CHEP'07 VICTORIA, BC

International Conference on Computing in High Energy and Nuclear Physics

2-7 Sept 2007 Victoria BC Canada

Collaborative Tools Track

Summary

Peter Clarke

University of Edinburgh
&
UK National e-Science Centre

Collaborative Tools Track

- 2 talk Sessions + 1 poster session
  - 11 Talks
  - 8 posters
- Topics
  - Video and audio meeting tools
  - Interdisciplinary collaboration
  - Improved CERN services
  - "extra dimensions"
  - … and some others
- I noted some negative progress as I put the summary together
  - .ppt -> .pptx
  - You cant 'nick your colleagues slides so easily now

Video and Audio meeting tools

Steve Goldfarb (U of Michigan)

Summary of Collaborative tools and the LHC

- LCG RTAG 12 Findings
  - Usage & Needs Greatly Increasing, But…
  - No Central, Coordinated Project for the LHC
  - Conference Rooms Out-Dated, Not Enough
  - Phone Service Limited Hours, Not Integrated with Video Conferencing
  - No Uniform Recommendations for Remote Participant
  - Limited Lecture Archival Capabilities

- Creation of RCTF (Remote Collaboration Task Force)
- Resources from Atlas and CMS + staff from cern
- Significant upgrades to video meeting (ESNet and EVO)
- Automated phone conferencing

Shaping Collaboration 2006

11-13 December 2006 | **Centre International de Conférences Genève**

- Home Page
- Registration
  - Modify my registration
- List of Registrants
- Remote Participation
- WACE 06
- Meeting Venue
- Timetable
- Bus Schedule
- Hotels
- Geneva
- Currency Converter

support

Home

Shaping the Future of Collaboration in Global Science Projects

A Conference Sponsored by

Workshop on Advanced Collaborative Environments

and

CERN Large Hadron Collider Users

Conference Goals

Shaping Collaboration 2006 will bring together members of the user community of the CERN Large Hadron Collider with researchers and practitioners in the area of advanced collaborative tools. This three day conference will focus on ways these communities can work together to advance research in collaboration while meeting the needs of global science projects.

Session Topics

- The Human Component of Collaboration
- Views from the LHC
- The Impact of Geography
- Collaborative Tools and Developing Countries
- Collaborative Tools, Education and Training
- A Vision for the Future
- Funding Models and Strategies for Collaborative Tool Support in Scientific Projects
- Frontiers in Collaborative Tool Research (**WACE** 2006)

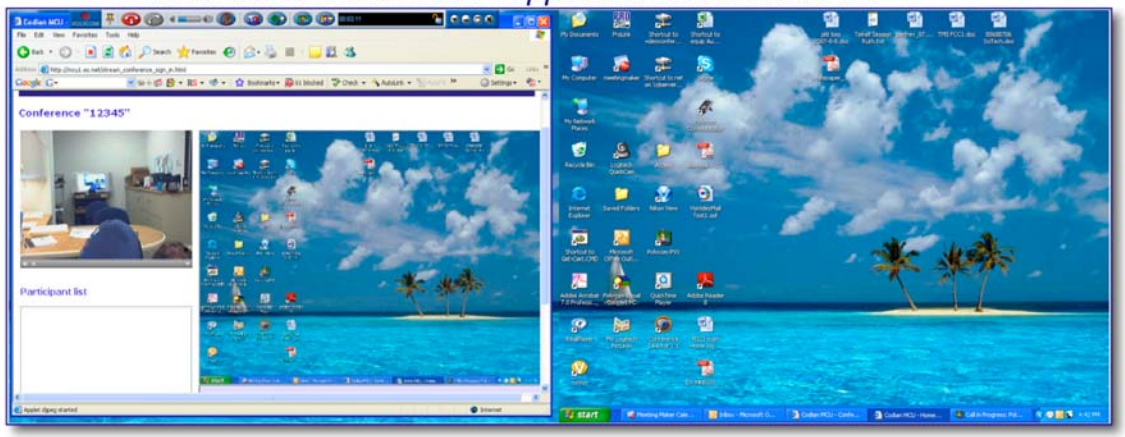
Organizing Committee

- R. Eisberg (DESY)
- P. Galvez (CMS, Caltech)

Video Conferencing improvements: ECS and EVO:

Video Conference Systems (cont.)

- *ECS (ESNet Collaboration Services) [input from Bill Johnston, Sheila Cisko]*
  - Hardware Upgrade to 3 Codians with Video & Web Conferencing
    - *120 Ports (40 Ports per MCU), 384k Access for ISDN Systems*
    - *Access to Audio through Codian ISDN Gateway*
    - *Content (H.239) Viewing and Markup via the Web*
    - *Web Chat for those without Traditional Video Conferencing System*
    - *Access to Global Dialing Scheme (GDS) via Radvision Gatekeeper*
  - Outsource of Maintenance & Operations
    - *Savings Expected to Finance Upgrades in 2008 (East Coast Facility)*
    - *Real-Time Conference Support Available for a Fee*



Phillipe Galvez (Caltech)

