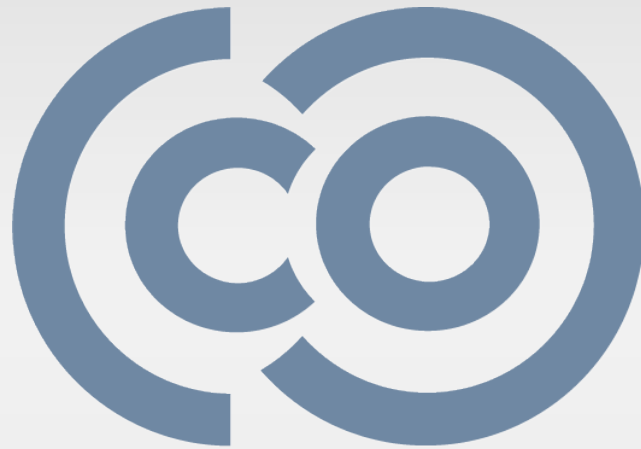


INDICO: A COLLABORATION HUB

CHEP 2012 — NEW YORK

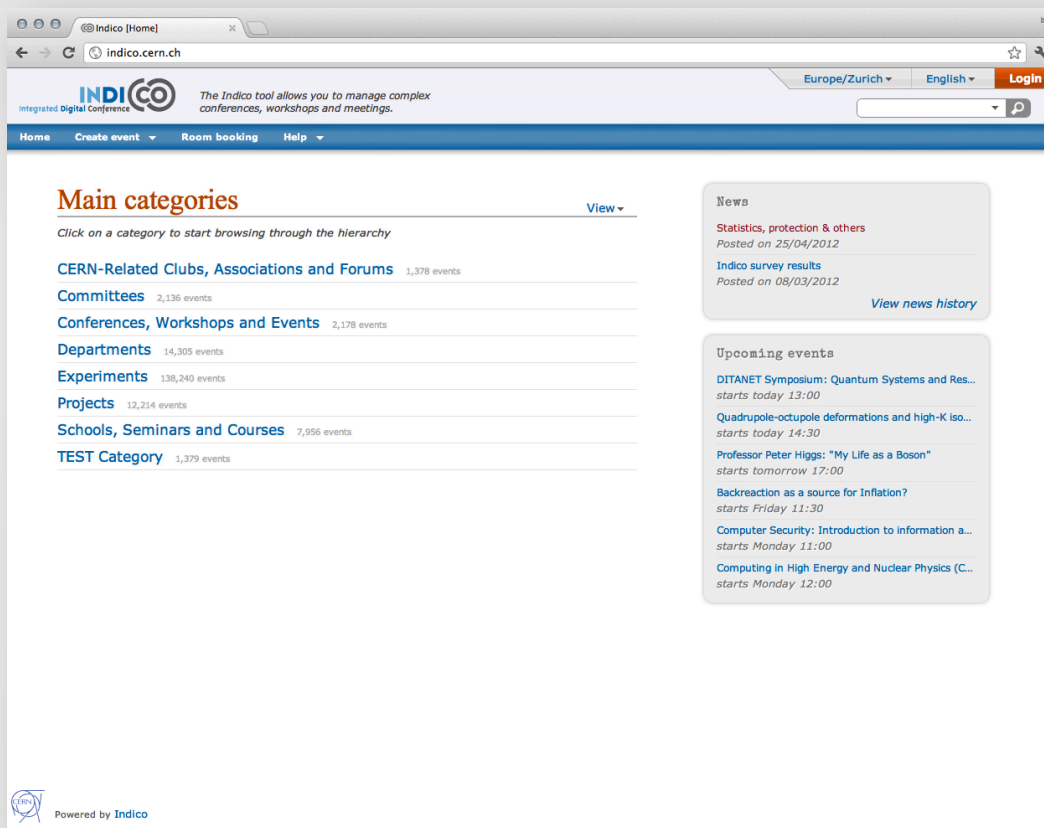


PEDRO FERREIRA
INDICO TEAM / CERN



WHAT IS INDICO?

An event management web application.



WHAT IS INDICO?

An event management web application

Conference Lifecycle

Room Booking

Data Repository

Collaborative tools



Developed at CERN - Free and Open Source

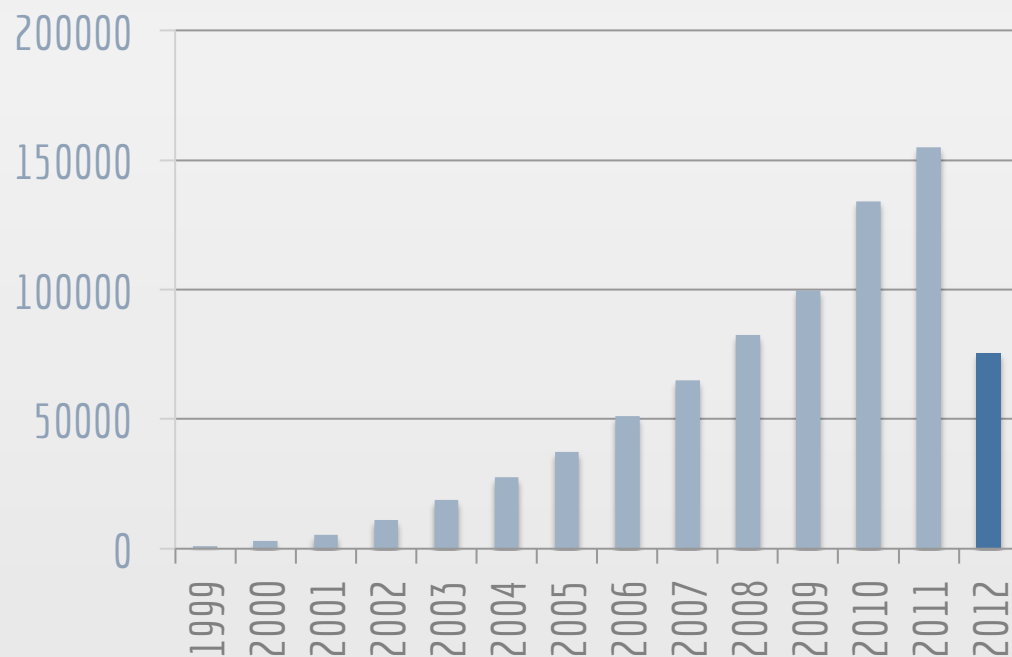
AT CERN

~ 180.000 events

~ 700.000 contributions

~ 1.000.000 files

CONTRIBUTIONS PER YEAR (START DATE)



AROUND THE WORLD

Indico is the *de facto* HEP standard collaboration tool

Growing Community

4 Continents

> 100 known servers



LAST TIME...

