Integrated Digital Conferencing

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CERN Desktop Forum

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About Conferences in HEP

March 93

http://marcal1.in2p3.fr/WWW/conf.html

Conferences by subject (HEP related)

- Physics
- Detectors, Acelerators
- Cosmology, Astrophysics
- Engineering, Computing
- Mathematics
- Other

47%
8%
16%
16%
7%
6%
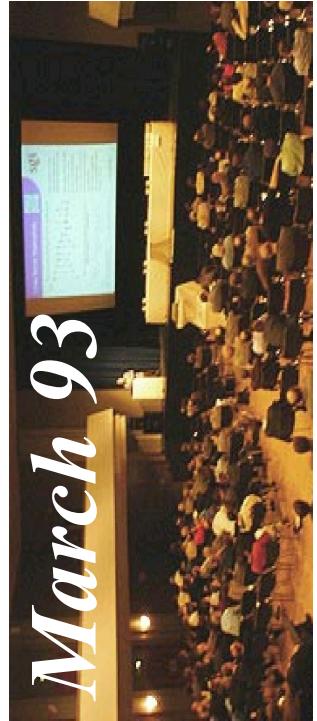
- Conf web sites do not survive
- 5,493 HEP related conferences since 2000

  Average of

  → **100 confs/month**

- Eg. next June

  http://cdsweb.cern.ch/sear ch.py?p=Jun+2004&c=Con ference+Announcements&r g=200
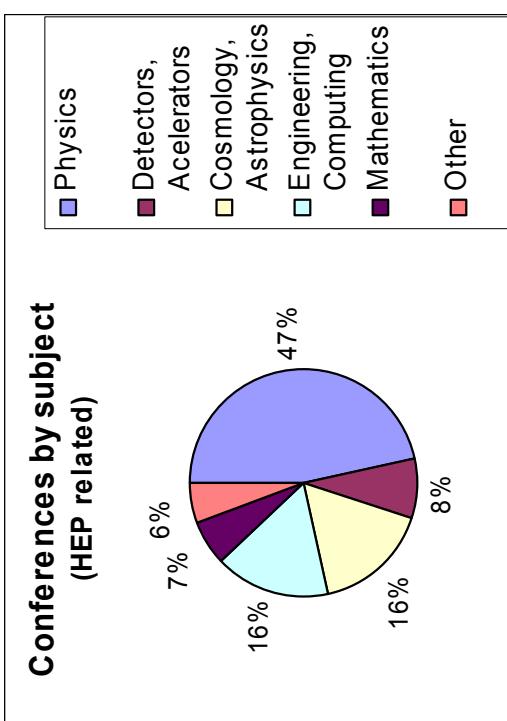
INDICO, an European Project

Issues recognized by European Commission who finance InDiCo:

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

The European Solution for managing and saving conference content in long term

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INDICO Project Resources

- 26 people involved
  - About 13 full time
- 2 years project :
 - From May 2002 to end April 2004
- 2.4 M CHF invested
- 5 institutes:
  - Italy: SISSA, University of Udine
  - Holland: TNO TPD, University of Amsterdam
  - CERN