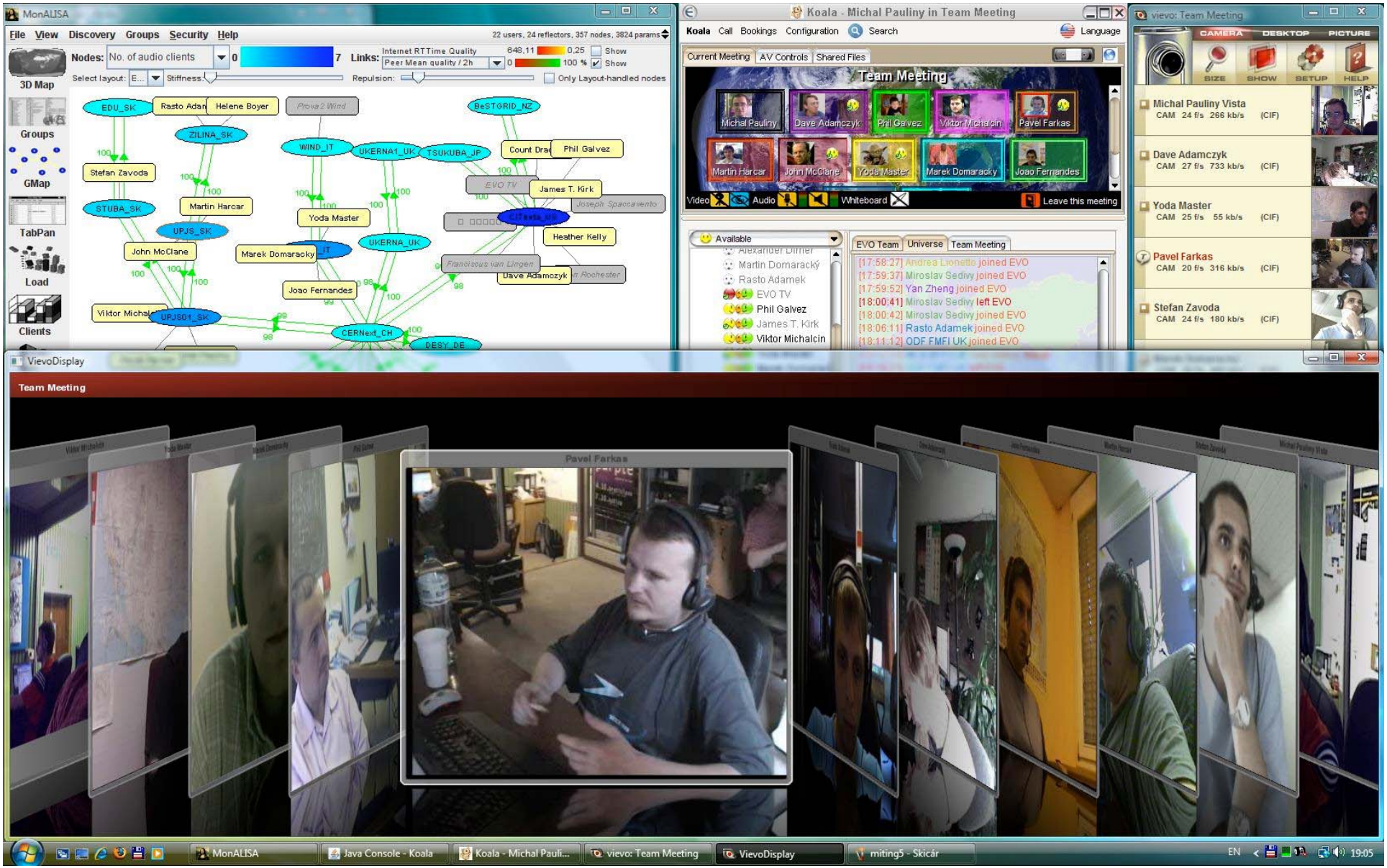
EVO - daughter of VRVS

- EVO
  - EVO = Enabling Virtual Organisations
  - Much more resilient to equipment and network change
  - EVO creates dynamic overlay network which adapts transparently to the user
  - JRAT / ViVEO
  - Meeting recording and playback
  - File exchange
  - Private sidebar meetings

Cures MacOS "underwater" problem

Koala in Meeting Interface

ViEVO Application (6/7)



Meeting Player

Playback a full EVO meeting from your local disk.

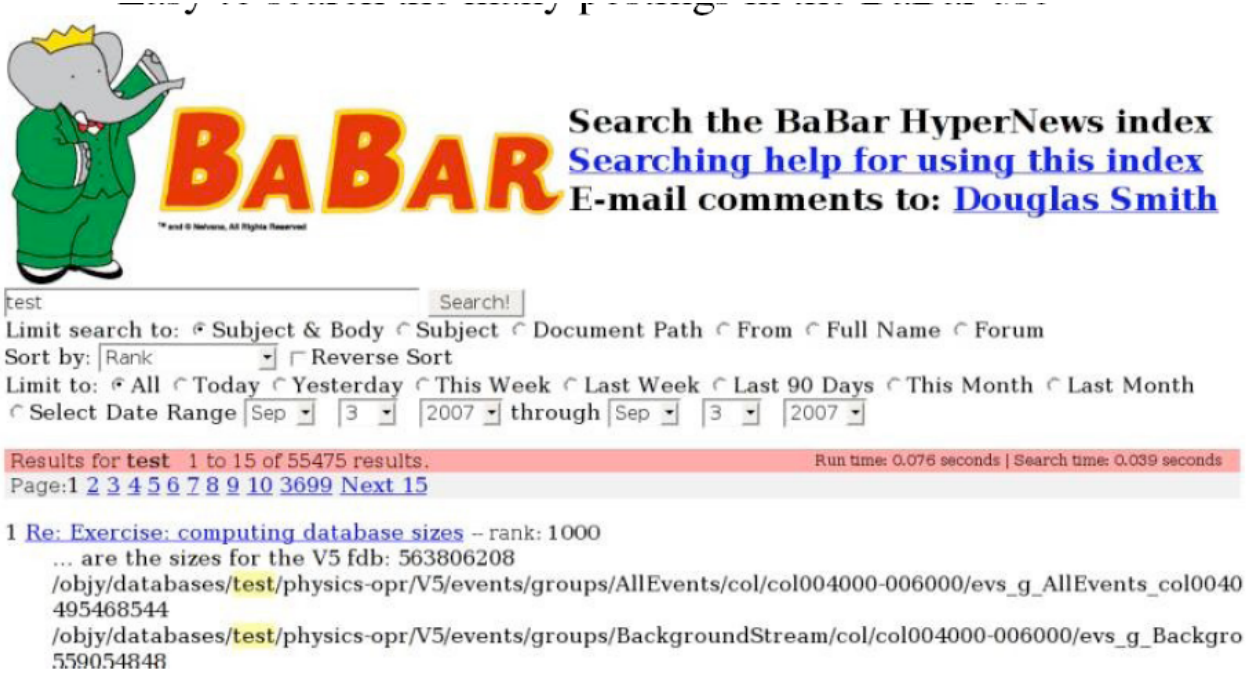
- The playback could be:
  - Local *(for your eyes only)*
  - Broadcasted
- Possible to PAUSE the playback

- You can go to the previous/next pre-recorded marks
- Possible to play:
  - Audio
  - Video
  - Whiteboard
  - Chat
  - Participants

Douglas Smith (SLAC)

Hypernews - bigger and better

- **Used extensively**
  - **BaBar**
  - **CERN experiments (particularly ATLAS)**
  - **Open source project**

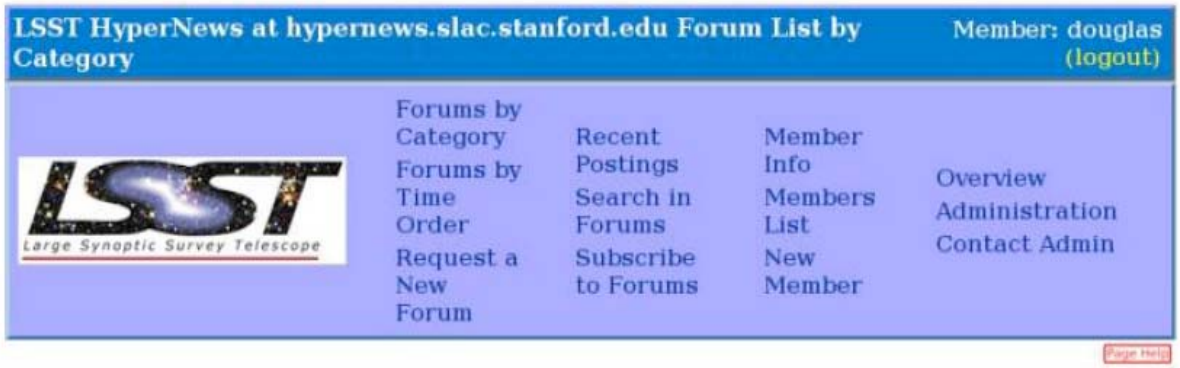


29 Updates to HN Edit Message page *by Peter Elmer, Jan 15, 08:02*
- 1 Re: Updates to HN Edit Message page *by Shahram Rahatlou, Jan 15, 08:14*
- 2 Re: Updates to HN Edit Message page *by Traudl Hansl-Kozanecka, Jan 15, 10:28*
  - 1 Re: Updates to HN Edit Message page *by Peter Elmer, Jan 15, 10:39*
- 3 Re: Updates to HN Edit Message page *by Dmitriy Kovalskyi, Jan 19, 15:28*