CHEP 2009 – “Indico Central”

Indico 0.97 was coming out

Biggest change in Indico to date

Integration with Collaborative tools

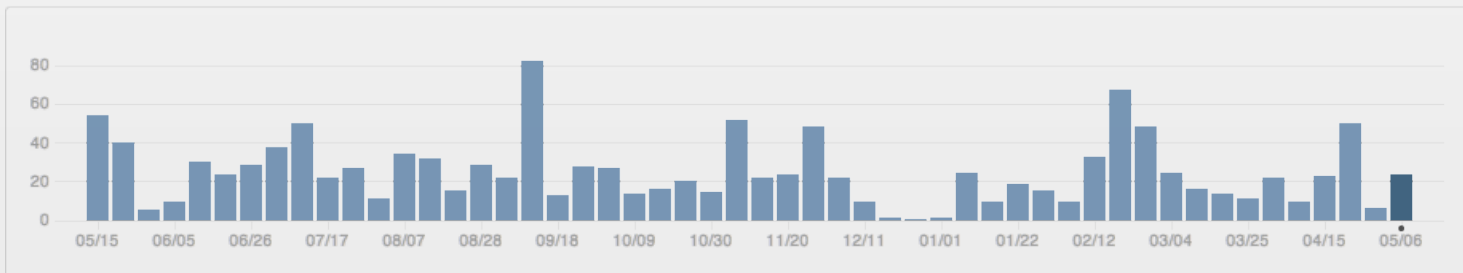
NOW

Indico is currently in version 0.98.2

0.99 is around the corner

Version 1.0 should be out by the end of the year

COMMITTS (LAST YEAR)

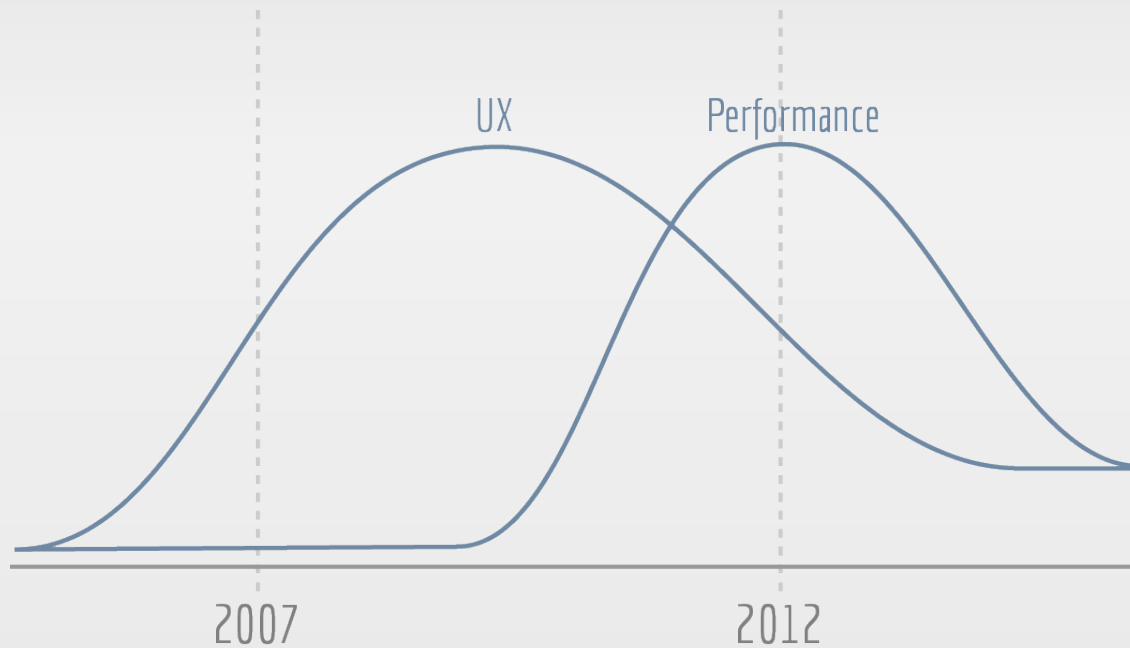




WHAT HAS CHANGED?

