

Collaborative Tools for the LHC: Update on Recent Activities (and some commentary)



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When Last We Met in India

LCG RTAG 12 Findings

- *Usage & Needs Greatly Increasing, But...*
- *No Central, Coordinated Project for the LHC*
 - CERN or Elsewhere
- *Conference Rooms Out-Dated, Not Enough*
- *Phone Service Limited Hours, Not Integrated with Video Conferencing*
- *No Uniform Recommendations for Remote Participants*
 - Equipment or Services
- *Limited Lecture Archival Capabilities*

LCG RTAG 12 Recommendations

- *Centralize Services*
- *Enhance Dialogue Between CERN IT and LHC Collaborations*
- *Bring Conference Facilities Up To Date, Equip All Meeting Rooms*
- *Support Video Conference Services in Use (VRVS, Esnet)*
- *Integrate Phone and Video Conferencing (All Tools, For That Matter...)*
- *Create Lecture Archival Service*
- *Set Up Service-Level Agreements*

Progress Over Past Couple Years

Organization

- *Centralization of Activities Under CERN IT*
 - UDS Group (Tim Smith)
- *Creation of RCTF (Remote Collaboration Task Force)*
 - Bi-Monthly Meetings
 - *Chaired by Thomas Baron*
 - *CERN IT Representatives + LHC Collaboration Representatives*
 - Establishment of Priorities for CERN Facilities
 - Focus on Service Level Agreements
 - *Drafts, at least...*
 - Documentation
 - <https://cern.ch/twiki/bin/view/RCTF/WebHome>
 - *Includes conference room tutorials, guides, some planning, etc.*

Resources

- *Commitment by ATLAS / CMS*
 - Around 50-100 kCHF / year / experiment (next 5 years) for Video Conferencing
- *Increase in CERN Staff*
 - Recent Addition of 1 Full-Time Engineer!!!

Progress Over Past Couple Years

Conference Rooms

- *Prototype Facilities Installed at CERN*
 - 40-4-C01, 40-R-B10 (+ a few others for other groups)
 - Based on Tandberg Codecs
 - Compatibility for H.323, VRVS, EVO, ECS, HERMES, Phone
 - *Local MCU's Provide Bridge Between Systems*
 - Acoustic & Light Situation Properly Taken Into Consideration
 - *Carpeting, Shades, Ceiling & Table Microphones,...*
- *Plans for Equipping All of Building 40*
 - Acoustic Evaluations of Auditoria
 - Similar Interfaces (Tandberg)
 - Centralized Maintenance
 - On-Call Maintenance
 - Operations Up To Users