28 Color of already visisted messsages *by Frank Winklmeier, Jan 11, 09:56*
- 1 Re: Color of already visisted messsages *by Peter Elmer, Jan 11, 10:09*
  - 1 Re: Color of already visisted messsages *by Frank Winklmeier, Jan 11, 11:18*
    - ... 1 Message(s)
  - 2 Re: Color of already visisted messsages *by Douglas Smith, Jan 11, 11:42*

27 Re: Reverse time order in "Recent Postings" *by Peter Elmer, Dec 14, 19:58*

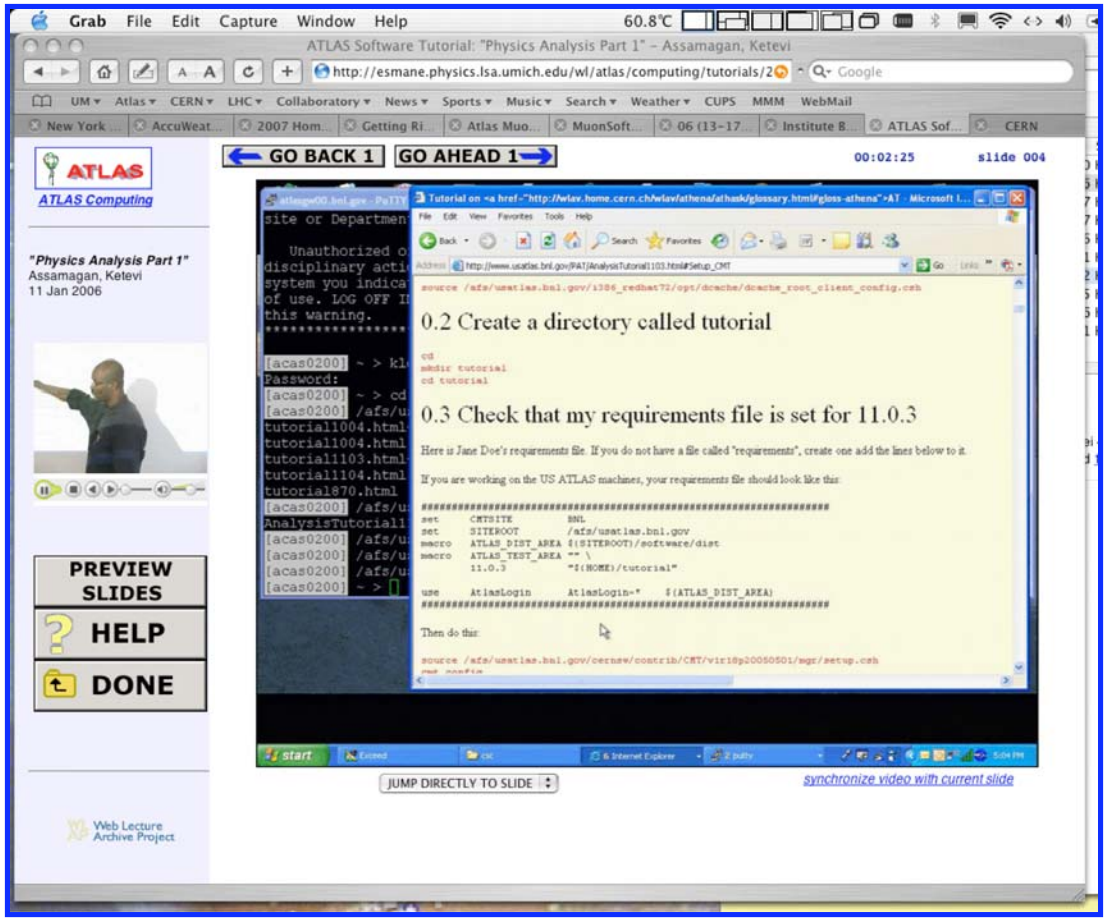
26 direct mails and mails to HN subscribers *by Peter Elmer, Dec 11, 23:55*
- 1 Re: direct mails and mails to HN subscribers *by Dmitriy Kovalskyi, Dec 12, 00:49*
  - Re: direct mails and mails to HN subscribers *by Peter Elmer, Dec 12, 01:00*



- **Lots of improvements**
  - **Attachment support**
  - **SPAM control**
  - **….**
- **Will be supported well into LHC**

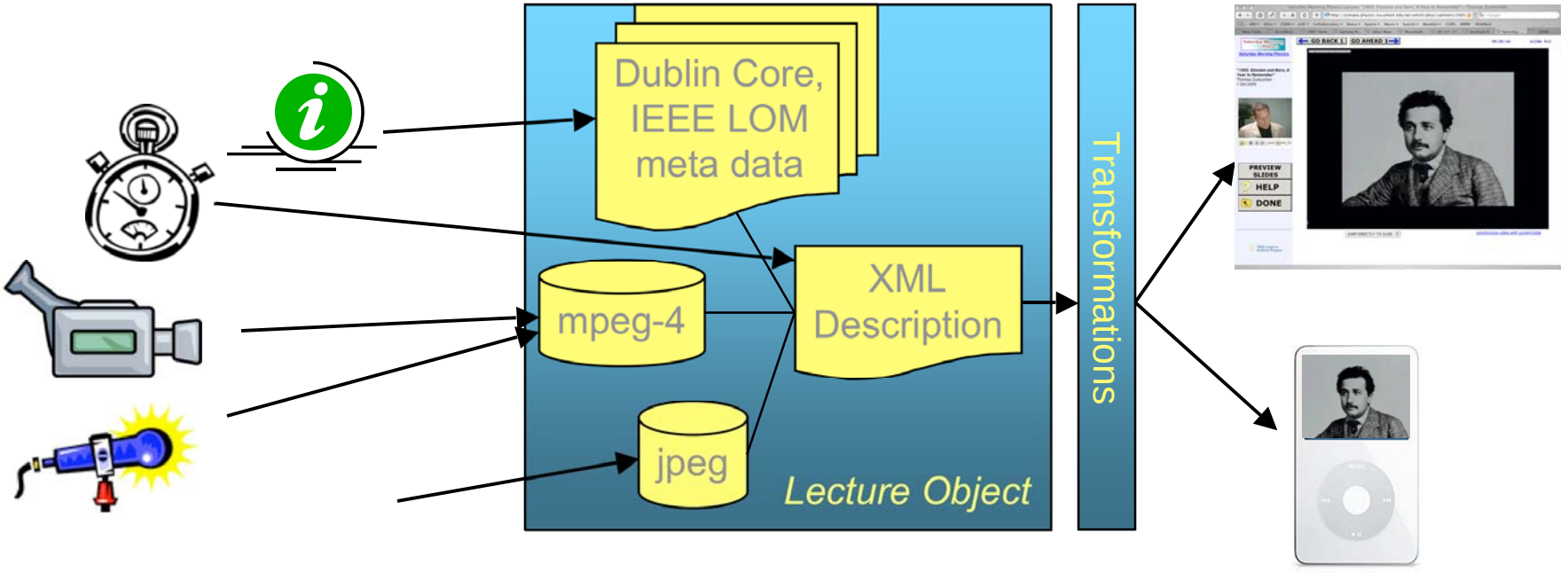
Jeremy Herr (U of Michigan)

