Collaborative Tools

Michal Kwiatek

Highlights

- EVO (Enabling Virtual Organizations), the Next Generation Grid-enable Collaborative
- The Health-e-Child Project
- HyperNews use in HEP – bigger and better
- University of Michigan Lecture Archiving

- CERN IT Contributions

- For current status of the tools, check talk: Collaborative Tools and the LHC: An Update by Steven GOLDFARB (University of Michigan)

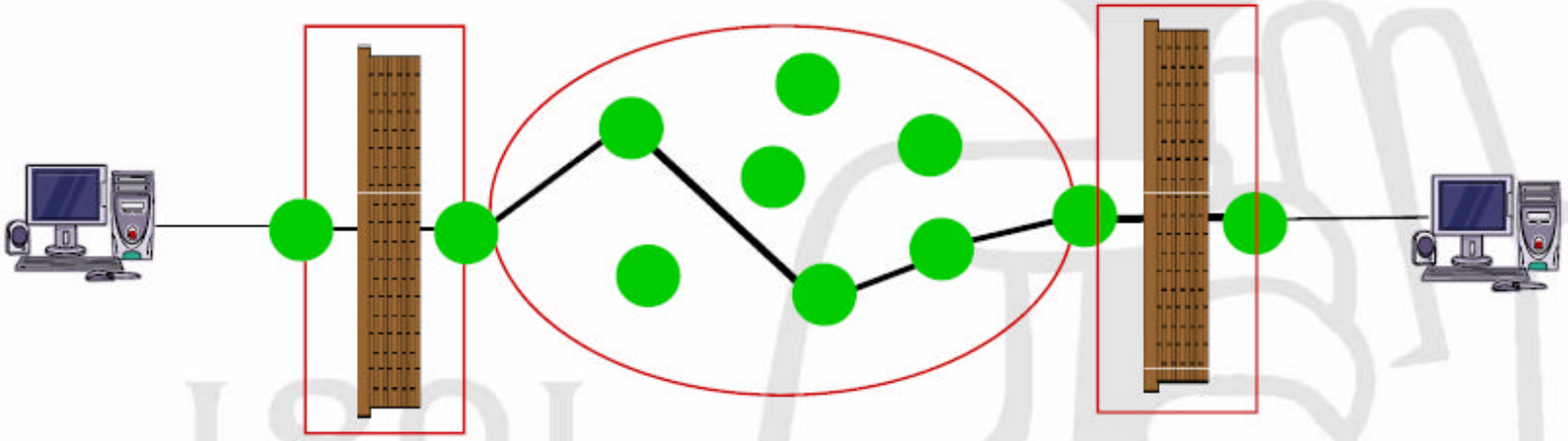
EVO, the next VRVS

Michal Kwiatek, Highlights of the Collaborative Tools track at CHEP 2007

Why?

Why it is so difficult to achieve total reliability/robustness when deploying a RTC Infrastructure?