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Project Global View
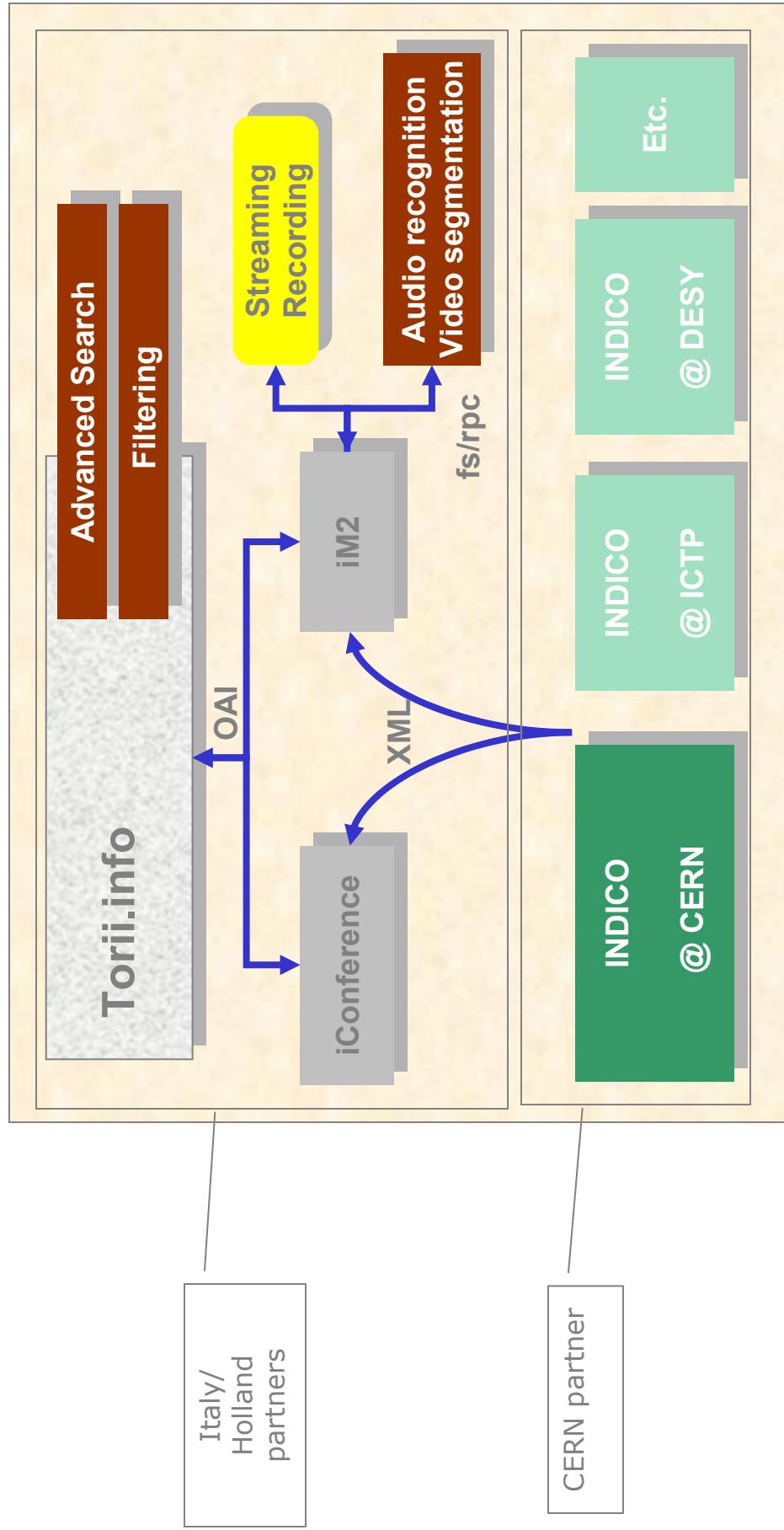
The 3 reasons of CDS involvement

- Archives
  - "Tracking" conference material: a permanent challenge for CERN library
- Video and Audio toolkits
 - http://webcast.cern.ch offers videos of CERN seminars.
  - Content captured during events can be analyzed to provide better rendering and richest search capabilities.
- Conference Management Software
  - http://agenda.cern.ch already widely used in HEP.

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Reminder of what is a conference ! (I)

∞ Many people...