Lecture & Video meeting Archives

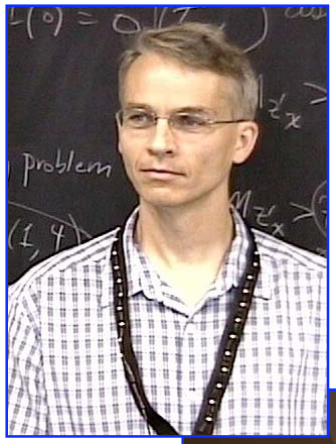


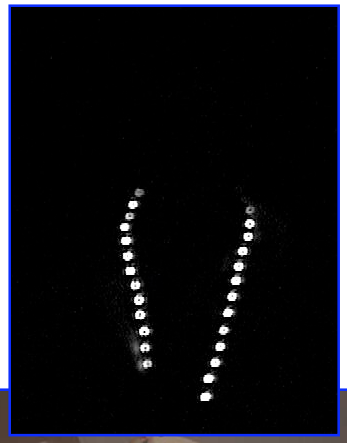
Lecture Objects

- Originally proposed by our team in 2000 at in international conference
- A standardized data object containing metadata, timing, high-res media
- Designed for
  - Longevity
  - Sharing among multiple institutions
  - Flexibility in viewing formats



MScribe – Lecture recording Robot





Interdisciplinary collaboration with medical sciences

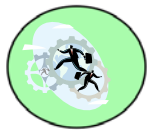
Richard McClatchey (UWE-Bristol)

Health e-Child project

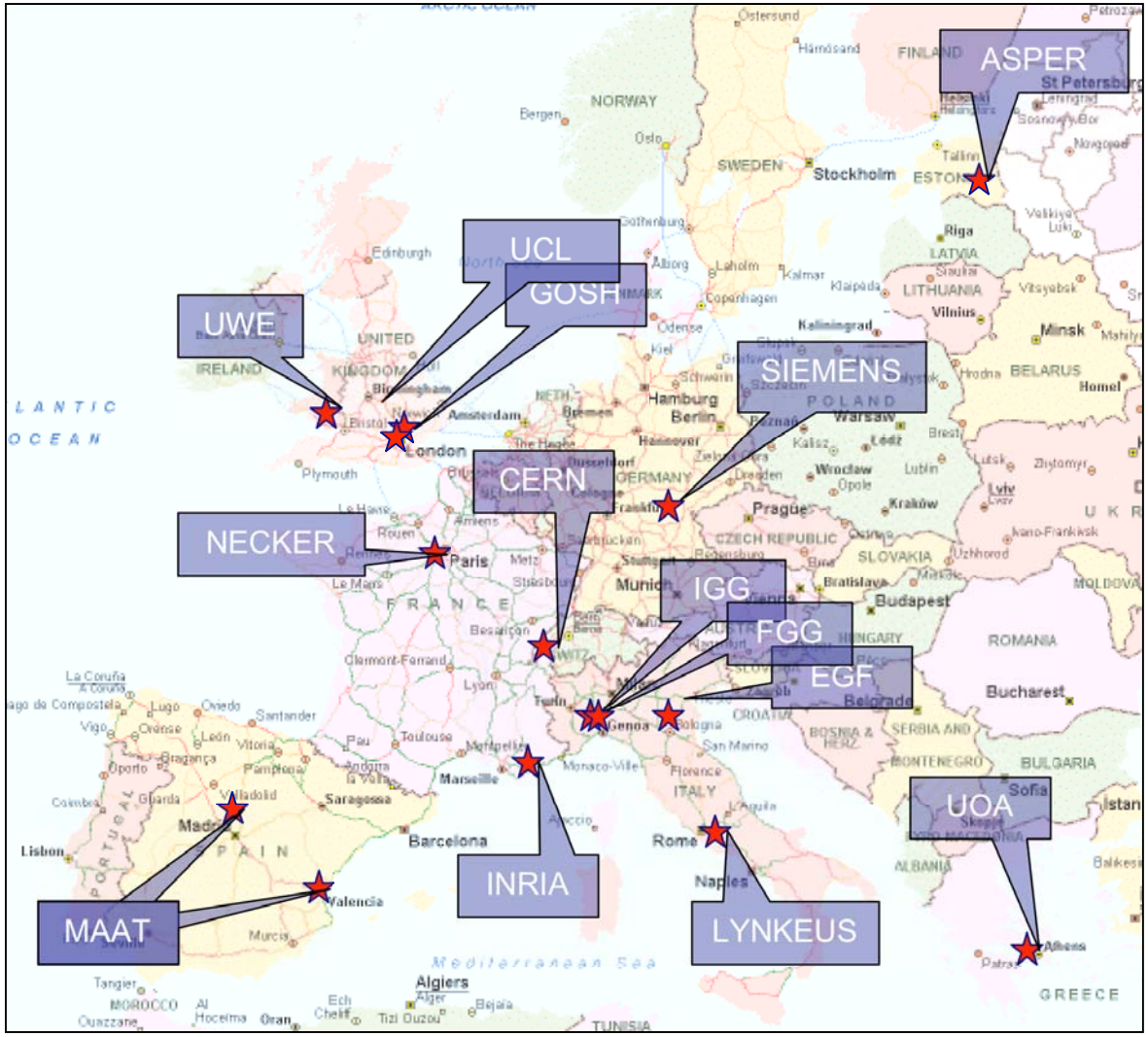
- Three Paediatric Diseases
  - Heart diseases (*Right Ventricular Overload, Cardiomyopathy*)
  - Inflammatory diseases (*Juvenile Idiopathic Arthritis*)
  - Brain tumours (*Gliomas*)
- Many Clinical Departments
  - Cardiology
  - Rheumatology
  - (Neuro-)Oncology
  - Radiology
  - Lab (Genetics, Proteomics)
  - Administration, IT
- Main Modalities / Data Sources
  - Imaging (MR, US/echocardiography, CT, x-ray)
  - Clinical (Patient information, Lab results etc)
  - Genetics & Proteomics