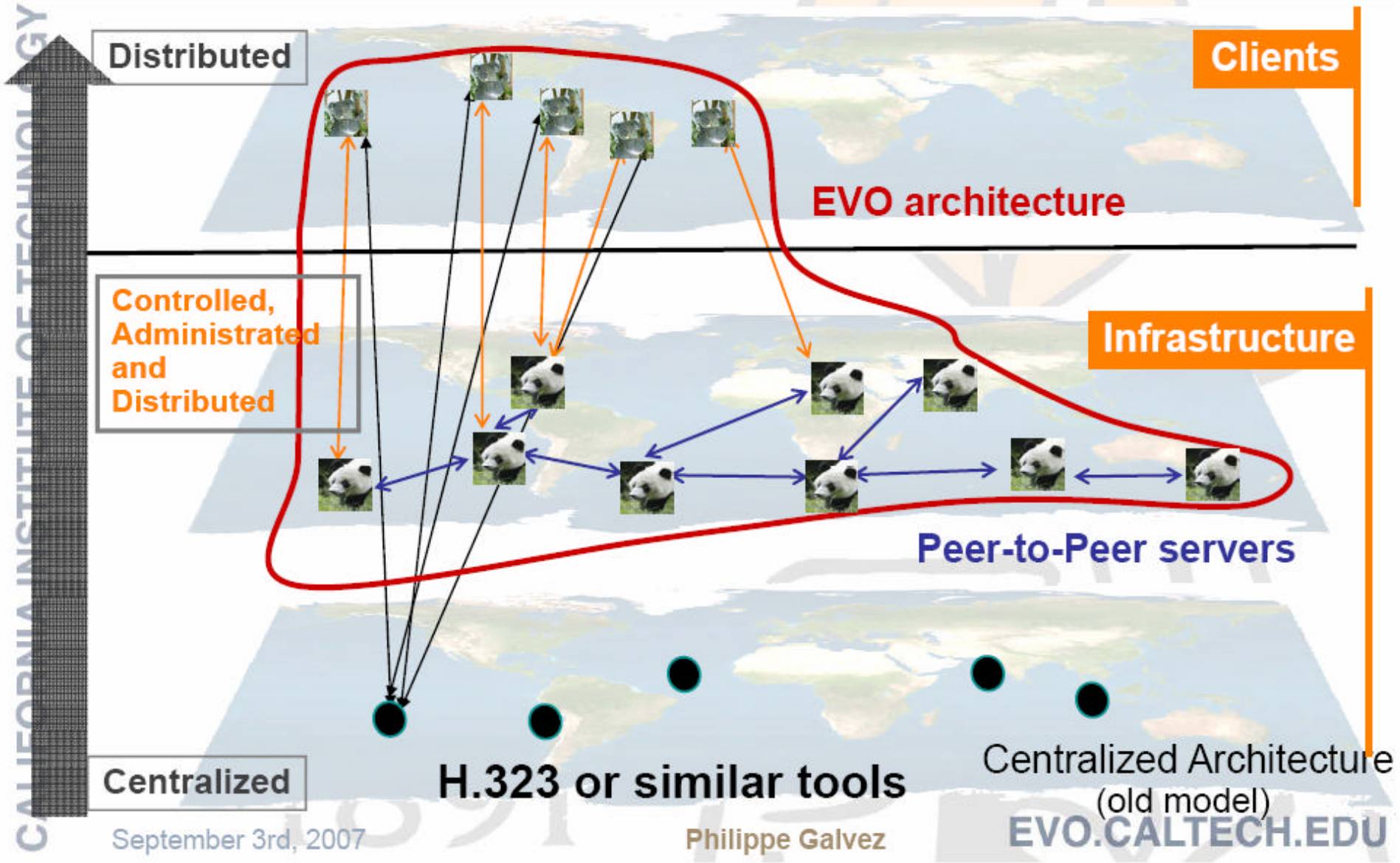
- The Real-Time Collaborative environment is a living environment: constantly changing, evolving
- In addition, devices/domains/nodes are managed by several independent technical and administrative entities.



Solutions ?

By creating a "living" RTC Infrastructure capable to react/adapt to the change of the environment in real-time transparently to the end-user.

EVO Advanced Architecture



Panda

Some functionalities:

