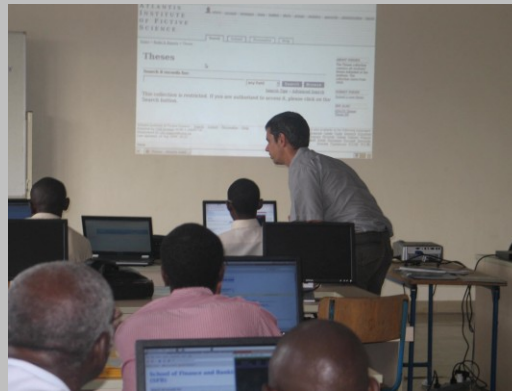


The 2nd CERN-UNESCO School on Digital Libraries



Jens Vigen (CERN)

CNRST, Rabat, Morocco , 21-25 November 2010

Libraries are the key to knowledge



The world is full of opportunities, but also hinders ...

The hinders are to be overcome!

Proposal presented to UNESCO

e-Infrastructures for (Open) Access to Scientific Information: a proposal to improve the visibility of African research

- A possibility of transferring the experience from high-energy physics
- A minimal of resources required
- A high potential; both for readers and authors



Jens Vigen
CERN

4th Meeting of the IBSP Scientific Board
Paris - March 17th 2008

CERN: European Organization for Nuclear Research (since 1954)

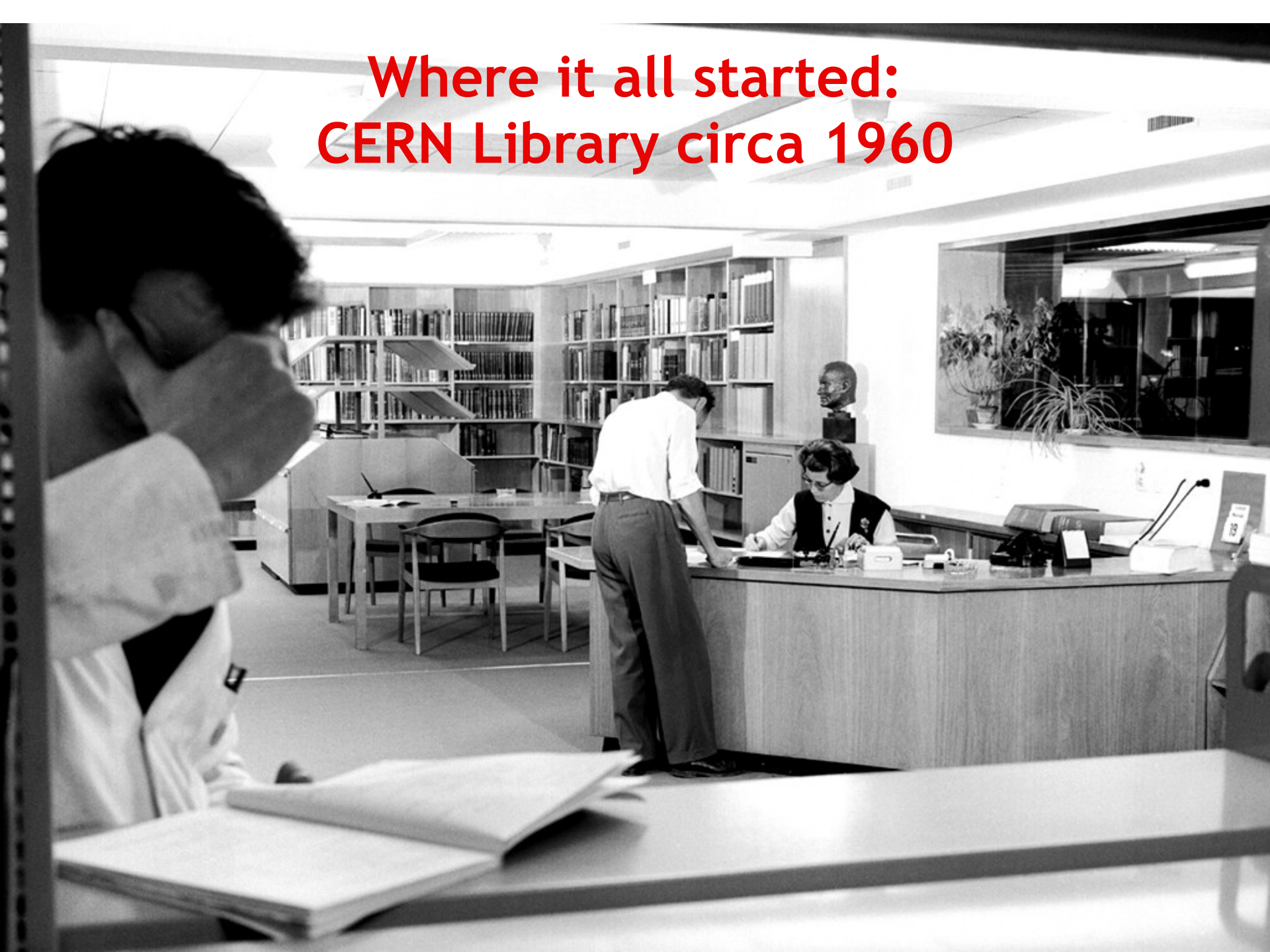
- The world leading HEP laboratory, Geneva (CH)
- 2500 staff (mostly engineers)
- 8000 users (mostly physicists)
- 3 Nobel prizes (Accelerators, Detectors, Discoveries)
- Invented the web 
- Commissioning the 27-km (6000 M€) LHC accelerator
- Runs a 1-million objects Digital Library