Conference organization

- Referees
- Chairperson
- Librarians
- Speakers
- Conference Secretary
- Participants
- Web site users
- System Manager
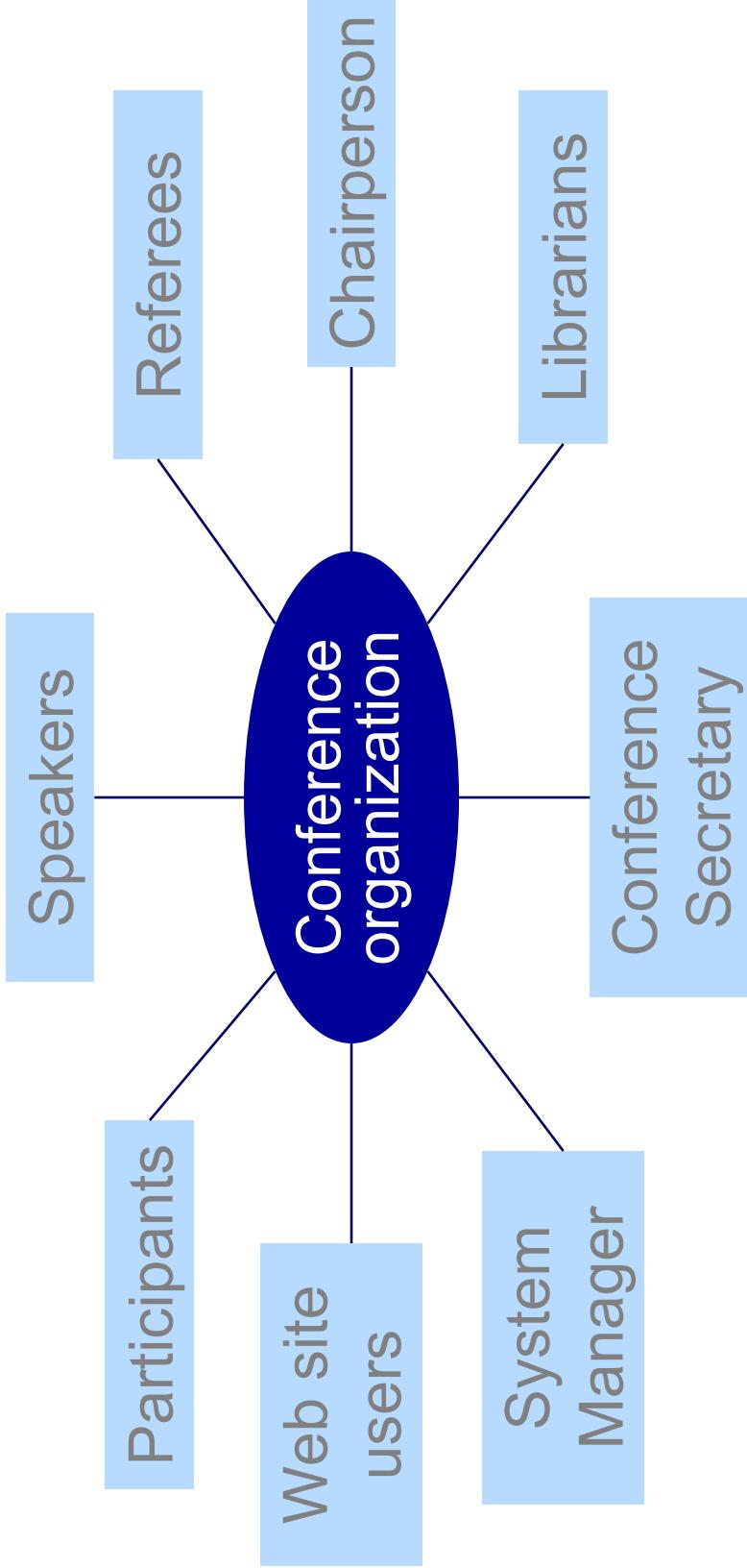
∞ And more ! (sponsors, travel coordinator, publishers...)

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What is a conference ! (II)

◎ Lot of "objects"...

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

INDI☺ ?