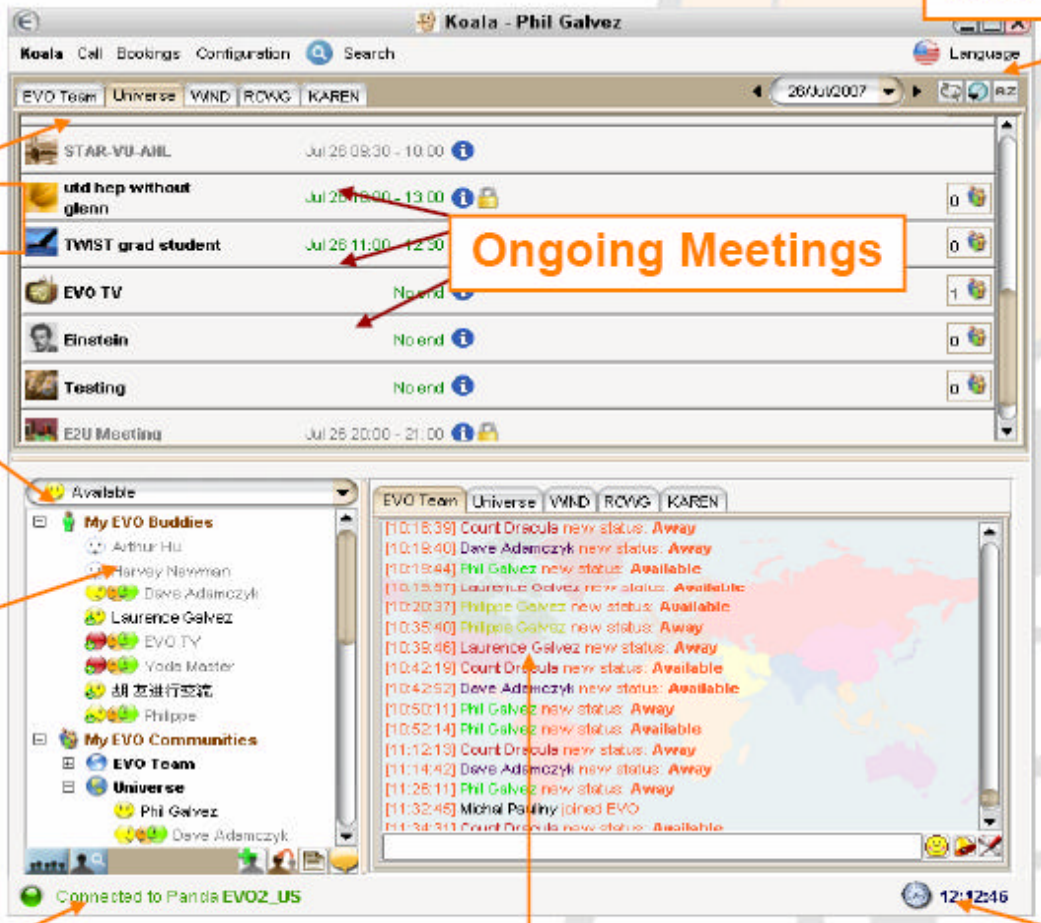
- **Dynamic registration** to high level directory services to provide global infrastructure view.
- **Automatic re-activation** of components and services.
- **Automatic** and secure **code update**.
- **Continuous monitoring** of network quality (packet loss, jitter, latency) between its peers and its possible peers.

Koala

Some functionalities:

- Our Client is platform independent: Java based
- Automatic Detection of:
  - systems parameters (CPU, Memory,..)
  - hardware components (audio card, video card, …)
  - capabilities in term of service (video, audio, …)
  - network environment and capabilities (wireless environment, DSL, available bandwidth, …).

Koala Main Interface



Multi language Support

Communities

Ongoing Meetings

Presence

Buddy

Connection to the Panda

Chat

Automatic Time Zone Adjustment

CALIFORNIA INSTITUTE OF TECHNOLOGY

The Health-e-Child experience with the GRID

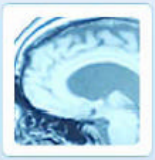
Health-e-Child

Information Society Technologies

Health-e-Child: A Grid Platform for European Paediatrics

On behalf of the Health-e-Child Consortium
(& with thanks to David Manset Maat-G)