A Geographically Distributed Environment

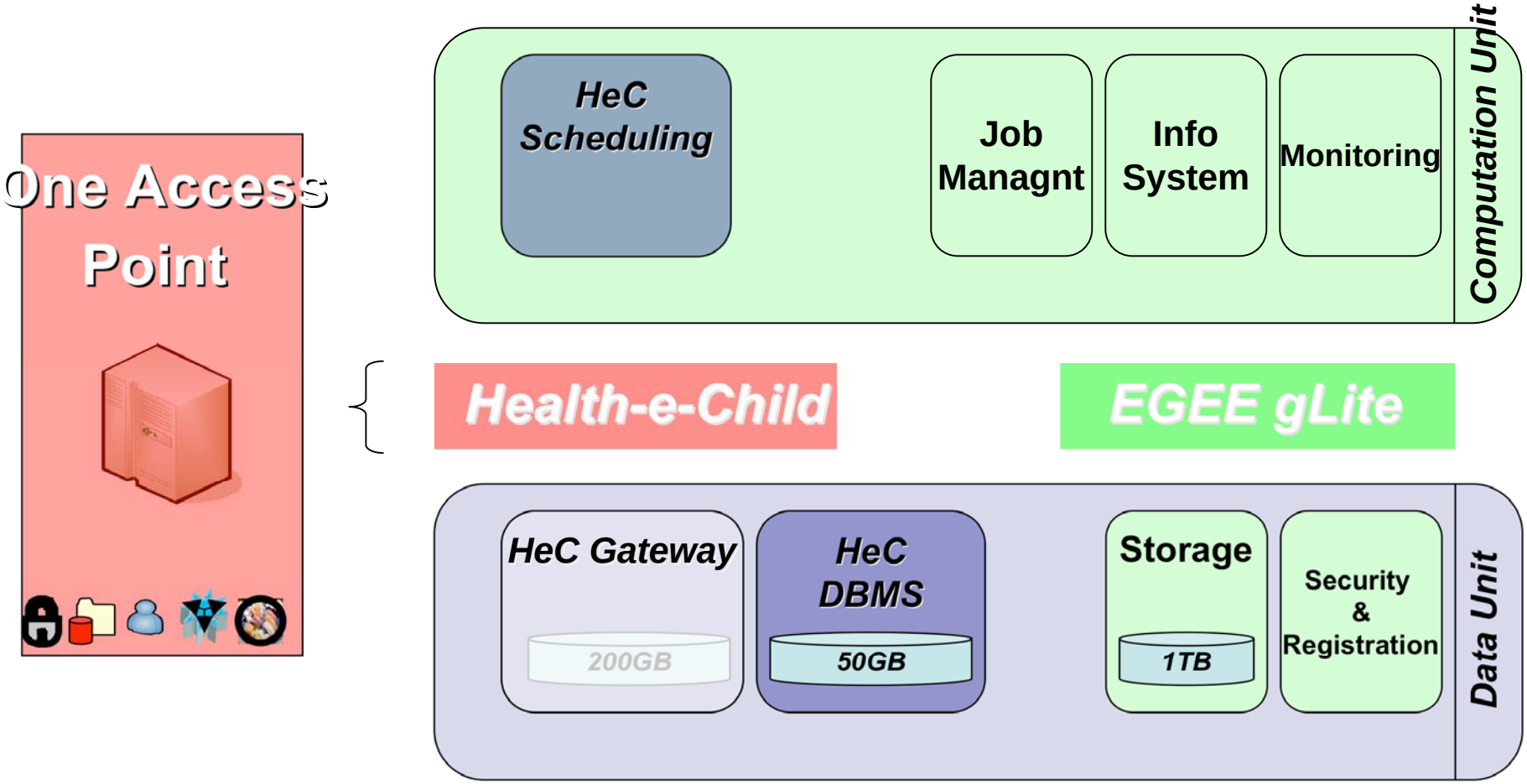
Clinical Site



R&D Site



The Health-e-Child Access Point

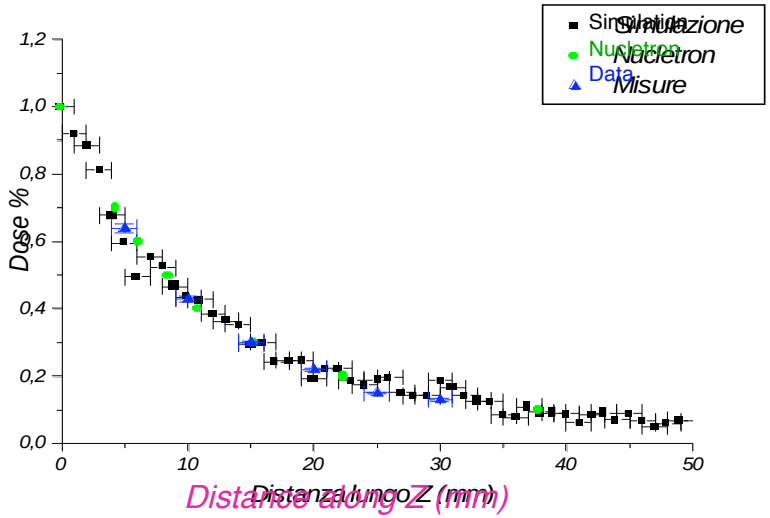


Maria Grazia Pia (INFN-Genova)

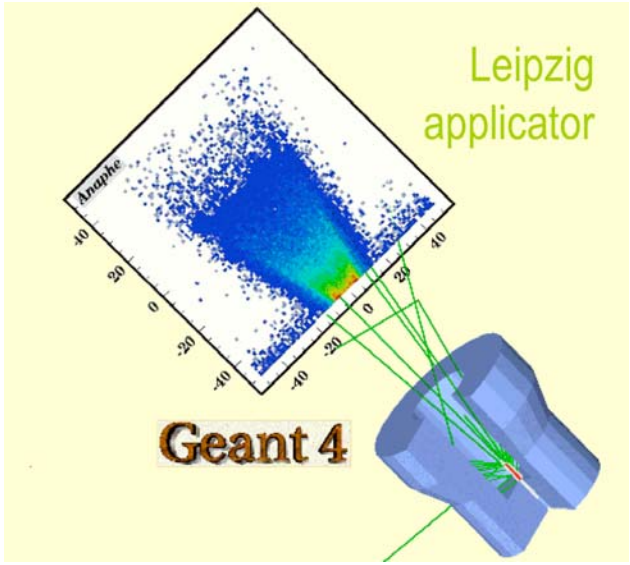
Italian National Institute for Cancer Research

Geant4 simulation of radiotherapy

Brachytherapy Example



Exp. data: F. Foppiano et al., IST Genova



Relatively "fast" simulation

~ 7 CPU hours on an "average" PC to produce meaningful statistics for clinical studies

On the grid

64% runs terminated < 30 min
96% runs terminated < 40 min

Medical LINAC for IMRT

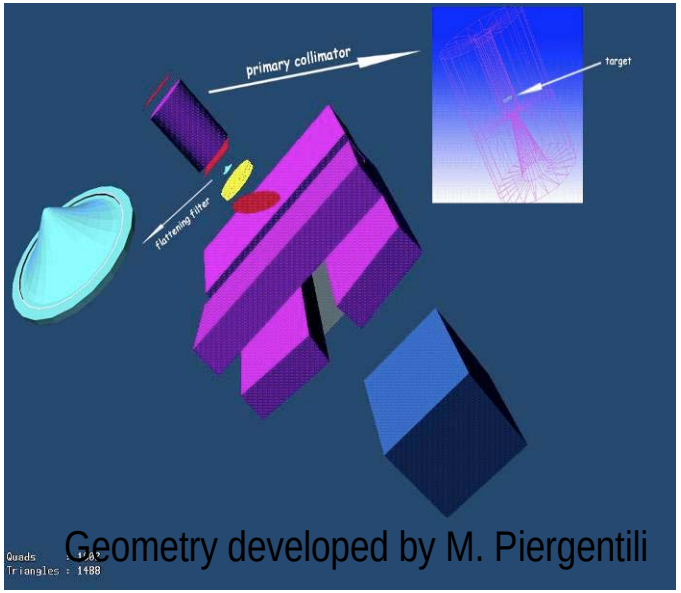
Italian National Institute for Cancer Research

