



Communications tools



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- Criteria for CALICE
- Technique and Realization of CALICE control room

Contents

- Overview Fermilab (experiment)
- Overview DESY (remote control room)
- Conference System(s)
- eLogbook
- Results
- Future aspects

IIL



- Web Based (no special software needed)
- Easy and fast to implement (<4 weeks)
- Easy to maintain
- Not too expensive (<10000 €)
- Nice to use (just start everywhere from everyone)





Costs and Size of Control rooms

• High cost: nice look and feel, impressing, PR relevant, Institute relevant

- Medium cost: mundane, functional, large collaboration relevant
- Low cost: functional, fast realization, feasible for everyone





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Technique and Realization





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Concept





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Experiment at Fermilab





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Control Room at DESY



CALICE Control Room at DESY

Control Console



Two DESY standard computers on the client site, each with 4 Monitors and a Java enabled browser - that's all.

The idea behind this simple structure is also simple: we integrated all intelligence and communication hard and software on the Fermilab site. No

special knowledge is necessary, apart from how to install a computer and use it, to make a connection to the CALICE control system at Fermilab. This does also mean, if an other person or institute want to get control of the CALICE experiment, a single https connection is necessary. PC 1 with browser PC 2 with browser

Conference System



The counterpart of the Fermilab conference system comprise out of a wide TV screen, one camera and a computer system including the software

Control Room



To give the shift crew the possibility to do good work, a pleasant area has been created. The room was equipped with well formed furniture, blue carpets, chairs, a proper blue wall as well as a sliding door which gives the feeling of expanse.

tcp

tcp

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3603 tcp

eLogbook



The common eLogbook

Since October 2001 the documentation of all accelerator operation relevant information at FLASH is accomplished by using the "electronic logbook" developed by the DESY MCS4 group. Due to the broad acceptance and usage of this service this e-LogBook is also used at several other accelerator and detector facilities like CALICE

Every standard web browser can function as a user interface for the input of text and retrieval of information. Also sending new entries by email is backed. Graphical data is inserted by low level postscript print services to offer a platform independent input interface. The generation of PDF is provided for high quality printouts. All data is stored in the today widely used XML format to allow high performance searches and interfacing with other web based services. A standard web server is generating dynamic content by use of JAVA servlet technology.



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Conference connection





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The ESnet is the Conference Host of CALICE

Esnet, the Energy Science Network is a high-speed network serving thousands of Department of Energy scientists and

collaborators worldwide. A pioneer in providing highbandwidth, reliable connections, ESnet enables researchers at national laboratories, universities and other institutions to communicate with each other using the collaborative capabilities needed to address some of the world's most important scientific challenges.

Managed and operated by the EShet staff at Lawrence Berkeley National Laboratory, EShet provides direct connections to all major DOE sites with high performance speeds, as well as fast interconnections to more than 100 other networks. Funded principally by DOEs Office of Science, ESnet services allow scientists to make effective use of unique DOE

research facilities and computing resources, independent of time and geographic location.

The same kind of network, but with the possibility of a higher bandwith for HD cameras is existing in Germany, called DFN - Deutsches Forschungs Netzwerk





Conference additional



Working groups

- RCWG (Esnet Remote Conferencing Working Group) : Esnet "power users" working group. Meeting every week on Wednesday at 8 p.m. Reinhard Eisberg from DESY, Philippe Galvez from EVO
- RTAG12 (LHC R&D working group on collaborative tools) in 2005
- CSMM (HepCCC/HTASC working group), with Hans Frese
- Close relationship with the team operating the MCU at CCIN₂P₃



Report of the LHC Computing Grid Project RTAG 12: Collaborative Tools

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Pros and Problems



• Pros:

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- All criteria of CALICE have been fulfilled
- Shift crew starts working without special instruction
- Starts working from day one
- Single sign on also possible under Kerberos
- Problems:
 - connection breaks down from time to time (no exclusive network, fast recovering)
 - video and audio quality must be better and faster





now:

IIL

- better communication quality (DFN, ES-net,..., H.323 Standard (Polycom, Mirial,) ...)
- better picture quality

(HD should become normal)

near future:

- better sound quality (much better echo cancellation, Dolby, ...)
- more flexibility

(faster wireless connections, movable stations, ...)

and for the very far future

better human feeling

(smell; 3D; beam me up, Scotty ;-))







thank you for your attention





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