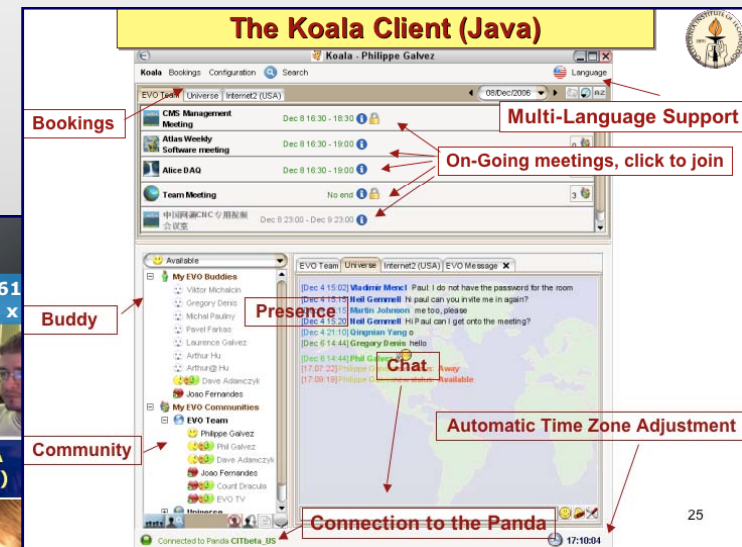
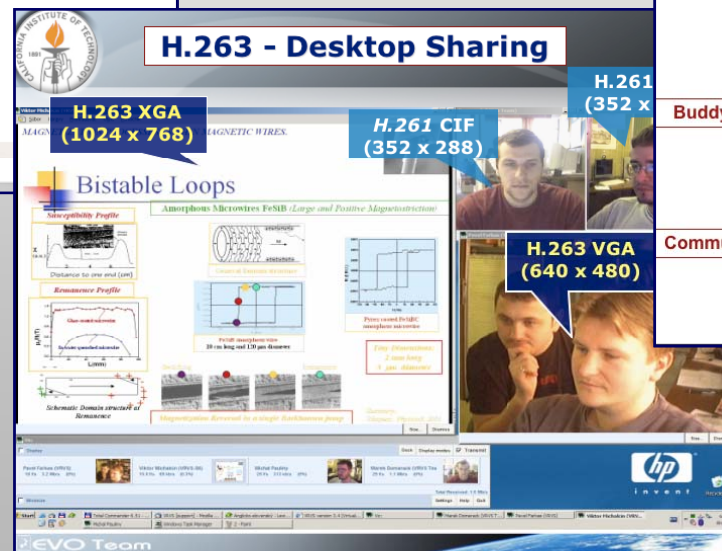
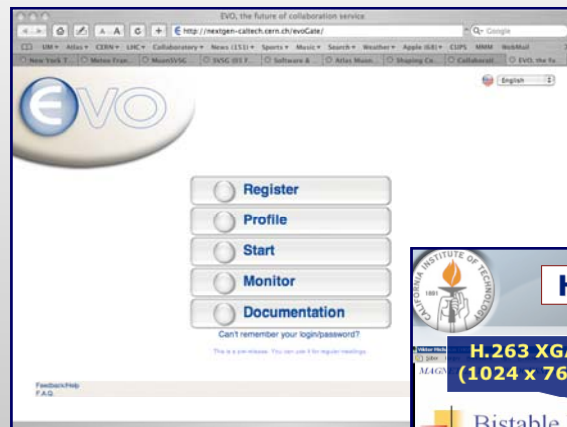
<http://cern.ch/it-multimedia/Rooms>
<http://cern.ch/it-multimedia/tutorials>
- *Institute Installations*
 - Recommendations for Equipment
 - Contracts for CERN-based Installations



Progress Over Past Couple Years

Video Conference Systems

- VRVS / EVO
 - First EVO Production Version Released (See Philippe Galvez' Talk)
 - Emphasis on Robustness, Adaptability to Hardware, Network Limits, Scalability



Progress Over Past Couple Years

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



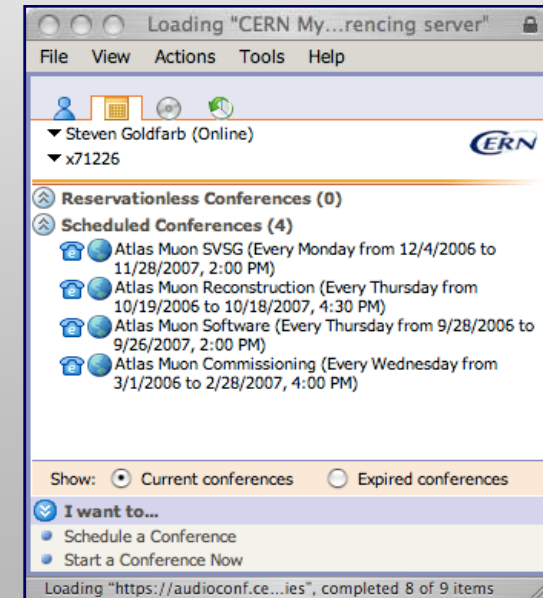
Progress Over Past Couple Years

Phone Conference Systems

- *CERN Alcatel MyTeamwork*
 - <http://edh.cern.ch/Document/AudioConf>
 - http://cern.ch/audioconferencing/Audio_conference/audioconf-start-guide.html
 - Operator-Free 24h / 7d Service
 - Web-Based Booking System
 - Call and Enter Conference Code -or- Click for Callback
- *Other Phone Possibilities*
 - Phone Bridge to ECS
 - Phone Bridge to EVO [new]
 - Skype (not allowed at CERN), Gizmo, etc.
 - *Not yet widely used for conferences (scalable?)*