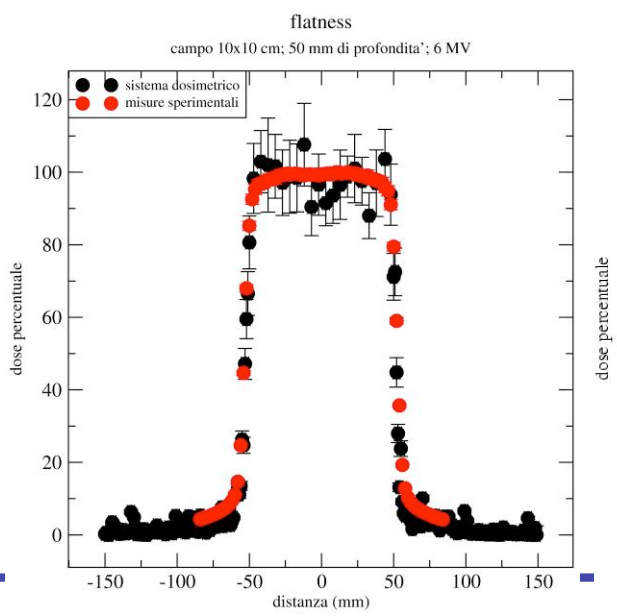
Geant4 medical_linac Advanced Example

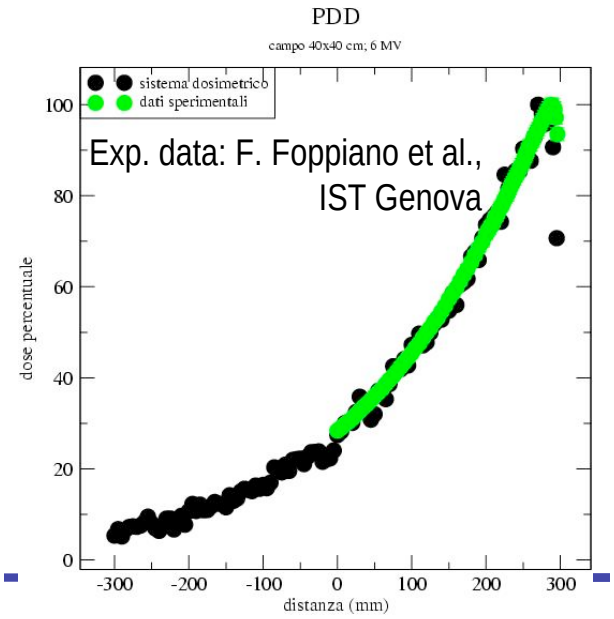
High demand of CPU resources for meaningful statistics

(e.g. for treatment planning verification)

≈ tens of CPU-days



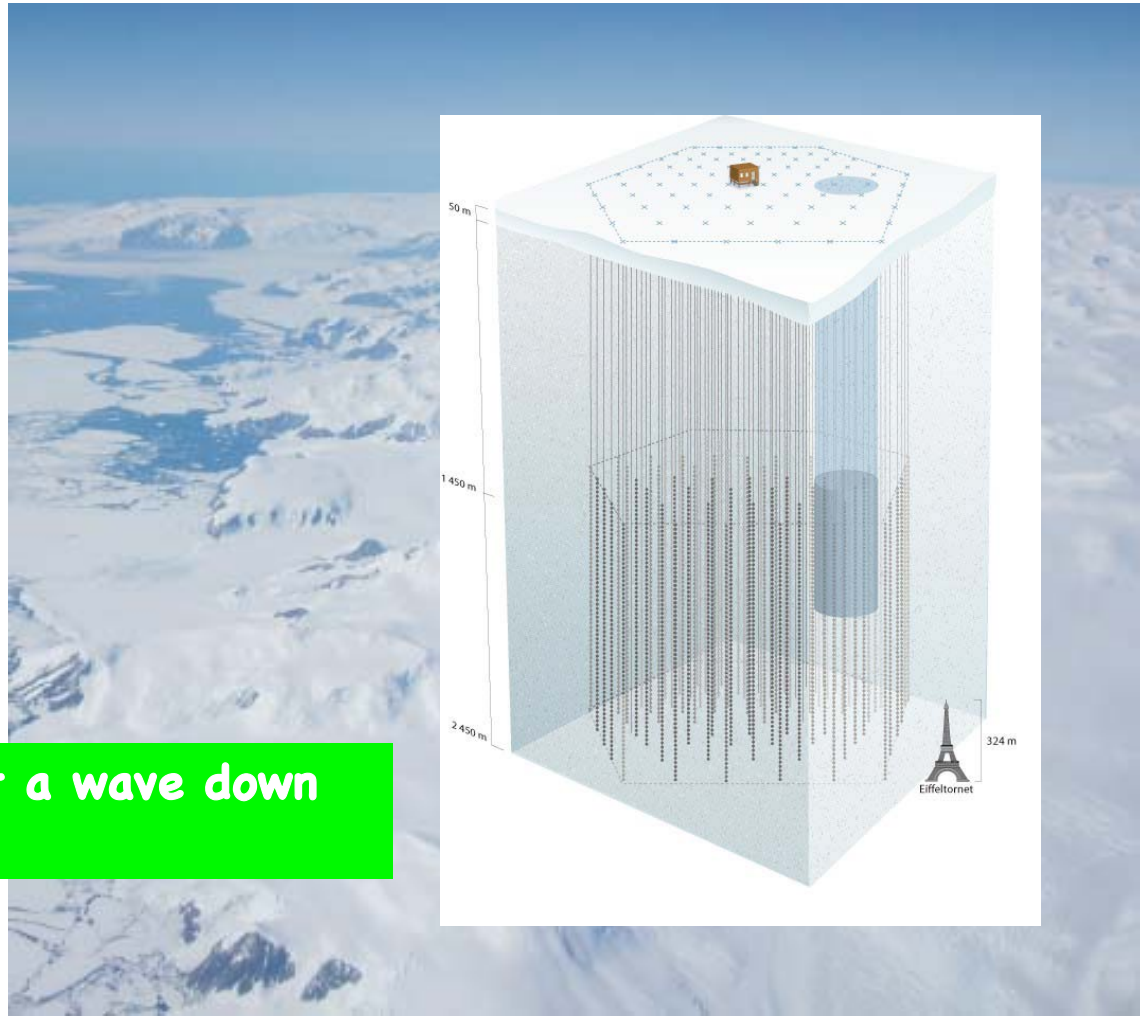




Keith Beattie (LBNL)