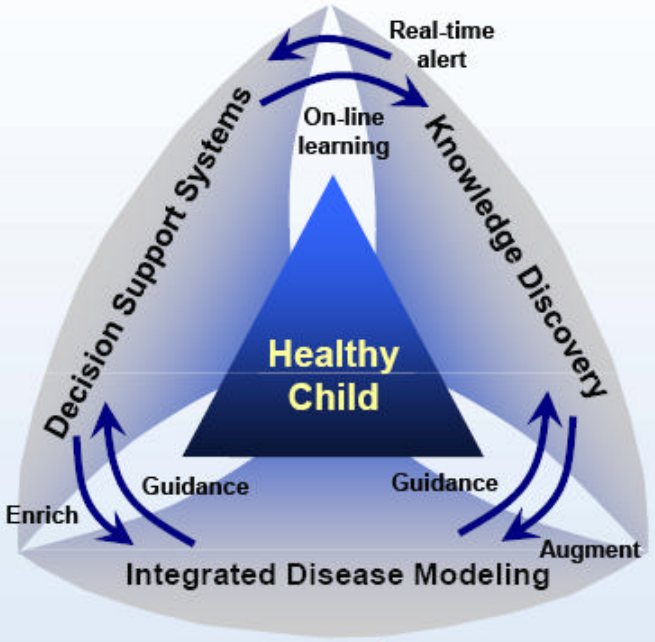
Richard McClatchey, UWE-Bristol UK

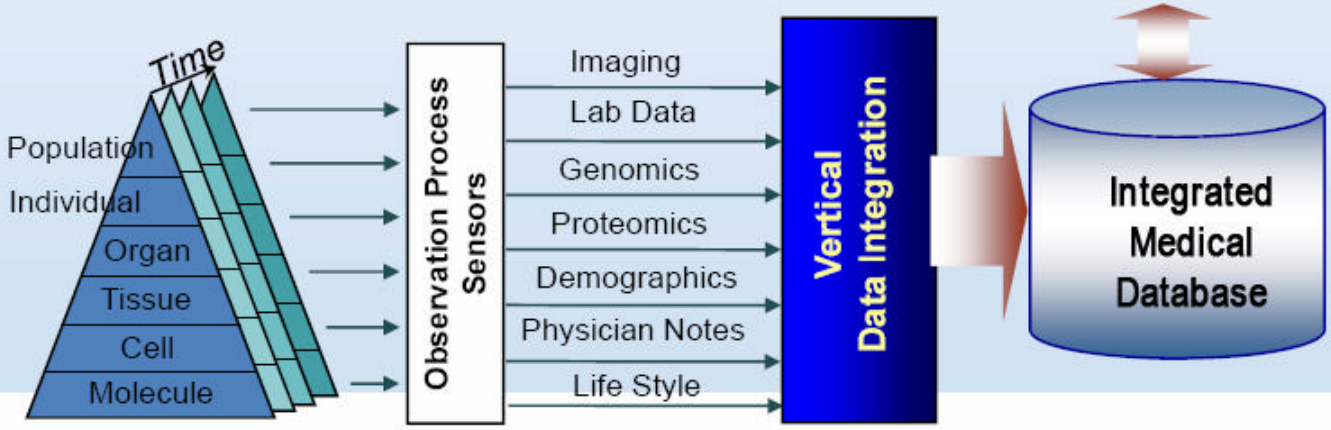


CHEP07 3rd September 2007, Victoria, CA

Objectives of Health-e-Child

- Build enabling tools & services that improve the quality of care and reduce cost with
  - Integrated disease models
  - Database-guided decision support systems
  - Cross modality information fusion and data mining for knowledge discovery
- Establish multi-site, vertical, and longitudinal integration of data, information and knowledge
- Develop a GRID based platform, supported by robust search, optimisation and matching