Lot of processes

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

Talks
Contributions
Sessions
Conferences
Categories
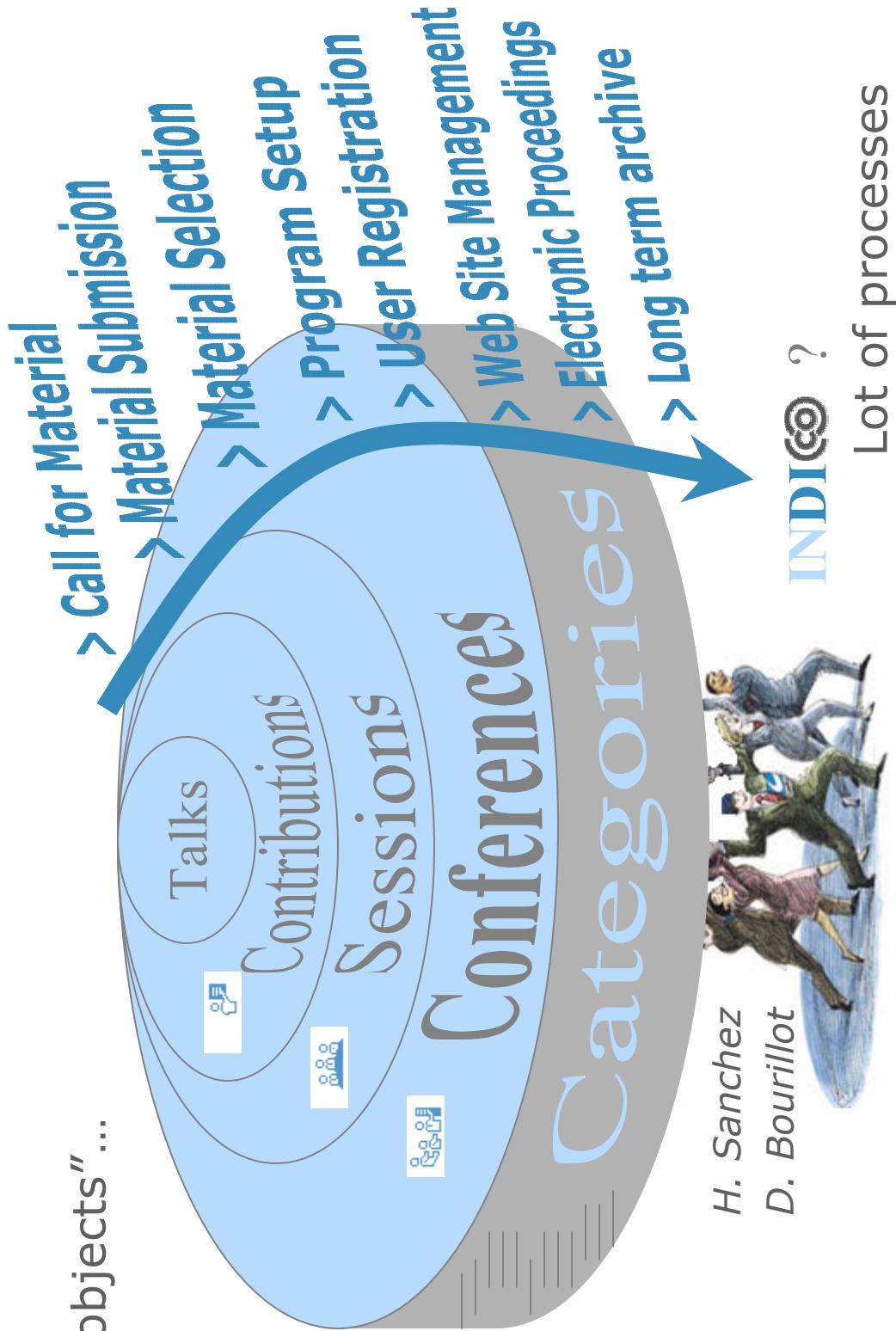
H. Sanchez
D. Bourillot

Some existing products (I)

- Commercial
  - Eveni: http://eveni.com
  - Suvisoft: http://suvisoft.fi/ *Corg software*
  - Conference.com: http://conference.com
  - Softconf: http://softconf.com *Start software*

- Freeware
  - CyberChair: http://www.cyberchair.org/
  - Open Conference System: http://www.pkp.ubc.ca/ocs/
  - Zakon Group LLC: http://www.openconf.org *Openconf*
  - *CDS Agenda http://agenda.cern.ch CERN*

- *And lot of home-made apps*

Some existing products (II)

⊚ Commercial products

⊚ Mainly hosting is proposed

⊚ Mostly service oriented, with "manual" intervention like hotels booking, paper shipping, etc

⊚ Targets are large conferences. Not convenient for one day workshop

⊚ No multi-conference features

⊚ High Cost: each event is charged and additional fees often asked to participants

⊚ Long Term problem: longevity of the web site requires to pay every year. Strong dependency on "small' company