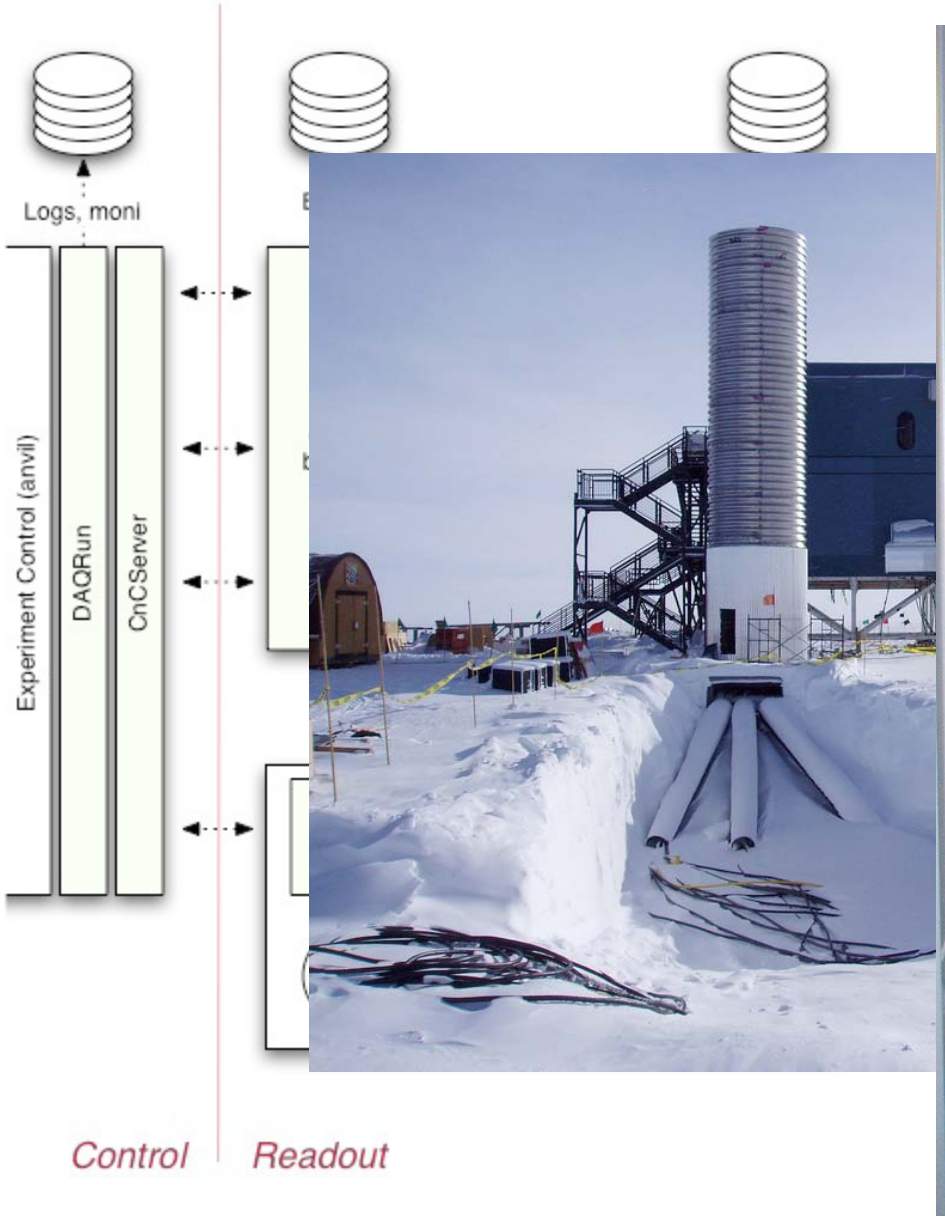
Ice Cube Data Acquisition

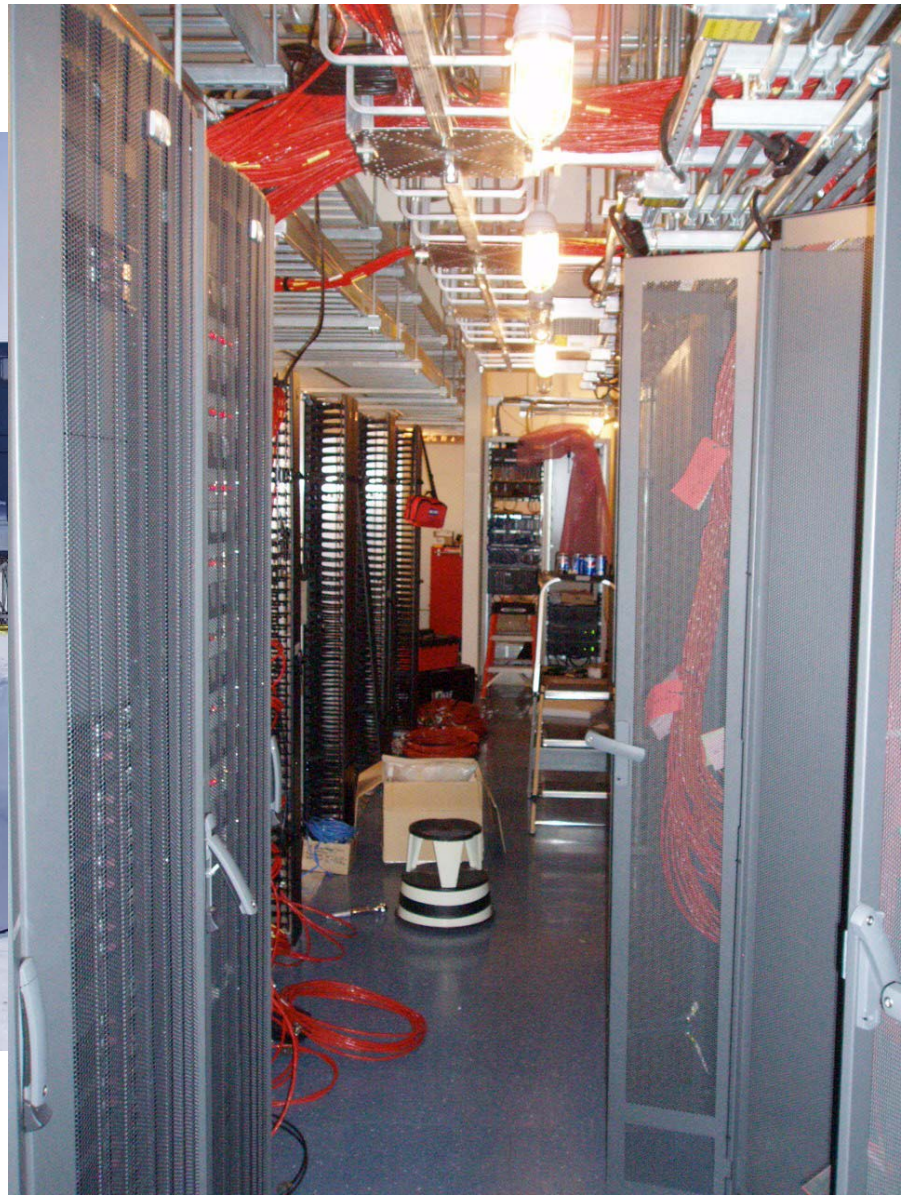
- Unique challenges
- Staff are not exactly centred at the experiment (at least for half the year)
- Needed "agile" methods



I challenge Harvey to get a wave down there !!!!!