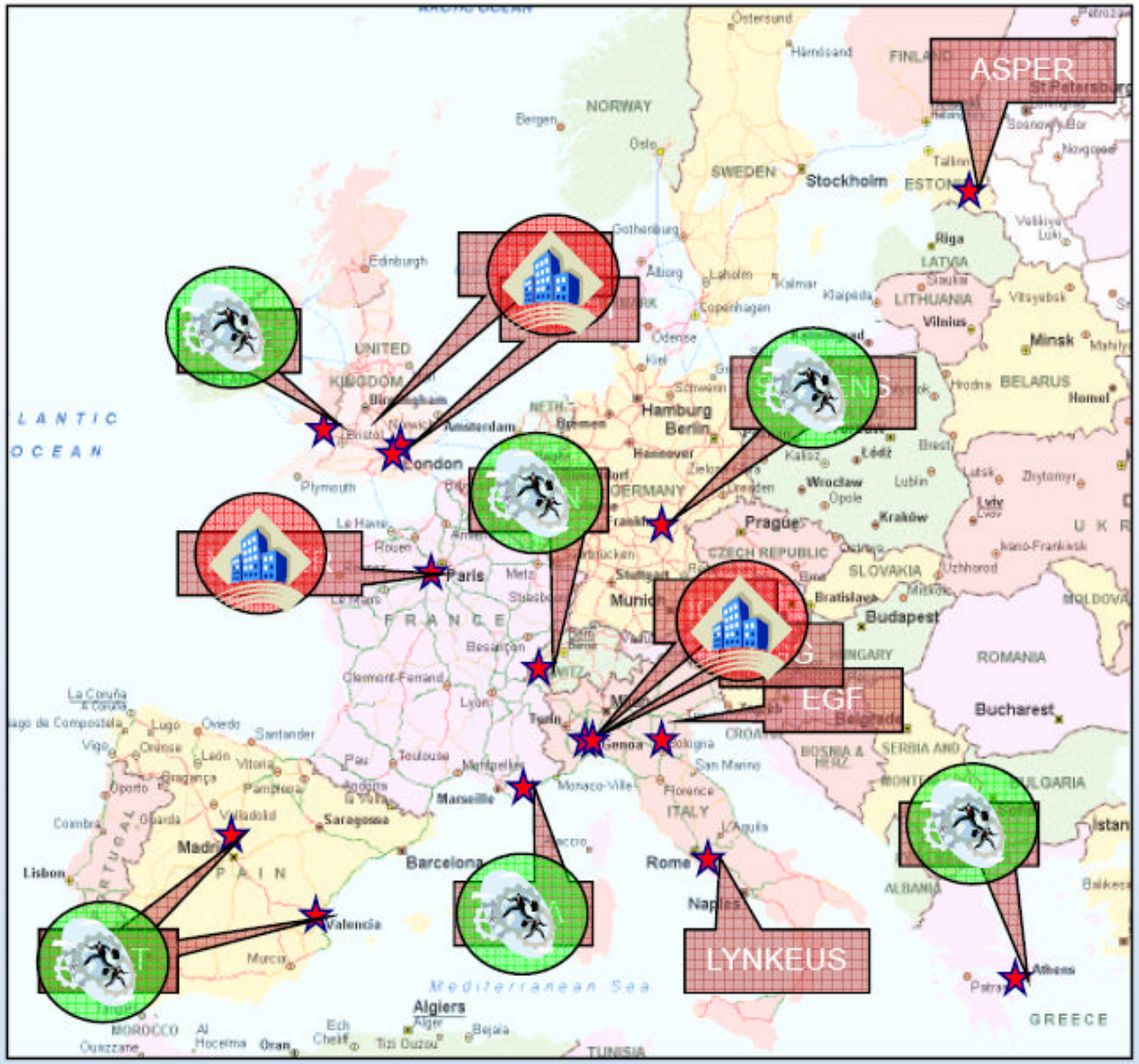