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Some existing products (III)

- Freeware products

  - Very basic features proposed and poor web interfaces

  - Incomplete

  - No much flexibility in the design

  - Aiming at single event management

  - Very little experience: not much used so far by conference organisers

- With the agendas of events stored in CDS Agenda System , we had at CERN an interesting starting point

CDS Agenda Status

CDS Agenda usage

Chart: Number of talks vs Years from 1999 to 2003

- 1002
- 2765
- 5462
- 12037
- 20206

Y-axis (Number of talks): 0, 5000, 10000, 15000, 20000, 25000

@ CDS Agenda is 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 108 times in 2004...

@ CDS agenda served as basis for writing the user requirements of InDiCo

@ InDiCo: good opportunity to face this evolution
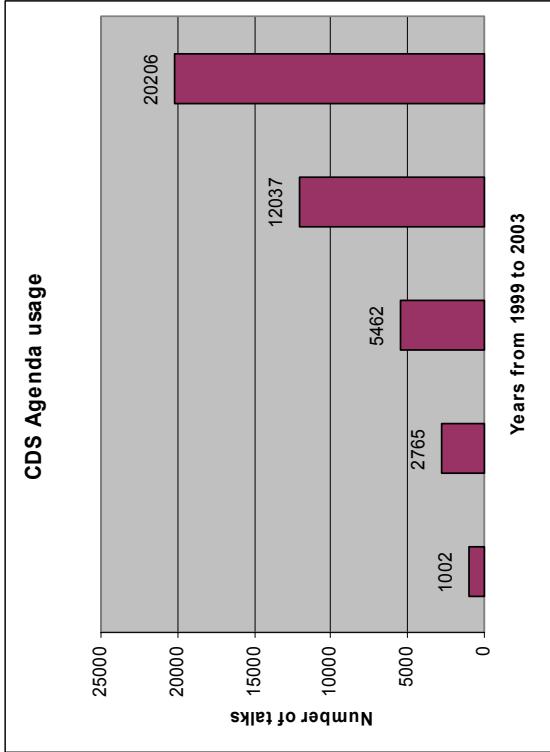
CDS Agenda and InDiCo Compared (I)

CDS Agenda Weaknesses:	InDiCo Answers:
◎ Not flexible enough (rigid structure: agenda->session->talk)	◎ Allows all combinations of elements
◎ Not portable enough	◎ Is easily portable to all platforms (windows, linux....)
◎ Not enough possibilities of delegating the modification	◎ Integrates a complete delegation mechanism at all levels (from the management of single files to the whole conference)
◎ Not enough protection mechanisms	◎ Integrates a complete protection solution

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CDS Agenda and InDiCo Compared (II)

| CDS Agenda Weaknesses:	InDiCo Answers:
◎ Dynamic html	◎ Standard html 4.0
◎ Local login only	◎ Local or external (afs, mail) login
◎ Not suited for big conferences (modification interface tends to be very slow – missing features)	◎ Manages as easily simple events and huge conferences without any performance loss ◎ Implements traditional conference management processes (user registration, call for abstract…)

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Development process

◎ Based on the *Unified Software Development Process* light weighted and adapted

   ✓ 5 iterations defined based on the use cases

   ✓ Activities & results:

User req.	Analysis	Design	Implementation	Test
UR-R1	SSR	Design model	Sw package Documentation	Automated test suite
		Deployment model	Deployment procedures	

◎ Implementation and use of several prototypes for validation and ensuring quality and scalability

