Integrated Digital Conferencing

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(on behalf of CDS/InDiCo team)

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CDS Activities

In the (most) recent restructuring I took over a new merged group – IT-UDS
- ex-User Services group (have been at HEPiX before)
- ex-Document Handling group (never was a part of the IT division).

Produced the CERN Document Server (CDS).

Good idea to expose CDS activities to HEPiX
- Due to vacations none of the principal team members could attend – so you get me!
CDS Elements

CDS grew out of the CERN Preprint server (1994)
- Now packaged as CDSWare and licensed under GNU GPL
- Now installed at >20 sites including:
  - EPFL (Lausanne), San Diego Supercomputer Center and
    most recently RERO (a Swiss consortium of research libraries)
- CDS consists of several modules
  - The one which is relevant today is CDS Agenda
CDS Agenda System

We got started in this business following a request from ATLAS to help them manage their “ATLAS Weeks”.

- They were already using CDS to store their documents.
- Wanted a tool to ‘manage’ their meetings
- Among other things, wanted to have the presented material “attached” to the talks and archived.

Created CDS Agenda:

- Web interface for setting up meetings (agendas)
- MySQL database behind the scenes
- Attached material stored on a document server
- Documents automatically sent to the CDS Conversion server to provide PDF or PS versions, etc.
CDS Agenda Status

- CDS Agenda is now installed in several places worldwide:
  - CERN (> 10,000 Agendas, > 70,000 files)
  - IN2P3, NiKHEF, Fermilab, ICTP

- Is available as open-source under the GNU GPL
- Downloaded so far >100 times in 2004...

- CDS Agenda served as basis for writing the user requirements of InDiCo – an EU-funded project for Integrated Digital Conference management.
INDICO, a European Project

Issues recognized by European Commission who agreed to finance InDiCo (1.6MEuros)

- Long term archiving of meetings material
- Enlarging access to scientific conference content
- Integrating multimedia into conference web archives
- Reducing conference organization cost

Partners:
- Italy: SISSA, University of Udine
- Holland: TNO TPD, University of Amsterdam
- CERN

Project was approved to start in 2002 for 2 years
The 3 reasons for our involvement

 ARCHIVES

Gathering conference material is a major challenge for CERN library – they need this for our Annual report.

VIDEO AND AUDIO TOOLKITS

Content captured during events can be analyzed to provide richer final product (e.g. synchronized video/slides) and better search capabilities.

CONFERENCE MANAGEMENT SOFTWARE

We knew that CDS Agenda needed to be upgraded and this was a good opportunity.
Deliverables

- A conference metadata repository will be made available to harvesters.
- An indexing module to allow searching the full content of multimedia documents.
- A conference creation and management system (web-based) to be used by the conference organisers.

This is the CERN part.
What is a conference!

Lot of “objects”...

Categories contain many conferences that contain many sessions that contain many contributions that may contain many talks with much attached material...

> Call for Material
> Material Submission
> Material Selection
> Program Setup
> User Registration
> Web Site Management
> Electronic Proceedings
> Long term archive

Lot of processes
INDICO main supported features

- **allow access rights** on each “object”
- **delegate** responsibilities according to **roles**
- **manage submission of material**
- **support modification of material** (e.g. withdraw abstracts or papers)
- **define tracks** and manage them
- **set up the programme:**
  - allocation of contributions to sessions
  - timetable arrangement
- **customize** conference web pages
- **register users**
- **attach material** at all levels
- **generate publications**: abstracts, proceedings, etc.
- **create categories** to classify conferences
- **archive** the conference
Architecture overview
Technology

- **UML** for technical documentation
- **Python** is the main development platform
- Persistence based on **ZODB** (Zope Object Database)
  - Object Oriented database implemented in Python
- **Apache** +**mod_python** as application server
- **OAI** (Open Archive Initiative) protocol for metadata harvesting
  - Standard protocol for information exchange between digital libraries
  - Used to expose conference data to the community
Final remarks

- Will be used for **CHEP’04 (September 2004)**
- But also for:
  - 10th Workshop on Electronics for LHC and future Experiments (Sep 2004)
  - ICALEPCS'2005 (Accelerator & Exp. control systems)
  - 2nd LHC Workshop Chamonix (Jan 2005)
- Ready to be released under an open source license
- Easy packaging & deployment
- Tested on windows and linux
More information

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