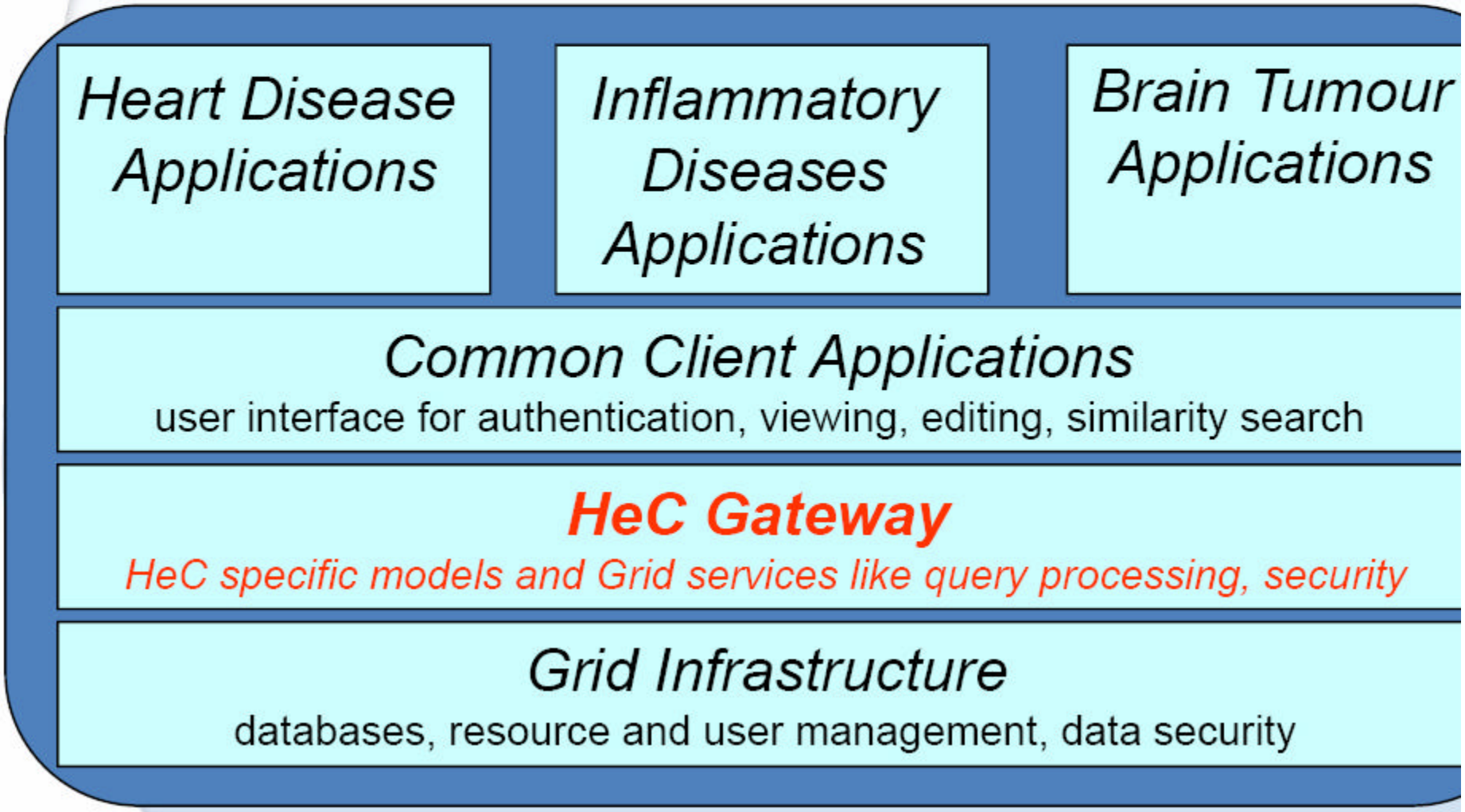
A Geographically Distributed Environment