SHIFTING PRIORITIES

A bit less UX, more performance



FEATURE SET

New features since 0.97

Integration with Collaborative Tools

Room Map

Paper Reviewing

Timetable Drag'n'drop

Per-event Statistics

Real-time search updates

HTTP API

Security Improvements

COLLABORATIVE TOOLS

Integration with videoconferencing, recording and chat tools

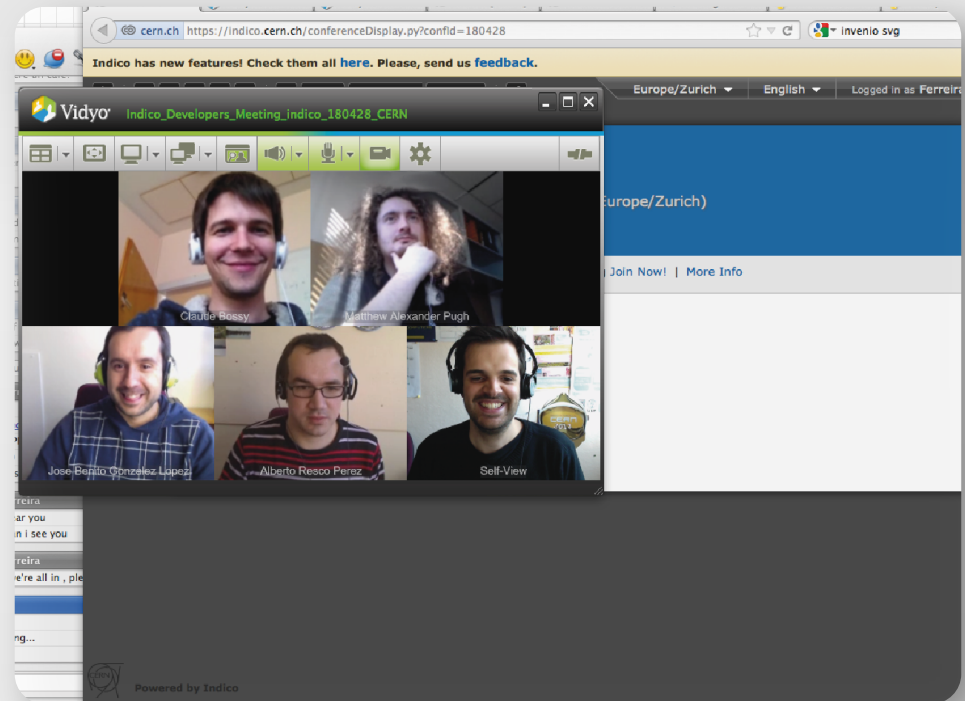
Vidyo

Recording/webcast request

CERN MCU

EVO

XMPP/Jabber



HTTP API

Accessing structured information in an easy and secure way

`http://indico.cern.ch/export/event/149557.json?ak=xxxxxxxxx`

```
{
  "count": 1,
  "additionalInfo": {},
  "_type": "HTTPAPIResult",
  "complete": true,
  "url": "https://indico.cern.ch/export/event/149557.json?ak=xxxxxx&pretty=yes",
  "ts": 1337178456,
  "results": [
    {
      "category": "Conferences",
      "startDate": {
        "date": "2012-05-21",
        "tz": "Europe/Zurich",
        "time": "12:00:00"
      },
      "_type": "Conference",
      "endDate": {
        "date": "2012-05-26",
        "tz": "Europe/Zurich",
        "time": "00:00:00"
      },
      "description": "",
      "title": "Computing in High Energy and Nuclear Physics (CHEP) 2012",
      "chairs": [
        {
          "_type": "ConferenceChair",
          "id": 1,
          "affiliation": "Unknown",
          "_fossil": "conferenceChairMetadata",
          "fullName": "Ernst, Michael",
          "email": "mernst@bnl.gov"
        }
      ]
    }
  ]
}
```

HTTP API

The Swiss Army Knife for the Indico Community

Easy to use (HTTP-oriented)

Secure – several configuration modes

Allows access to most event metadata

Events, contributions, sessions, file URLs, bookings

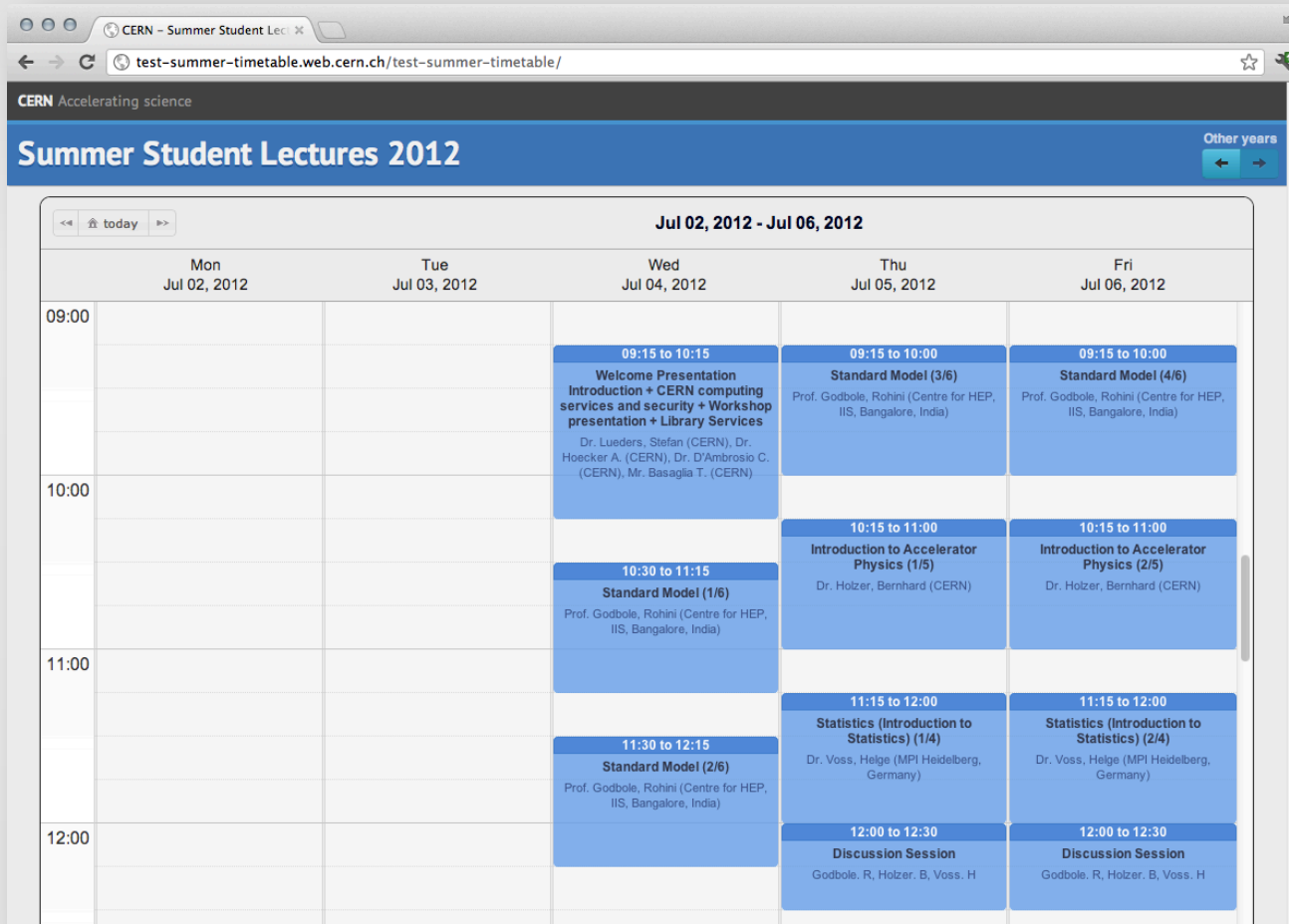
Several formats (XML, JSON, iCalendar, Atom, JSONP)