Web Conference Systems

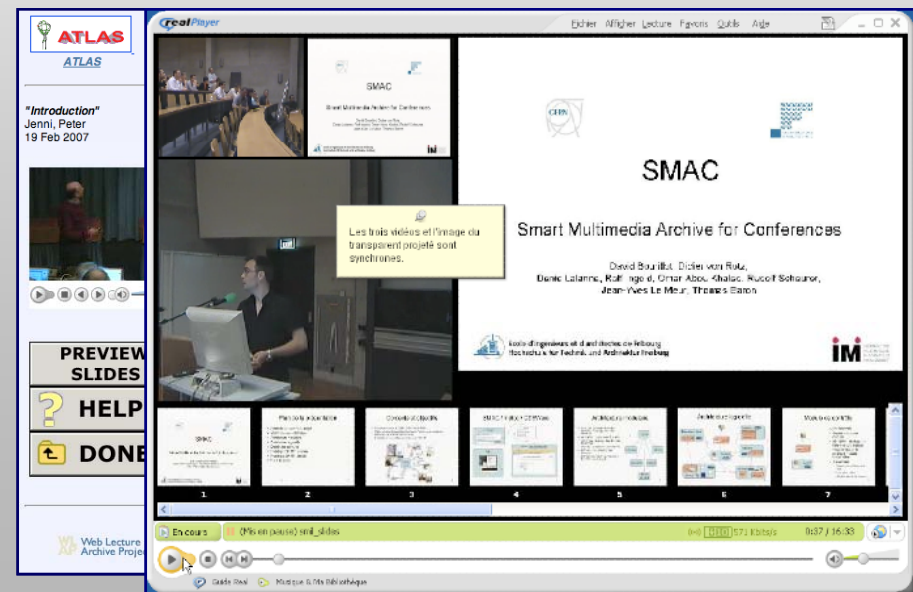
- *Xmeeting*
 - Used by Fermilab/CERN Accelerator Groups
 - Relatively Large Licensing Fee
 - *But, Professional Product*
 - Video can be included



