GEM TN-93-477

GEM Computing Subsystem Acting Steering Committee Meeting - SSCL

September 23, 1993

Abstract:

Minutes of the GEM Computing Subsystem Acting Steering Committee Meeting on September 23, 1993.

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Present:

Yuri Fisyak
Vladimir Glebov
John Hilgart
Ken McFarlane
Antonio Morelos
Lee Roberts
Irwin Sheer
Tomasz Skwarnicki
Henk Uiterwaal
John Womersley
Gary Word

PRCD events of interest, J. Hilgart

The following items were described (See attached transparencies for details.) PDSF transition to PDSF III; personnel changes in PRCD; conferences. The discussion following this talk indicated that the contents were more appropriate for another forum. The CSSC should be concerned about more general issues.

Global Control System work at SSCL, H. Uijterwaal

An EPICS test stand is installed at the SSCL, and has been exercised by Henk. The biggest open issue is whether or not the EPICS GUI can be replaced by TK/TCL. See transparencies for more details. During discussions of some relevant issues, it became apparent that Henk was doing system management work which should be off-loaded to IS in the ideal world.

SIEGM code-management conversion, Y. Fisyak

Torre has a tool: pam2unix, which automatically converts PATCHY-maintained code to regular FOARTRAN files, while preserving the old structure. It only takes about 5 minutes to run this on SIGEM. Torre also has a scheme to use GNU make procedures to build SIGEM, but it is complicated enough that Yuri hasn't gotten it to work. Some of the problems with the conversion of SIGEM could have been avioded if naming conventions has been used consistently. Dave Schmid's de-patchyification program was also tried, but it is too SDCSIM specific for use on SIGEM. J. Hilgart offered to help with the GNU make problem.

Maintenance of a version of SIGEM on VMS was also discussed. Yuri feels that a VAX version has to be maintained simply because the FORTRAN debugging facilities are superior to those available on UNIX platforms. That point was debated, however. In particular, T. Skwarnicki testified to having gone through the VAX -> UNIX FORTRAN debugging, with only a few days of learning. A suggestion to encourage that IS mount the UNIX disks on the VAX was briefly debated without real consensus.

System Development documents, and other thoughts, K. McFarlane
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Ken recommends to have a fairly simple project plan. The evolutionary delivery method seems very appropriate for us. In this approach, the analysis-design-deliverable cycle should be 3 months. In our current system, our documentation requirements ssem to be "killing" us. Irwin Gaines is part of the problem we have with projects, as he absolutely insists that the projects should have long-term focus, and _not_ be tied to the testbeam schedule. The CSSC reached the consensus that the two main common projects--Framework and Data Mdoelling--should definitely have deliverables and timetables which are tied to the testbeam requirements.

How to get resources from the collaboration

There exist many people engaged in computing activities who are not coordinated by the computing subsystem (CS). It was suggested to use the upcoming collaboration council meeting to hold a CS meeting, at which every subsystem would be asked to send a representative to tell us what computing they are working on, and what they are interested to work on within the context provided by CS. The CS will not benefit from another meeting with a different name but the same faces from the SSCL.

As a postscript to this item, the CS meeting which was held later on was the first real success in bringing together other subsystem members. Real progress on the issue of what the other subsystems are working on/would like to work on under CS coordination was accomplished.

submitted by John Hilgart

GCS Work at the SSCL.

Henk Uijterwaal, SSCL, September 23, 1993.

- Developments during the past weeks.

1) Went through the learning curve of EPICS. Read the manuals, looked into the details of using EPICS.

2) Solved the hardware problems.

3) Connected the system to the network. This causes communication problems inside EPICS. It is not clear whether this is a SSC networking problem or an EPICS bug. I'm working with Bob Dalesio to find the problem.

4) Created a temperature control system, consisting of:

   - User interface.
   - Monitor system for the temperature.
   - Alarm mechanism.
   - IOC connected to a power supply and thermocouple.
   - Control program on the IOC

   This took about 2 days starting from scratch, using the existing EPICS software and tools.

5) Installed TCL (7.0b3) and TK (3.3b3) on the machine.

- The next steps:

1) Go through the learning curve of TCL/TK.

2) Find a few other things to control and develop the necessary EPICS applications. One application could be the TTR high voltage supplies. This involves modifying the existing EPICS software.

3) Show that the EPICS OPI can be replaced with TCL/TK.

4) Look at the other EPICS GUI's. Try to replace them with TCL/TK so that everything looks the same to the end user.

5) Evaluate EPICS, see what has to be added for the GEM GCS.

6) Write "MOU" for system management, have IS install typical SSC tools on the machine (emacs, lwprint, backups...)

7) .....

PRCD Update

Personnel Changes:

o David Liu leaving PDSF support group (2nd person in a month)

o Jing Pan will leave the CEG group in a couple weeks.

PDSF 2.5 –> III transition

o GEM and SDC each recieve 72 GB of disk space.

o The disks have arrived and are being configured this week.

o The GEM filesystems with have the path:

/home/pdsf/gemNM ,

where,

N = {0 , 1, 2} for disks belonging to the {SUN, HP, SGI} clusters, and M is a serial number.