Architecture overview

INDICO
Integrated Digital Conference

conference organisers
conference participants
CDS
iM2
iConference

interface
- web
- OAI
- iConf/iM2
- PDF

business
- conference management
- user management
- authentication
- archives

system
- persistence
- file repository

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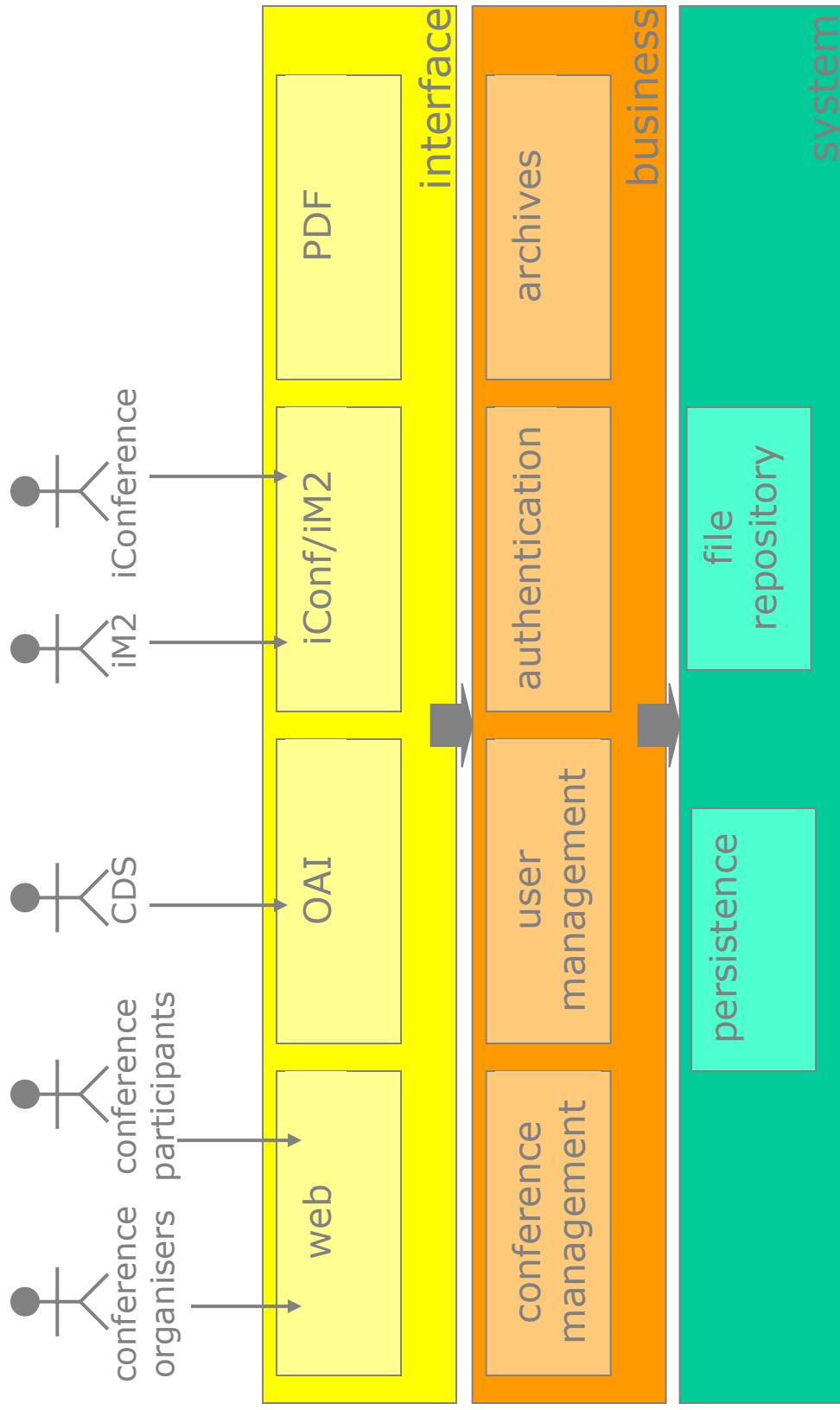
Technology (I)

- **UML** for technical documentation (development models)

- **Python**
  - ✓ General purpose scripting language
  - ✓ Supports the OO paradigm
  - ✓ High-level → less developing time
  - ✓ Java or C/C++ components can be easily integrated
  - ✓ CDS has good experience
  - ✓ Easy to learn for potential contributors

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Technology (II)

- Persistence based in **ZODB** (Zope Object Database)
  - ✓ Object Oriented database implemented in Python
  - ✓ Transparency: no need for explicit read/writes of the objects
  - ✓ Fits very well with our complex object model
  - ✓ Performance and scalability proved as it is the DB engine of Zope

- **Apache+mod_python** as application server

- The web interface is built using standard **HTML**

InDiCo Status

- In production at CERN for events in 2004
  - CHEP 2004
  - 10th Workshop on Electronics for LHC and future Experiments

- Already considered for events in 2005:
  - ICALEPCS'2005
  - Workshop Chamonix-2005 (XIV)

- Outside CERN:
  - Pre-release installed at DESY
  - Strong interest from CNRS (Fr) and DTV (Dk)
  - Two private companies interested

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Future of InDiCo at CERN ?