Progress Over Past Couple Years

Lecture Archiving

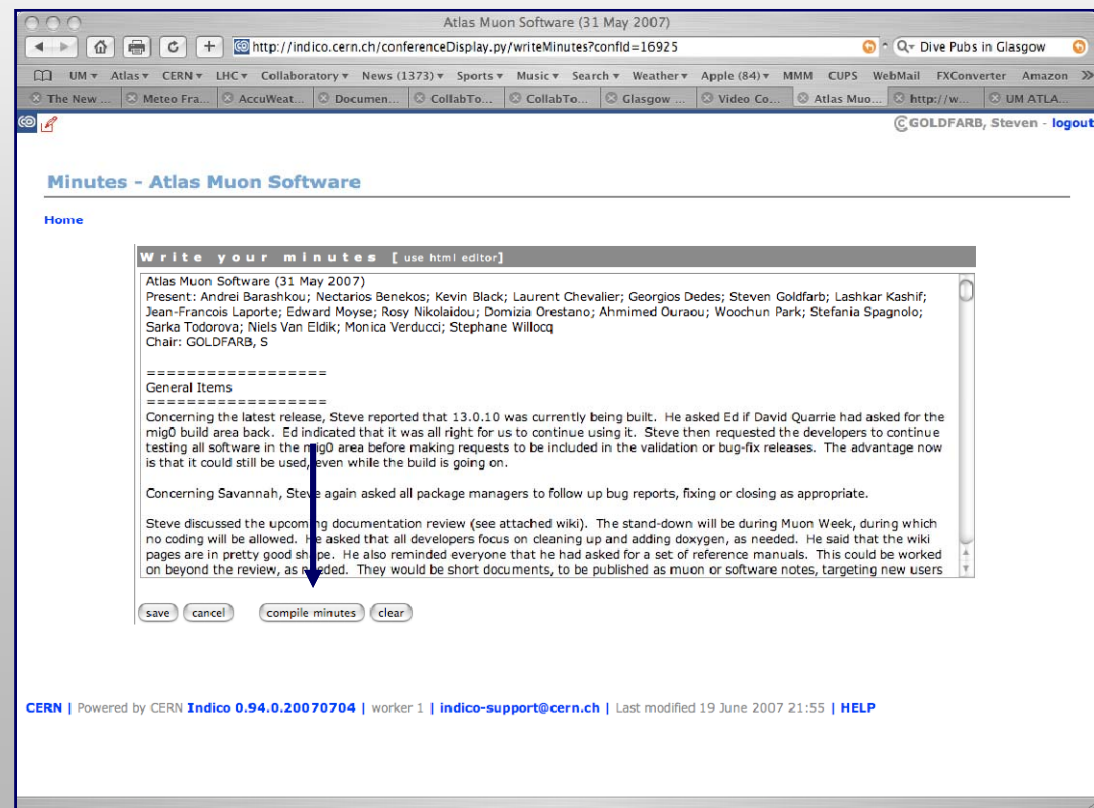
- *Michigan WLAP System*
 - Based on Lecture Object Concept (See Jeremy Herr's Talk)
 - *Real Player Viewing*
 - Service-Level Agreement with ATLAS (2006, 2007)
 - *ATLAS Overview Week Plenary Sessions (CERN & Away)*
 - *Tutorials, Seminars, Training*
 - 343 Meetings, 87 Tutorials in Archives
 - Experience with Large-Scale Production at Michigan, Elsewhere
 - Working on Quicktime, Flash
- *CERN SMAC System*
 - Similar XML Object Concept
 - Similar Final Product
 - Working on Flash, Quicktime
- *CERN Facilities*
 - Video Splitting in Auditorium
 - Portable Facilities
 - *Investigating*



Progress Over Past Couple Years

Event & Meeting Management: Indico

- New Features
 - *CRBS, VRVS Booking Integrated*
 - *Data Exportation (All Slides on Agenda!)*
 - *Minute Compilation*
- Coming Soon
 - *EVO Booking*
 - *Alcatel Phone Booking*
 - *Interface Simplification*



Shaping Collaboration 2006

Conference on Collaborative Tools & LHC

- *Agenda, Slides, Videos, Web Lectures*
<http://cern.ch/ShapingCollab2006>.
- *Date, Venue*
 - December 11-13, 2006, CICC, Geneva (*Not at CERN!*)
- *Two 1.5-Day Workshops (LHC / Workshop on Advanced Collaborative Environments)*
<http://www.mcs.anl.gov/wace>

Goal

"...bring together members of the user community of the CERN Large Hadron Collider with researchers and practitioners in the area of advanced collaborative tools [to] focus on ways these communities can work together to advance research in collaboration while meeting the needs of global science projects."

Participation

- *100 Local & Remote Participants*
- *Worldwide Representation*
- *Key Participants Concerning the LHC / CERN*
 - Jos Engelen - CERN Deputy Director General for Science
 - Doug van Houweling - Director Internet 2
 - Tim Smith - CERN IT/UDS
 - Markus Nordberg - ATLAS Resources Coordinator
 - Steinar Stapnes - ATLAS Deputy Project Leader
 - Dan Atkins - US NSF Director Office of Cyberinfrastructure

Summary ⇒ Top CERN Management, Funding Agencies



Challenges On The Horizon

Completion of CERN Facilities

- *Complete Debugging of Prototypes*
- *CERN Local Gatekeeper*
- *Breaking-In of Users*

Remote Teaching Facilities

- *Video Conference / White Board / Slide Sharing Facility*
 - *Optimized for Teaching Faculty at CERN*

Non-CERN Facilities

- *Standard Set of Hardware Recommendations*
- *Testing, Certification of Sites*

Lecture Archival Service At CERN

- *Based on UM or SMAC Standardized Systems*
- *Automation*
 - *Recording, Archiving, Publishing*