pDAQ System


Logs, moni
Experiment Control (anvil)
DAQRun
CnCServer
Control
Readout

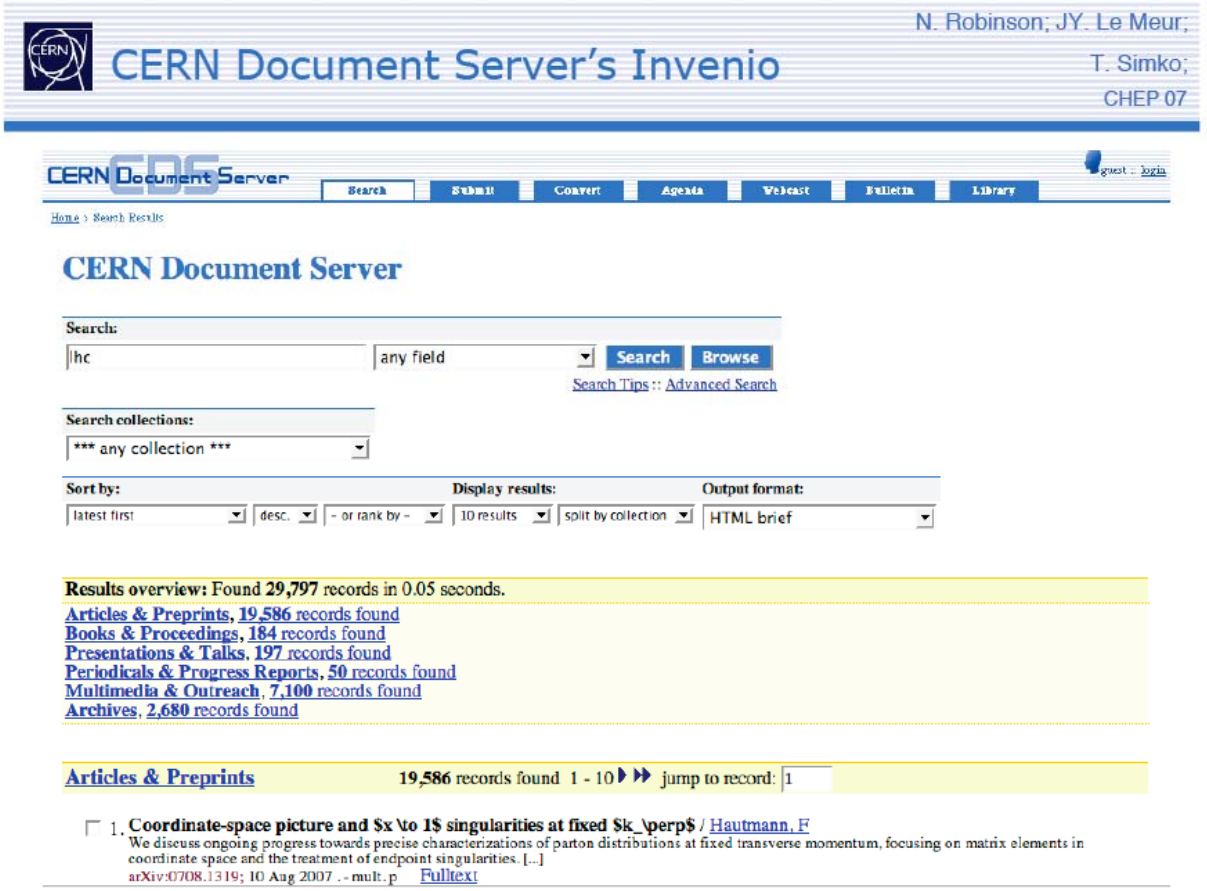


CERN Developments

Nicholas Robinson (CERN)

Managing an Institutional Repository with CDS Invenio

- 1,000,000 records
- 10,000 unique searches per day
- Powerful in house designed search engine
- Customisable for different types of entry
- Customisable approval workflows



High Energy Particle Accelerators

View Movie
(Choose quality)

Low (128 kbps) | Medium (400 kbps) | High (1000 kbps)

How to view .asx video?

Film about the different particle accelerators in the US. Nuclear research in the US has developed into a broad and well-balanced program.Tour of accelerator installations, accelerator development work now in progress and a number of typical experiments with high energy particles. Brookhaven, Cosmotron. Univ. Calif. Berkeley, Bevatron. Anti-proton experiment. Negative k meson experiment. Bubble chambers. A section on an electron accelerator. Projection of new accelerators. Princeton/Penn. build proton synchrotron. Argonne National Lab. Brookhaven, PS construction. Cambridge Electron Accelerator; Harvard/MIT. SLAC studying a linear accelerator. Other research at Madison, Wisconsin, Fixed Field Alternate Gradient Focusing. (FFAG) Oakridge, Tenn., cyclotron. Two-beam machine.
Comments : Interesting overview of high energy particle accelerators installations in the US in these early years. .

Produced by: Audio Productions, Inc, New York
Director: Atomic Energy Commission
35:00 min. / 1960 / AEC Copyright
Keywords: accelerators, particles, cosmotron, cyclotron, proton synchrotron, linear accelerator

Original Source: P104
Language: eng
Source Medium: BETACAM PAL (Master)
Note: Original film : 16 mm, optical sound

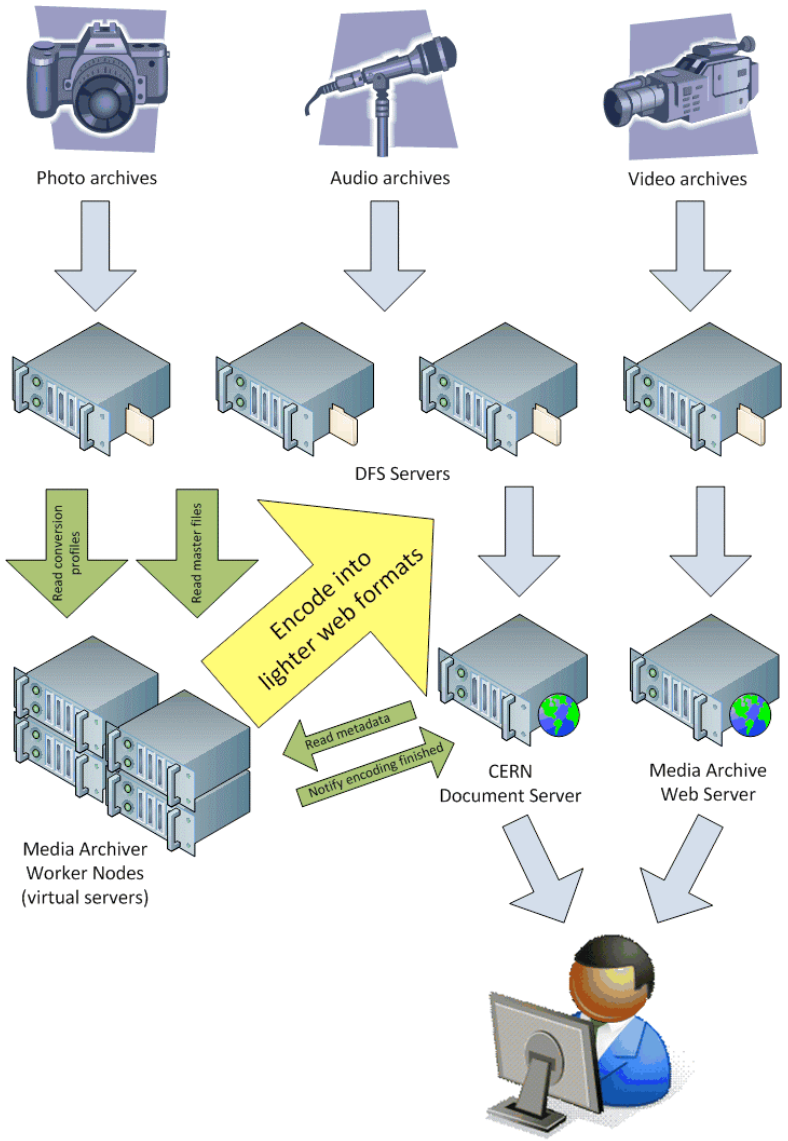
Reference: CERN-MOVIE-1960-005

- Emmanuel Ormancey : Single Sign on (talk)
  - Previously needed 6 credentials
  - Now down to 2
  - Lots of work behind scenes here

- RSS Alerter (poster)
  - New alert system based upon RSS feeds
  - Easy to subscribe to from all platforms
  - No excuse for not knowing that some service is going down
  - ...or the world cup footbal score..

- Printing at CERN (poster)
  - Much simplified backend print server architecture at CERN
  - As a user I was pleasantly surprised how easy printing has become

- **Video, Picture and Audio Archiving**
  - Automatic processing and archiving of huge resources
  - All available from web document server



Other contributions:

- Giulio Eulisse (Northeastern U) : Talk CMS WEBTOOLS
- Poster: GridPP Collaboration Website
- Poster: Aragats Data Acquisition System for distributed detectors

Norman Graf (SLAC)

Extra Dimensions

Adding 3D and time to embedded pictures

Adobe reader already supports this via standards (U3D)