The CERN Convention (1953) contains what is effectively an early Open Access manifesto:

“... the results of its experimental and theoretical work shall be published or otherwise made generally available”

**Where it all started:
CERN Library circa 1960**



Communication patterns in HEP

L.Goldschmidt-Clermont, 1965

http://eprints.rclis.org/archive/00000445/02/communication_patterns.pdf

Luisella Goldschmidt-Clermont, CERN (early '60)
(the first 'preprint librarian')

- HEP scientists cannot wait ~1 year for their articles to reach their peers through journals
- *Preprint* are the main vehicle of information in HEP: final version of articles as sent to journals
- Researchers (of affluent institutions) mass-mail preprints to hundreds of (prestigious and therefore affluent) institutions
- *Ante-litteram* (author-pays) Open Access
- At CERN preprints get indexed and displayed (and often discarded once published)
- The weekly “new preprints” display is a big event

HEP pioneered repositories; still developing

Time to share with other disciplines and other geographic regions



Safari File Edit View History Bookmarks Window Help
High Energy Physics - Experiment authors/titles "new"
http://arxiv.org/list/hep-ex/new

arXiv.org > hep-ex Search or Article-Id (help | Advanced search) All papers Go

High Energy Physics - Experiment

New submissions

Submissions received from Tue 11 Sep 07 to Thu 13 Sep 07, announced Fri, 14 Sep 07

- New submissions
- Cross-lists
- Replacements

[total of 5 entries: 1-5]
[showing up to 250 entries per page: fewer | more]

New submissions for Fri, 14 Sep 07

[1] arXiv:0709.1988 [ps, pdf, other]

Study of $e+e- \rightarrow \Lambda \bar{\Lambda}$, $\Lambda \bar{\Lambda} \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma \gamma$ using Initial State Radiation with BABAR

The BABAR Collaboration: B. Aubert, et al
Comments: 24 pages, 37 postscript figures, submitted to Phys. Rev. D
Subjects: High Energy Physics - Experiment (hep-ex)

We study the $e+e- \rightarrow \Lambda \bar{\Lambda}$, $\Lambda \bar{\Lambda} \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma \gamma$ processes using 230 fb⁻¹ of integrated luminosity collected by the BABAR detector at $e+e-$ center-of-mass energy of 10.58 GeV. From the analysis of the baryon-antibaryon mass spectra the cross sections for $e+e- \rightarrow \Lambda \bar{\Lambda}$, $\Lambda \bar{\Lambda} \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma \gamma$ are measured in the dibaryon mass range from threshold up to 3 GeV/c². The ratio of electric and



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in Particles and Fields

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1987-1988

ANTH: Preprints

| Author | Title | Date | Pages | Abstract |
|-----------------|--|------------|-------|--|
| B. Aubert et al | Study of $e+e- \rightarrow \Lambda \bar{\Lambda}$, $\Lambda \bar{\Lambda} \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma \gamma$ using Initial State Radiation with BABAR | 2007-09-14 | 24 | 24 pages, 37 postscript figures, submitted to Phys. Rev. D |



CERN Document Server

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arXiv.org

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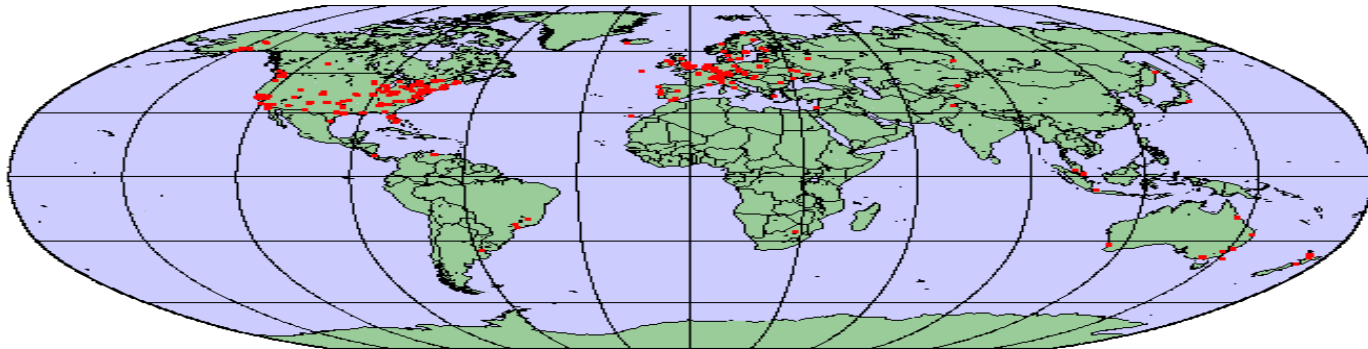
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arXiv:0709.1988
Date: Thu, 13 Sep 2007 04:09:46 GMT (81kb)