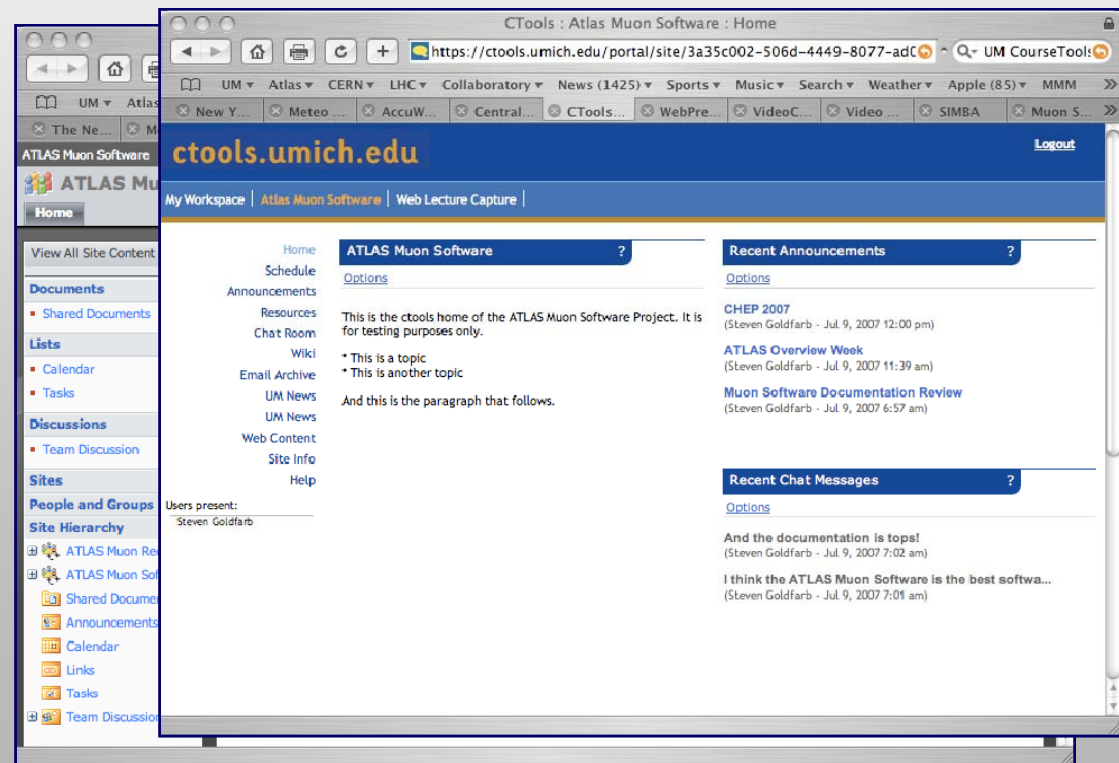
Integrated, Secure Collaborative Environments

- *Authentication will become crucial this next year!*

Collaborative Environments

Sharepoint / Sakai

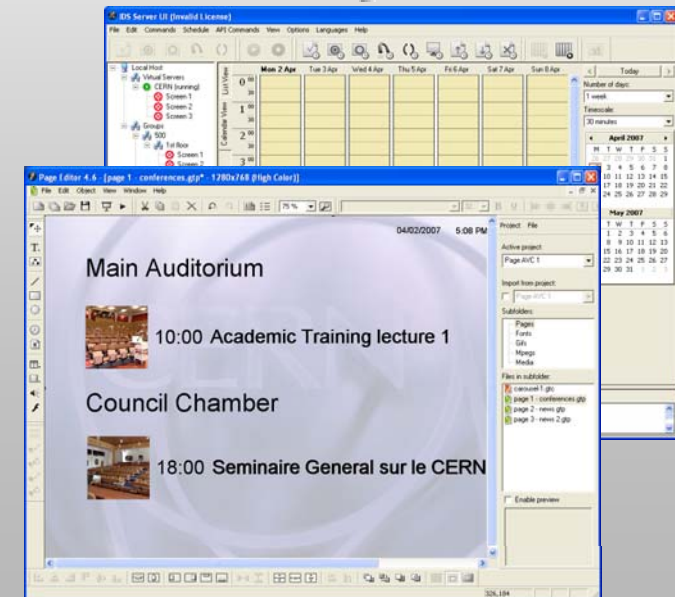
- Group Conveners
 - *Topic-Based Portal to Tools*
 - Indico, Savannah, Mailing Lists, EVO, etc.
 - *Integration & Automation of Web Pages*
 - Upcoming meetings, latest discussions, file-sharing
- Document Security
 - *Authentication*
- On RCTF Radar
 - *Needed now!*