Allows people to build applications on top of Indico

Example - Conference4Me

HTTP API

Example: Summer Student lecture timetable



CERN Accelerating science					
Summer Student Lectures 2012					
Jul 02, 2012 - Jul 06, 2012					
	Mon Jul 02, 2012	Tue Jul 03, 2012	Wed Jul 04, 2012	Thu Jul 05, 2012	Fri Jul 06, 2012
09:00			09:15 to 10:15 Welcome Presentation Introduction + CERN computing services and security + Workshop presentation + Library Services Dr. Lueders, Stefan (CERN), Dr. Hoecker A. (CERN), Dr. D'Ambrosio C. (CERN), Mr. Basaglia T. (CERN)	09:15 to 10:00 Standard Model (3/6) Prof. Godbole, Rohini (Centre for HEP, IIS, Bangalore, India)	09:15 to 10:00 Standard Model (4/6) Prof. Godbole, Rohini (Centre for HEP, IIS, Bangalore, India)
10:00			10:30 to 11:15 Standard Model (1/6) Prof. Godbole, Rohini (Centre for HEP, IIS, Bangalore, India)	10:15 to 11:00 Introduction to Accelerator Physics (1/5) Dr. Holzer, Bernhard (CERN)	10:15 to 11:00 Introduction to Accelerator Physics (2/5) Dr. Holzer, Bernhard (CERN)
11:00			11:30 to 12:15 Standard Model (2/6) Prof. Godbole, Rohini (Centre for HEP, IIS, Bangalore, India)	11:15 to 12:00 Statistics (Introduction to Statistics) (1/4) Dr. Voss, Helge (MPI Heidelberg, Germany)	11:15 to 12:00 Statistics (Introduction to Statistics) (2/4) Dr. Voss, Helge (MPI Heidelberg, Germany)
12:00				12:00 to 12:30 Discussion Session Godbole, R, Holzer, B, Voss, H	12:00 to 12:30 Discussion Session Godbole, R, Holzer, B, Voss, H

SECURITY

Security is an essential topic in modern web applications

Full HTTPS mode – logged in users

Protected events excluded from iCal/Atom feeds

Access key/signature authentication mechanism (HTTP API)

HTML sanitization, XSS prevention

Protection status displayed for protected pages

USER EXPERIENCE

Since 2007, we've been actively conducting usability tests

UX is **not** a secondary question

Several testing methodologies

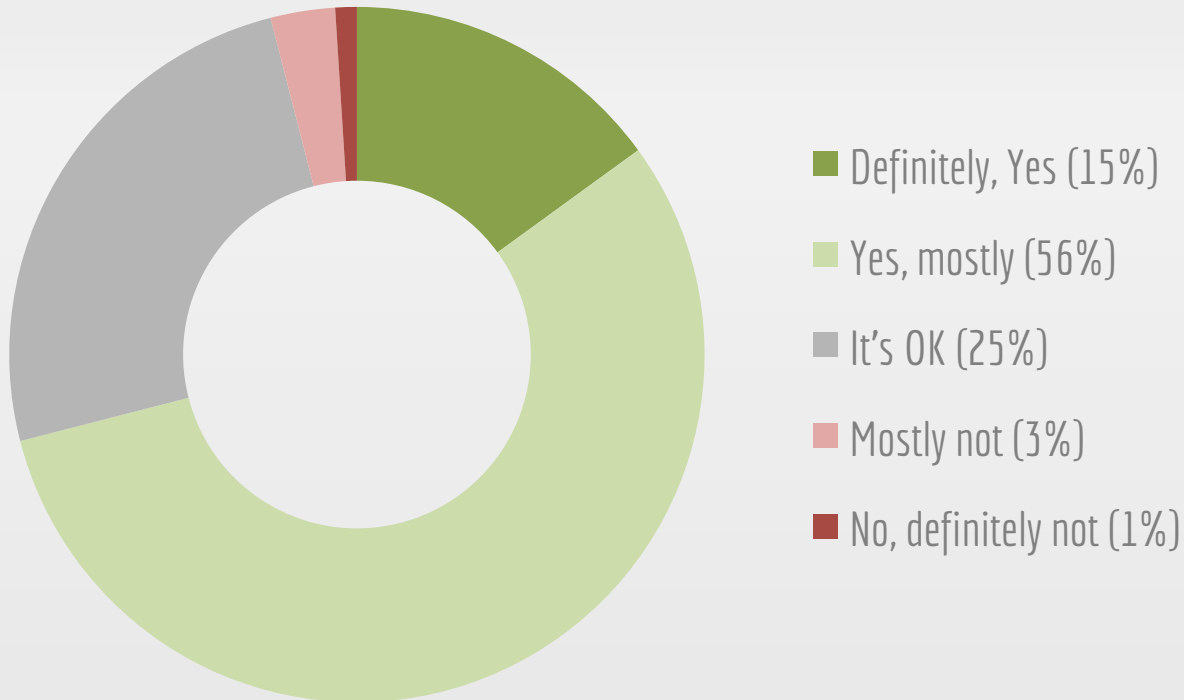
“Lab tests” in 2007 and 2012

Real users, a computer and a camera

USER EXPERIENCE

And we haven't been doing too bad...