Title: Study of $e+e- \rightarrow \Lambda \bar{\Lambda}$, $\Lambda \bar{\Lambda} \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma$, $\Lambda \bar{\Lambda} \gamma \gamma \gamma$ using Initial State Radiation with BABAR



Knowledge transfer requires only a minimum of resources

- **Expect the participants to have access to:**
 - A recent PC
 - University Intranet
 - Possibly Internet (not required)
- **External financing of:**
 - Travel expenses
 - Subsistence



High potential for success

- **Readers**

- Will get access to all the material stored in the repository via the University's Intranet (possibly Internet)

- **Authors**

- Will get their work made visible, and consequently citable, to the entire world

CERN will ensure that the content from those universities without adequate Internet access will be exposed to Google Scholar and similar services and thus become known to the world



CERN Digital-Library/Digital-Conference solutions



Navigable collection tree

Digital Library
1-million records
Backbone of future

- Documents organized in collections
- Regular and virtual collection trees
- Articles for each collection
- A CERN about 1,000,000 collections

HEP Info System

- Specifically designed to provide Google-like search speed for repositories of up to 1,500,000 records
- Parallel scanning of external collections
- Customizable simple and advanced search interfaces
- Unified metadata, full text and data searches in one go
- Results clustering by collection
- Flexible ranking capabilities

Search: ellis any field Search Browse
 Search collections: any field Search Browse
 Results over time: 2,240 records in 0.41 seconds



INDICO is a new web application for organising meetings. This software allows you to schedule events, from simple talks to complex conferences with many sessions and contributions. It includes an advanced user delegation mechanism. It also allows for reviewing archival of conference material electronic

Meeting organisation

From O(1) to O(1000):

- covers all event organization
- support different types of event (lectures, seminars, etc.)
- participants
- talks/slides
- EU funded product (IST-2001-34306)
- compliant to the OAI-PMH protocol for metadata harvesting
- writeup
- minutes
- free software

Try the CERN server : <http://indico.cern.ch>
 Visit the project website : <http://indico.web.cern.ch>
 Contact us : indico-project@cern.ch

Strong high-level
African support:
“... will provide new and
exciting opportunities
for Rwandan
universities ...”

Prof. Romain Murenzi
minister of sci.&techn.

REPUBLIC OF RWANDA

Kigali 07 NOV 2008



N° 361 / ST.MIN/2008

MINISTER IN THE OFFICE OF THE PRESIDENT
IN CHARGE OF SCIENCE AND TECHNOLOGY,
B.P. 15
KIGALI

Professor John Ellis
Responsible of the Official Relations with the non members countries
CERN
CH 1211
Geneva 23

Re: CERN – UNESCO academic digital library and teaching education projects

Dear Professor Ellis,


On behalf of the Ministry in the Office of the President in Charge of Science and Technology I am pleased to confirm Rwanda's participation as the pilot country in the CERN-UNESCO academic digital library and teaching education projects.

The projects outlined in the UNESCO-IBSP work plan will provide new and exciting opportunities for Rwandan universities and institutions of higher education to access a wealth of leading scientific knowledge.

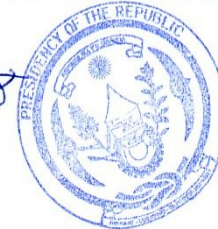
The Government of Rwanda will arrange the local training workshop in early December, to which the four international experts nominated by CERN will be invited. I understand you require details of the course participants and details of the institution where the training will take place and I will forward these details as soon as possible.

We are grateful that CERN and UNESCO have chosen Rwanda as a pilot country for the academic digital library project and the teaching education programme. I look forward to our ongoing collaboration and the successful implementation of this project.

Yours sincerely,

 07/11/2008

Professor Romain Murenzi
Minister in the Office of the President
in Charge of Science and Technology



CC:

- Director of Cabinet, Office of the President
 - Director General ICT, Office of the President
- Kigali

Course plan

1. Introduction
 - What are digital libraries, required tools and competencies
2. Getting ready
 - What is Open Access, installing Invenio
3. More background
 - Resources and tools, configuring Invenio
4. Fine tuning
 - Using Invenio, exchange protocols, ranking results, open issues
5. Vision

... and from then onwards is up to you; we are ready to help