Clinical Site

R&D Site

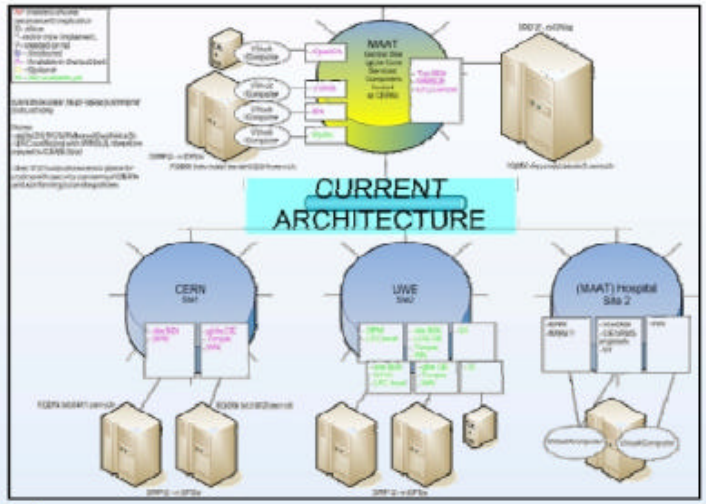


HeC System Overview



Grid

- Grid technology (gLite 3.0) as the enabling infrastructure
  - A distributed platform for sharing storage and computing resources
- HeC Specific Requirements
  - Need support for medical (DICOM) images
  - Need high responsiveness for use in clinical routine
  - Need to guarantee patient data privacy:
    - access rights management
    - storage of anonymized patient data only



Status

- √ Testbed installation since Mai 2006
- √ HeC Certificate Authority
- √ HeC Virtual Organisation
- √ Security Prototype (clients & services)
- √ Logging Portal & Appender

HyperNews use in HEP – bigger and better – is it really?

HyperNews

Douglas A. Smith, Terry Hung
Stanford Linear Accelerator Center
Peter Elmer
Princeton University

CHEP 2007
Sep 5th 2007, Victoria, BC, Canada

Michal Kwiatek, Highlights of the Collaborative Tools track at CHEP 2007

HyperNews

- HyperNews discussion system was created to join the open, centrally stored, discussions of web forums, and the rapid feedback of e-mail.
- The system is organized as a series of forums, each one is a web discussion, with a e-mail list back end
- The collection of forums are joined together as the discussions for an organization.
- Members of the organization are managed, and members can subscribe to any forum, getting all discussions as e-mail.

