of Icycle (Margherita)
 - DAQ Support at CDF
- Run IIB
 - Upgrade of D0 online machines to linux from osf1 for run II b
 - Supporting tornado for new embedded processor boards for run II B. Possibly more Linux nodes too.
- R&D
 - P907 in data taking mode
 - CKM
 - BTeV DAQ Architecture
 - CMS DAQ

Database Support – Run II

■ CDF

- pre-production linux replication machine. Failover working fine, but has had periodic crashes. New kernel installed per Oracle (Nelly, Anil)
- 9i server upgrades for replication at CDF. Online machines in January. Offline following
- CDF Connection Management rewrite (Dennis)
- Database statistics monitoring tool to help understand usage patterns. Prototype up. Gui needs lots of work. Server need to move to a production environment. (Yuyi)
- Codegen lite rewrite by Paulo needs some interface code (Dennis)
- Interact with: Alan Sill, Dmitri Litvinsev, Bill Badgett, Richard Jetton, Jim Kowalkowski

■ D0

- DAN – D0 database server next generation (Steve White, Margherita for testing and configuring, Julie?)
- Implementation and support of monte carlo into sam, with coordination of cdf design requirements. (Carmenita)
- Interact with: Taku Yasuda, Wyatt Merritt, Lee Lueking, Jim Kowalkowski, Steve Kovich

■ Both

- Continued Monitoring and Tuning of production machines (Nelly, Diana, Anil, Julie). Note the databases themselves are VERY stable (no corruption, high availability, etc), BUT users are often affected by performance problems.
- Continued support of Schema changes in all applications (Julie, Diana for SAM)
- **Implementation and support of dimensions into Sam. Manpower unknown**
- LOTS and LOTS of integration problems solving (all of DBA group + Margaret)

Database Support – R&D

- New products always being tested and implemented. Currently oracle streams, oracle 9i, designer 9i, oem 9i, 9i client. N.Stanfield, A.Kumar, D.Bonham, Y.Guo
- Replication methods to and from oracle and freeware databases (mysql and postgres) for minos and cdf. S.Lebedeva, D.Box, Y.Guo
- Packaging and installation support of freeware databases for general user community (Svetlana)
- Backup strategy for very large databases
- Minos work
 - Populated the oracle replica of the offline minos mysql database. Used the mysqldump facility to dump the entire database to an ascii file, and perl scripts to reformat the dump into sql*loader input files which were then run on minosdev. now have a reasonable test-bed for integrating my oracle odbc driver with the minos software.
 - Attempted to build oracle_odbc_driver on a solaris platform to check reports from off-site of memory leaks on this platform. I mainly discovered that my autoconfig and automake scripts are very linux-centric and failed in the link stage.

Database Support – Miscomp

■ Database

- Continued support for a production environment, on call schedule, production releases, database monitoring. This includes databases for helpdesk, ngop, miscomp, d0miser, tapesdb. N.Ho, S.Jones, J.Trumbo, N.Stanfield
- Continued support for the financial group, including Oracle Discoverer and File Maker Pro. J.Trumbo, S.Jones
- Continued support for d0 Miser, including MS Access S.Jones
- Interface with: Maurine Mahilik, Mike Smith, Karen Prosapio, Adam Walters

■ Application

- Project Accounting database and application. S.Jones, N.Ho, J.Trumbo
- Day to Day customer support for equipdb, mischief, misnet, misjob, sysadmindb, misweb, etc.– S.Jones, N.Ho, J.Trumbo
- Miser & Matrix support for CD and D0. S.Jones
- Interacts with: Barb Angelos. Adam Walters, Mike Smith, Karen Prosapio

Database Support – Up and Coming

■ Run II

- Connection Broker at CDF (Yuyi)
- API work necessary for freeware replication at CDF – this is A LOT of work
- Additional onsite replication for CDF.
- Limited support(setup and maintenance) of off site replication for CDF.
- Moving db servers off of d0ora1 with a failover process. A.Kumar, S.White
 - Replacement for d0ora1
 - Replacement for fcdfora1

■ R&D

- Assist with calibration database for R.Soltz, p907 j.trumbo
- Look for new backup strategy for very large databases.
- BTeV electronic production database
- BTeV calibration database
- Oracle and Linux, do they work as advertised? Do we get support? Can our applications run on them? All people in the current ODS group would be involved in these questions.
- Miscomp
 - Leave Usage (Norman)
 - Node Registration (Shirley)
 - Bar code reader?

Globally Distributed Computing

■ JIM

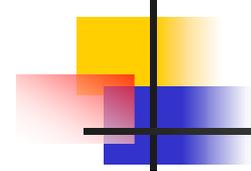
- prototype released Oct 10th and demo'ed at D0 collaboration meeting. Includes:
 - remote job submission,
 - grid job submission with brokering of SAM projects based on the amount of the project's data cached at stations
 - web-based monitoring of execution sites, submission sites and jobs, and sam stations.
 - Support for both D0 and CDF
- V1_0 will include improved installation procedures and error handling
- JIM and DCAF will be included in the CDF panel for SC2002
- By SC2002, we plan to have 5-7 D0 and CDF sites combined doing analysis on the grid with sam and jim (well, capable of doing analysis.
- Working on integrating D0 Monte Carlo software with JIM – completed by year end?
- Done by Igor, Gabriele and
- Interfaces with: Dave E., Rod Walker, Greg Graham, Frank Wurthein, Lee Lueking

■ GRID Data Handling proposal for Run II Computing

- describe an updated view of the data handling architecture in light of network capable storage systems and network capable applications. (Igor)
- Interfaces with Igor M, Frank w.

■ SAM

- Testing and debugging of the clued0 Station (Andrew)
- Global File Routine Implementation (Andrew)
- NFS based SAM Cache (Andrew)



Community Service

- SC2002 (Jerry)
- Mae Chau training (Julie/Shirley)

Beams Division Work

■ Flying wires

- The existing pbar flying wire system seems to be stable. The VME upgrade hardware for the system will probably not be available until next year.
- The system setup for Tech support is progressing. Some additional motor amplifier wiring needs to be constructed. Once all of the hardware is in place, we will do some basic motor parameter tuning tests to check the hardware. The computer and motion hardware will then be delivered to Tech support.
- An IBM PC clone based system will be setup in Dale Miller's tech area for starting the port of the main ring flying wire software to be used for the new accumulator flying wire system. The existing software will need some additional work to port it from LabView 4.1 to LabView 6.1, as well as some adaptations for the new motion control hardware.

■ Accelerator studies application development

- The application is available and usable, but not yet finished. Wasn't tested out in real studies. The application reads an XML file with a study configuration and allows the user to change it through the GUI. User can start/stop study at any time. There is a small feedback on the status bar (Luciano)

■ Booster Monitor application progressing.

- First production release – has Configuration editor in XML format. Working on plotting and monitoring. (Jerry)

■ Tornado II support (Dinker)

■ Enhancements for the GUI part of Trace (Dehong)

- Interacts with: Ron Rechenmacher

Concerns

- Several efforts do not have a bench in the department, and individuals are key:
 - Dave S. does Camac, embedded linux, PCI test cards
 - Database application people
- No Available bodies for items in red
 - Much of the post Run II work. We are not doing sufficient R&D in daq or database areas. We (the Division) have a specific commitment to CMS ...
- Oracle as a long term strategy
 - Licenses model changes 2004. WE ARE NOT PREPARED IF IT BECOMES UNAFFORDABLE.
 - Not enough resources in freeware evaluation.
- DBAs and Application people are becoming the defacto support staff as experimenters move on (online dba, calibration manager, interfaces to freeware databases, etc).