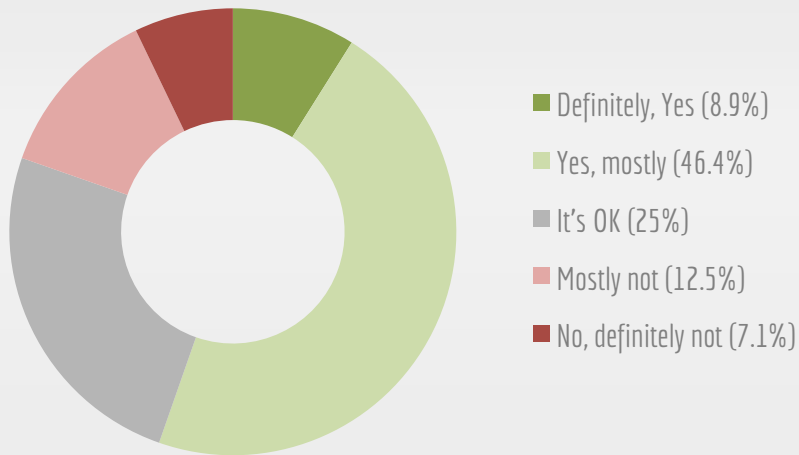
ARE YOU SATISFIED WITH INDICO?



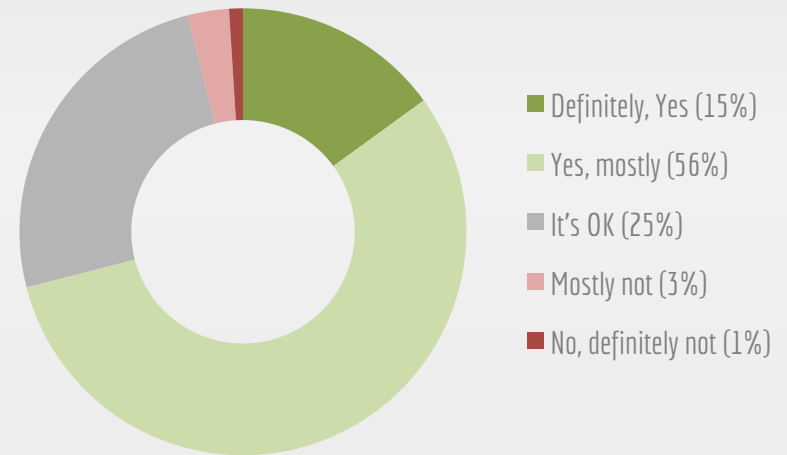
USER EXPERIENCE

A clear improvement, but we can do even better

ARE YOU SATISFIED WITH INDICO? (2007)



ARE YOU SATISFIED WITH INDICO? (2011)



INTERFACE IMPROVEMENTS

Small things can make a lot of difference

User search pop-up everywhere

Timetable (from Thu 17/05 to Thu 17/05 [edit] Timezone: Europe/Zurich)

Thu 17/05

07:00

08:00

09:00

10:00

11:00

Add Users

Family name

First name

E-mail

Organisation

Exact Match ☐

Search CERN user database ☐

COUTINHO FERREIRA, Pedro Miguel	★
FERREIRA, Pedro	★
FERREIRA, Pedro	★
<small>jose.pedro.ferreira@cern.ch</small>	
FERREIRA, Pedro	★
FERREIRA NATAL DA LUZ, Pedro Hugo	★
FERREIRA PARRACHO, Pedro	★
VIEIRA DE CASTRO FERREIRA DA SILVA, Pedro	★

Suggested users

BARON, Thomas	★
CORREIA FERNANDES, Joao	★
FERREIRA, Pedro	★
GONZALEZ LOPEZ, Jose Benito	★

INTERFACE IMPROVEMENTS

Small things can make a lot of difference

Nicer, more functional listings

The screenshot displays the Indico web interface. At the top, the Indico logo and navigation menu are visible. The main content area shows the 'Participants' tab for an event titled 'Indico developers review meeting' on May 15th. The interface includes a sidebar with various settings and a main panel with a table of participants. The table has columns for Name, Affiliation, and Email. Two participants are checked: Jose Benito Gonzalez Lopez and Matthew Alexander Pugh. A dropdown menu is open over the 'Manage attendance' button, showing options like 'Set as present', 'Set as absent', and 'Excuse absence'.

Indico Integrated Digital Conference

Home Create event Room booking Administration My profile Help

Home » Departments » IT » Groups » CIS » Audio Visual & Conferencing Services » Indico » Indico developers review meeting

Indico developers review meeting 15 May
Created by Alberto Resco Perez

General settings
Timetable
Material
Room booking
Video Services
Participants
Evaluation
Statistics
Chat Rooms
Advanced options
Lists
Protection
Tools
Logs

Setup Participants Statistics

Displaying 7 participants

Add Remove Manage attendance Email Export to:

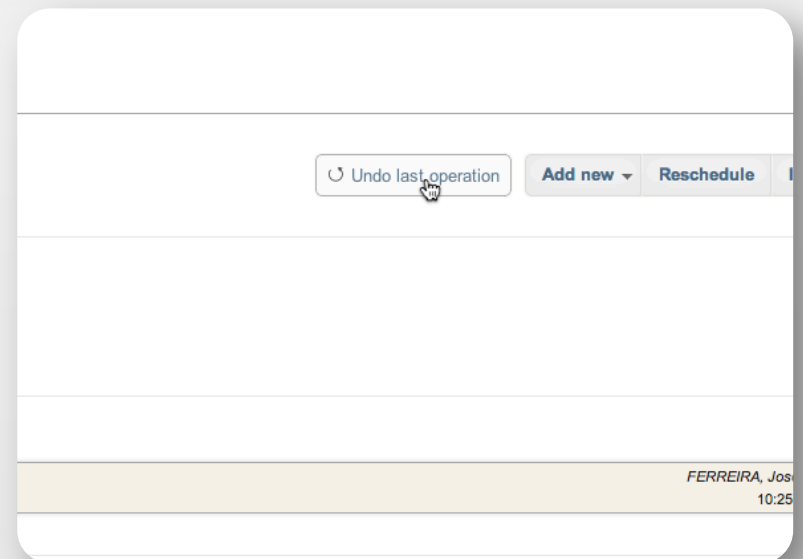
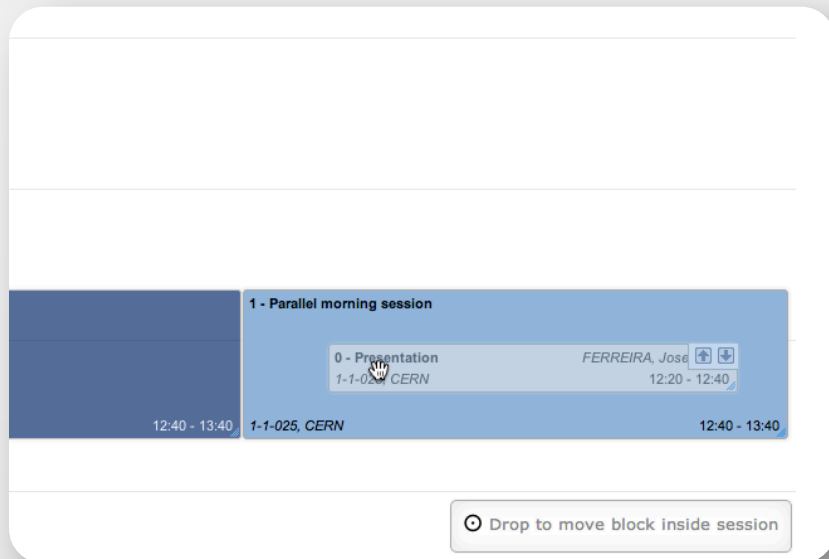
Select: All, None