The Current Filesystems

o /home/dssg{0,1,2,3}/gem : 12 GB total, most users have login home on /home/dssg0/gem. 95% full

o /home/dssg0{0,1,2,3}/gem2 : 12 GB total, mostly full

o /home/dssg{0,1,2,3}/gemlib : 2 GB total , mostly unused

o /home/dssg{0,1,2,3}/gemtmp : 2 GB total, mostly unused

o /home/dssg{2,3}/gemscr{1,2,3,4} : "gemscr" , 8 GB, full

36 GB total

Users have private areas scatterred wherever space is available.

The new filesystems

The names, corrals and assignment of the new file systems are:

Filesystem	Size	SUN	HP	SGI
gem{n}0	4 Gb	User	User	Cal*
gem{n}1	"	User	User	
gem{n}2	"	Physics	Physics	
gem{n}3	"	Physics	Physics*	
gem{n}4	"	Cal	Cal*	
gem{n}5	"	Comp	DAQ	
gem{n}6	"	Muon	Muon*	
gem{n}7	"	Tracker	Tracker*	
gem{n}tmp	"	temp	temp	

*) Held in a reserve pool until needed

We need a disk czar for each subsystem. Candidates are being contacted. General coordination is by Henk Uijterwaal and John Hilgart

Assimilation period for comments, etc.: 9/21 – 9/28
Users can move themselves to the new filesystem during 9/28 – 10/5
Other users moved automatically in following days.

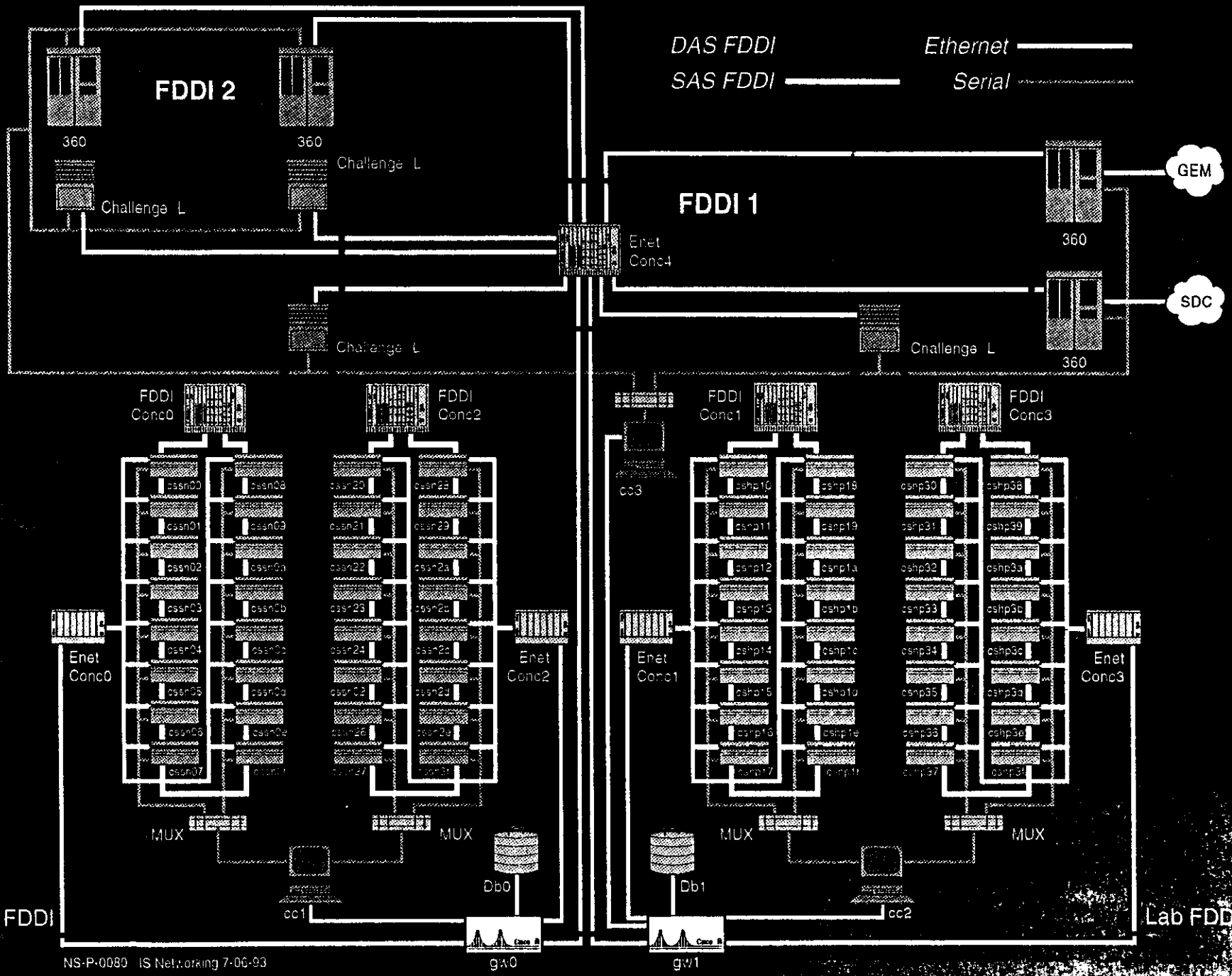
Conferences

- o International Conference on Software Engineering, Artificial Intelliegnce, and Expert Systems , 4 – 8 October

- o HEPIX Pisa, 11–14 October

- o HEPIX U.S. (SLAC), 27–29 October

Physics Detector Simulation Facility



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