Other Fun (Useful) Stuff

PID's (Public Information Displays)

- What?
 - *Flat, Durable LCD Screens with Processors*
 - Used in Airports, other Public Places
- Where?
 - *Main Auditorium, Council Chamber*
 - *Restaurant 1, Restaurant 2*
 - *Globe, Microcosm, Reception, Bd 513 (Grid Café)*
 - *Building 40?*
- Content?
 - *LHC, Experiment Conditions*
 - *Indico Agenda Feeds*
 - *General, LHC, News Feeds*
 - *Any Web Content (and Vice-Verse, probably)*
- Cost?
 - *4 kCHF Display + 4 kCHF CPU + 2 kCHF Misc.*
 - *ATLAS & CMS Interested*
 - Might share a prototype



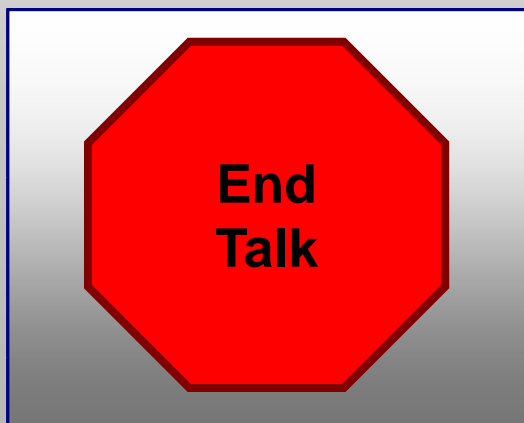
Commentary

Convergence on Support for Video Conference Services

- *Get Beyond EVO / ECS / Xmeeting Debate*
- *Decision, Support from Collaborations*
 - Not Reasonable for U.S. Funding Agencies to Pay Full Bill
 - But, Remote Institutes Have Most to Gain

Simplification, Robustification™ of Human Interface

- *Currently*
 - 7 Clicks / Actions Required to Start a Phone Conference in 40-4-C01
 - 11 Clicks / Actions Required to Start an EVO Conference in 40-4-C01
 - And one needs to know: phone code, use ISDN, IP/gatekeeper for EVO, etc.
- *Proposed New Indico Interface for Audio & Video Conferencing*



Quick Reference Guide

Information

- *RCTF*: <https://cern.ch/twiki/bin/view/RCTF/WebHome>
- *EVO*: <http://evo.caltech.edu>
- *ECS*: <http://www.ecs.es.net>
- *UM Lecture Archives*: <http://esmane.physics.lsa.umich.edu/wlap-cwis/SPT--Home.php>

Communication

- *Video Conferencing at CERN*:
 - videoconference-support@cern.ch
 - Paul Gelissen (16-0219), Jean-Louis Latsague (16-4607)
- *Phone Conferencing at CERN*:
 - standard.telephone@cern.ch
- *General announcements, discussions on collaborative tool topics*:
 - forum-collaborative-tools@cern.ch

Documentation

- *LCG RTAG12 Final Report (CERN-LCG-PEB-2005-07)*
 - <http://cern.ch/LCG/peb/documents/RTAG12-Report.doc>
- *Opportunities for Use and Development of Collaborative Tools in ATLAS*
 - <http://doc.cern.ch/archive/electronic/cern/others/atlnot/Note/gen/gen-2003-002.pdf>