	Name	Affiliation	Email
<input type="checkbox"/>	Claude Beat B...	EPFL	claudio.bossy@cern.ch
<input type="checkbox"/>	Jose Pedro Ferreira	CERN	jose.pedro.ferreira@cern.ch
<input checked="" type="checkbox"/>	Jose Benito Gonzalez Lopez	CERN	jose.benito.gonzalez@cern.ch
<input checked="" type="checkbox"/>	Matthew Alexander Pugh		matthew.alexander.pugh@cern.ch
<input type="checkbox"/>	Alberto Resco Perez	CERN	alberto.resco.perez@cern.ch
<input type="checkbox"/>	Jakub Piotr Trzaskoma	Warsaw University of Technology (PL)	jakub.piotr.trzaskoma@cern.ch
<input type="checkbox"/>	Christophe Wachter	EPFL	christophe.wachter@cern.ch

INTERFACE IMPROVEMENTS

Small things can make a lot of difference

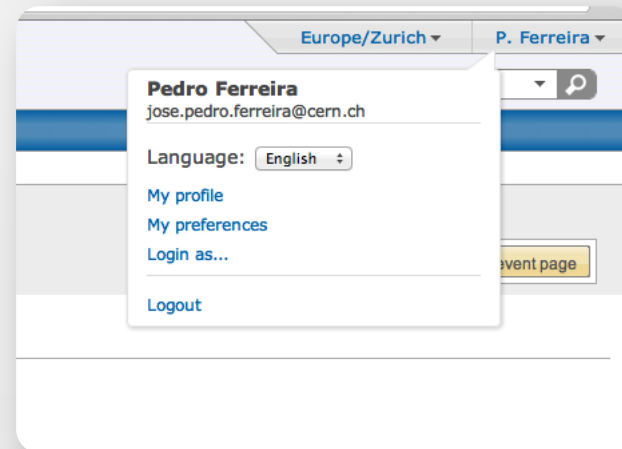
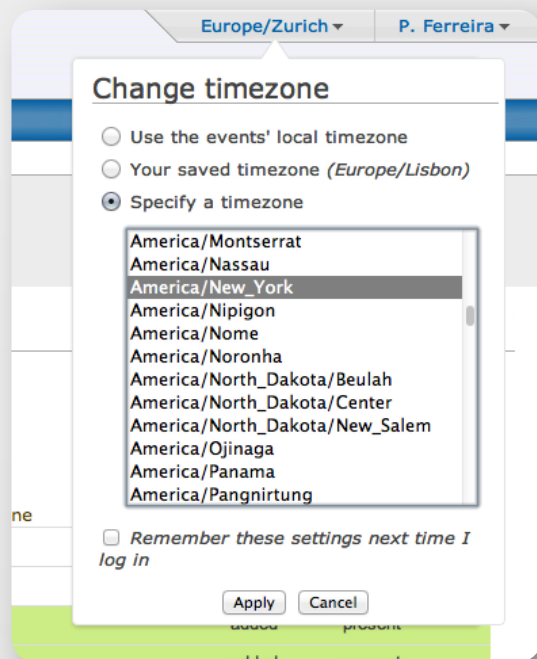
Drag'n'drop Timetable



INTERFACE IMPROVEMENTS

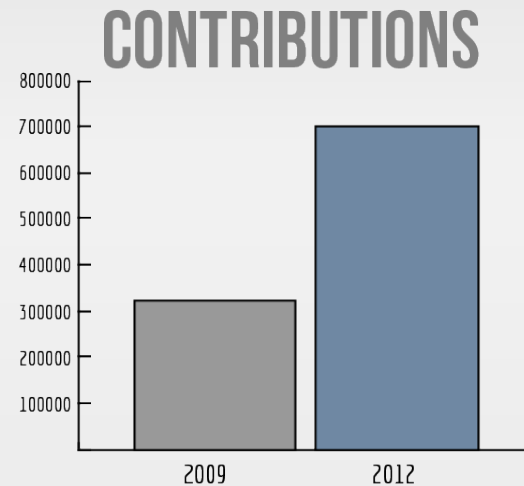
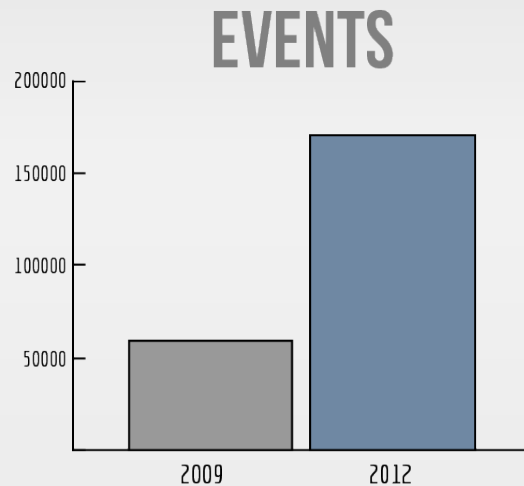
Small things can make a lot of difference

Integrated profile bar



PERFORMANCE

Because we can't afford being slow.