⊚ Planned as replacement application for CDS Agenda by end 2004: complex migration

⊚ Very tight deadline due to end of the project, loss of resources and support required for on-going conferences

⊚ Good Integration in CERN environment requires more actions such as:

  ⊚ linking with room booking system

  ⊚ linking with LDAP system

  ⊚ linking with CDS archives

  ⊚ linking to webcast server

  ⊚ Adaptation of the audio and video filters

  ⊚ etc

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Conclusion

- InDiCo is designed to host meetings and simple events that were hosted so far by CDS Agenda: 400 agendas per month so far this year

- At the same time, InDiCo is a professional tool to electronically support complex conferences, currently being validated by the large CHEP event

- With an estimation of 100 HEP-related conferences per month

  Number of clients should not grow too fast !

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Otherwise…

Talks

Contributions

Sessions

Conferences

Categories

INDICO

KO

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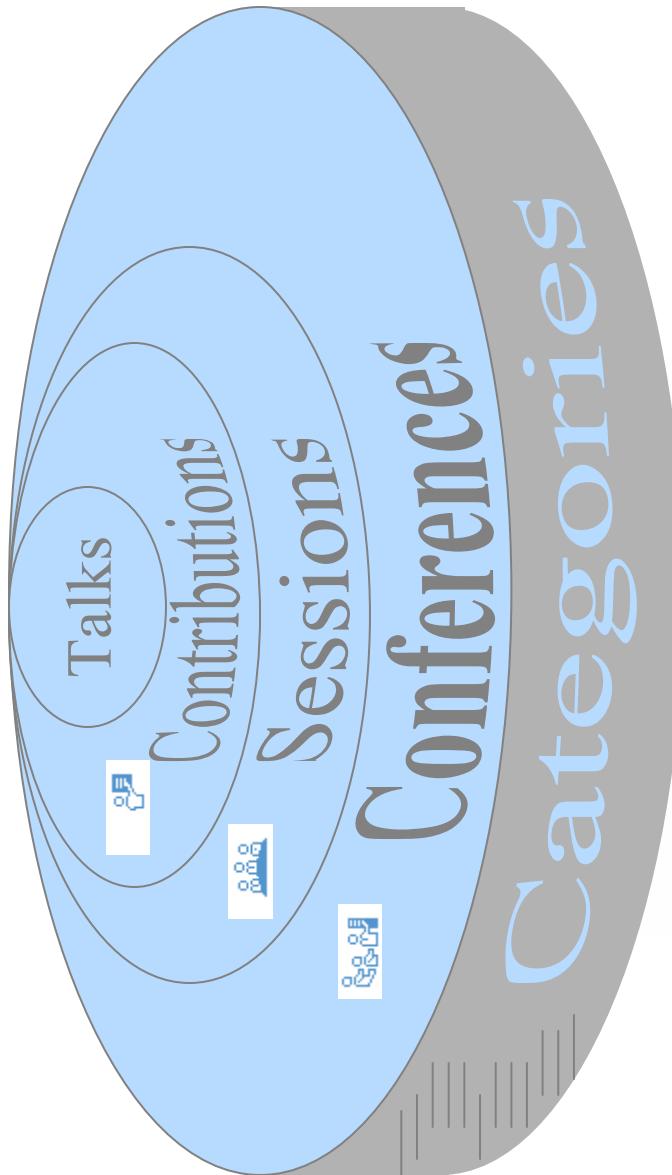
More information

- Production@CERN:
  http://indico.cern.ch

- InDiCo@CERN:
  http://cern.ch/indico

- CERN contact:
  mailto:indico-project@cern.ch

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