University of Michigan Lecture Archiving

University of Michigan Lecture Archiving

and related activities of the ATLAS Collaboratory Project

Jeremy Herr

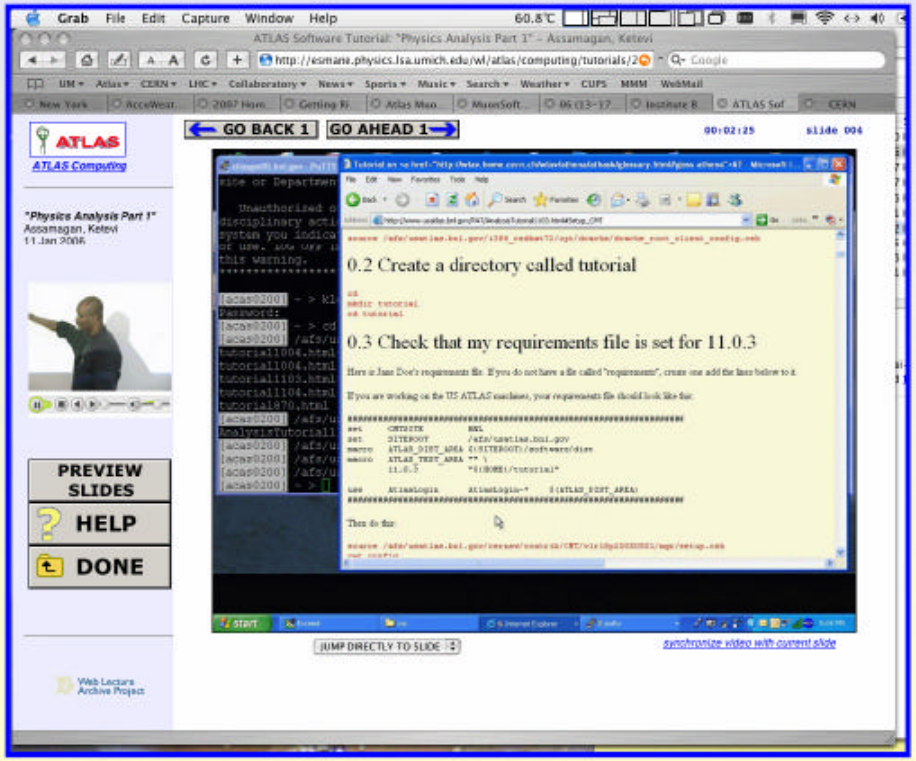
University of Michigan

CHEP 2007, Victoria, B.C.

Michal Kwiatek, Highlights of the Collaborative Tools track at CHEP 2007

What is a Web Lecture?

- Low-bandwidth media-rich presentation viewable with:
  - any web browser
  - RealPlayer plug-in
- Media streams:
  - lecturer's audio
  - lecturer's video
  - high-res slide images
  - high-res chalkboard images
- Features
  - slide index
  - ability to "jump around"
  - platform independence
  - low bandwidth
  - ability to evaluate usage

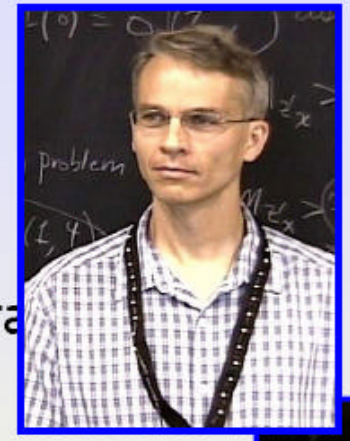


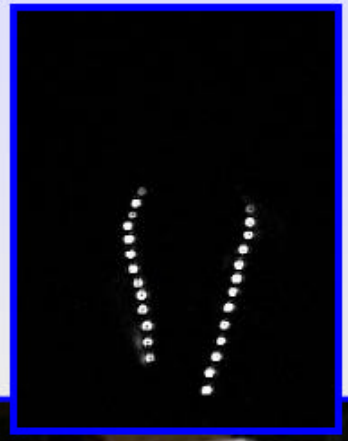
MScribe – Technical Achievements

- 4 automated, self-contained, portable carts built
- 8 courses, 200 hours of video recorded
- recordings accomplished by unskilled student helpers
- RealPlayer Web Lectures and video iPod lectures were provided for students online
- venues ranged from small classrooms to large auditoria
- chalkboard writing and tablet PC annotations were captured
- automatic processing software developed and improved

Active IR tracking system used for MScribe 2006-2007

- "Active" Infrared used 2006-07
  - necklace chain of bright IR LED's
  - CCD camera follows it
  - PTZ commands sent to video camera
- This system satisfies our criteria
  - Portable: sits on a cart
  - Robust: simple design makes it very robust
  - Affordable: currently under 4 000 USD
  - No expert intervention: start it and it works
  - Little setup: almost no calibration required
  - Accurate to within centimeters
- Improvements needed
  - confounded by incandescents, sunlight
  - can only be used in certain rooms





The Future

- Totally automated room installations
  - record lectures at times specified in online agenda
- ultra-portable recording carts
  - entire system including tracking can be checked on airplane
- desktop recording software
- many display formats available
- multiple-person (and audience) tracking
- integration with other lecture recording systems:
  - SMAC
  - Apple's new lecture recording system (name?)
  - EVO

Contributions from CERN IT

- Talks
  - CERN Single Sign On Solution by Emmanuel Ormancey, IT-IS
  - Managing an Institutional Repository with CDS Invenio by Nick Robinson, IT-UDS
- Posters
  - RSS based CERN Alerter by Emmanuel Ormancey and Rafal Otto, IT-IS
  - Printing at CERN by Rafal Otto, IT-IS
  - Automatic processing of CERN video, audio and photo archives by Michal Kwiatek, IT-IS