PERFORMANCE

Optimizing “slow spots”.

Event List

Event Pages

Event Overview / Calendar

Room Booking module

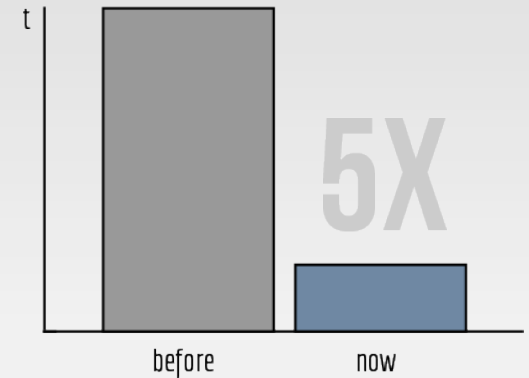
Abstract management

PDF creation

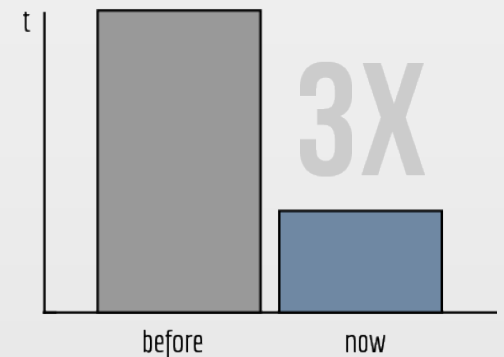
Registrant List

Contribution List

EVENT OVERVIEW



BOOKING CALENDAR

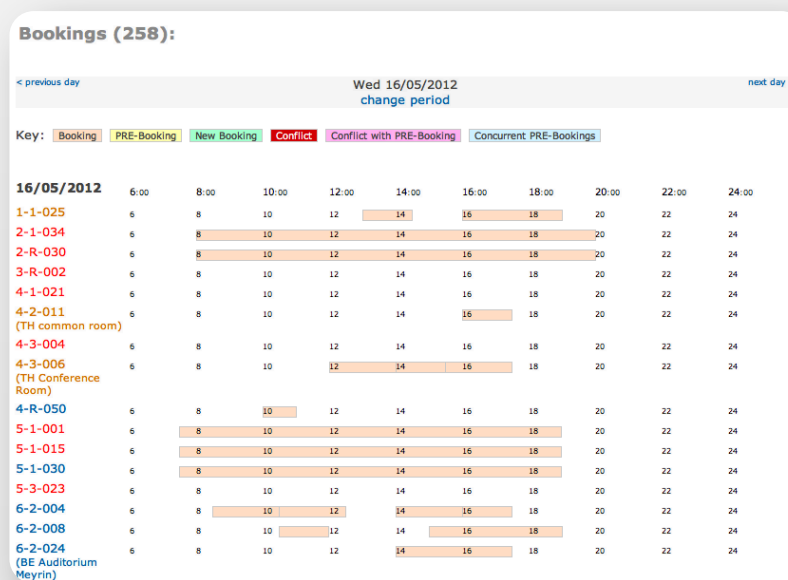


PERFORMANCE

Using technologies the right way.

Minimizing the number of database commits

New caching mechanism with memcached support



TECHNOLOGIES

Doing more, writing less code.

Python 2.6 +

WSGI

Mako templating engine

jQuery & friends

Babel (i18n)

jQueryUI, Google Maps, webassets.py, memcached, pypdf, pyatom, icalendar ...

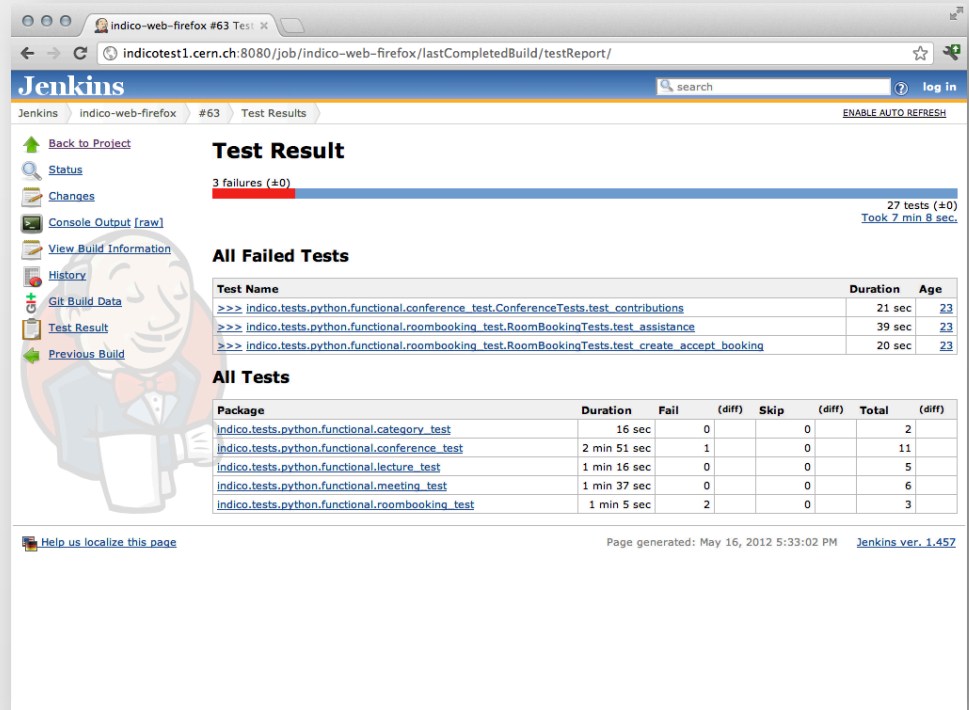
QUALITY ASSURANCE

Developers fail but software can't

Unit tests

Functional (interface) tests

Integration server



A screenshot of a Jenkins web interface showing test results for a build named 'Indico-web-firefox #63'. The page displays a 'Test Result' section with a summary of 3 failures and 27 tests. Below this, there are two tables: 'All Failed Tests' and 'All Tests'. The 'All Failed Tests' table lists three failed tests with their durations and ages. The 'All Tests' table lists all tests, including those that passed, with columns for package, duration, fail status, skip status, total, and diff. The page also includes a sidebar with navigation links like 'Back to Project', 'Status', 'Changes', 'Console Output', 'View Build Information', 'History', 'Git Build Data', 'Test Result', and 'Previous Build'. At the bottom, there is a footer with a link to 'Help us localize this page' and the page generation timestamp 'Page generated: May 16, 2012 5:33:02 PM'.

indico-web-firefox #63 Test X

Indicotest1.cern.ch:8080/job/indico-web-firefox/lastCompletedBuild/testReport/

Jenkins

search log in

Jenkins Indico-web-firefox #63 Test Results ENABLE AUTO REFRESH

[Back to Project](#)
[Status](#)
[Changes](#)
[Console Output \[raw\]](#)
[View Build Information](#)
[History](#)
[Git Build Data](#)
[Test Result](#)
[Previous Build](#)

Test Result

3 failures (*0)

27 tests (*0)
Took 7 min 8 sec.

All Failed Tests

Test Name	Duration	Age
>>> indico.tests.python.functional.conference_test.ConferenceTests.test_contributions	21 sec	23
>>> indico.tests.python.functional.roombooking_test.RoomBookingTests.test_assistance	39 sec	23
>>> indico.tests.python.functional.roombooking_test.RoomBookingTests.test_create_accept_booking	20 sec	23

All Tests

Package	Duration	Fail	(diff)	Skip	(diff)	Total	(diff)
indico.tests.python.functional.category_test	16 sec	0		0		2	
indico.tests.python.functional.conference_test	2 min 51 sec	1		0		11	
indico.tests.python.functional.lecture_test	1 min 16 sec	0		0		5	
indico.tests.python.functional.meeting_test	1 min 37 sec	0		0		6	
indico.tests.python.functional.roombooking_test	1 min 5 sec	2		0		3	

[Help us localize this page](#)

Page generated: May 16, 2012 5:33:02 PM [Jenkins ver. 1.457](#)



THE FUTURE

1.0

Is coming out this year

Lots of refactored code

Cleaning up some “dusty corners” – improving design/usability

UX improvements (Drag’n’drop Registration form...)

A Uniform, stable and complete Software Project

INDICO MOBILE

An improved interface for mobile devices

A mobile add-on for Indico

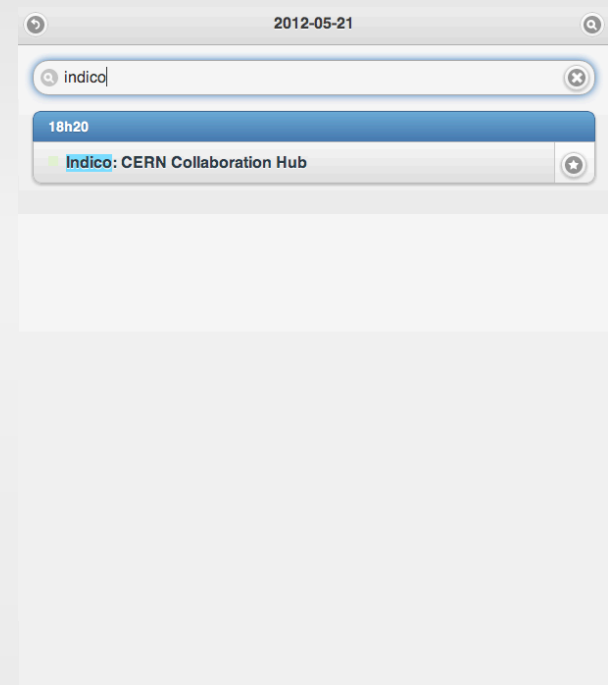
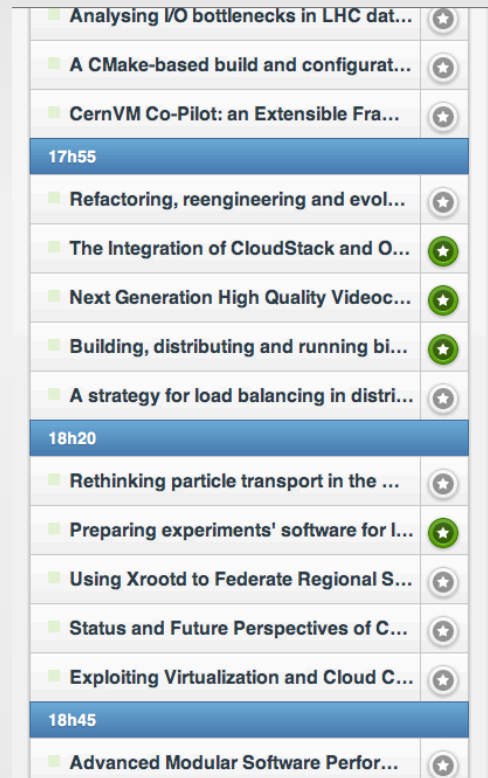
Currently in development

Usable version by the end of the year

Powered by Indico's own HTTP API

INDICO MOBILE

An improved interface for mobile devices



BEYOND 1.0

We have come a long way since CHEP 2004

Paper Reviewing brought us closer to our objectives

Finishing the Conference Lifecycle coverage – **proceedings**

“My Indico” – better homepage?

The web keeps evolving towards something ubiquitous...

We want to be a part of it!

TAKE PART!

Indico is Open Source and free to use

You can help us make it better.

We are open to suggestions and code contributions!

Project Site – <http://indico-software.org>

GitHub – <http://github.com/indico>

INDICO TEAM

Web Development for the Scientific Community

Jabber/XMPP – `indico@conference.jabber.cern.ch`

Admin mailing list – `project-indico-administrators@cern.ch`

Project Site – <http://indico-software.org>



Thank you for your time!

QUESTIONS?