



# 50 Years of Experience in Making Grey Literature Available

Matching the Expectations of the  
Particle Physics Community

Carmen O'Dell

# CERN - European Organization for Nuclear Research

- Founded in 1954
- World's largest particle physics laboratory
- Funded by 20 member states
- Serves 6500 CERN users, representing 500 universities and over 80 nationalities

# CERN Scientific Information Service

- should acquire and manage information resources in all fields of relevance to the Organization
- make these accessible to the worldwide particle physics community
- provide services for obtaining information not available on site
- advise CERN divisions on the best ways of ensuring that all relevant documents are made publicly available

# Research at CERN

- Fundamental particle physics research
- Experiments require huge, very powerful, meticulously manufactured and aligned machines => very, very Expensive
- Large collaborations ~ 50 – 300 people
- Need fast communication of results to establish priority, avoid duplicating work and provide future research leads

# Preprints at CERN

- 1958 - Weekly Preprint List first produced
- 1960s - bibliographic data of each document typed into a dbase to produce list
- 1983 - dbase searchable by users
- 1991 - 10,000 paper preprints catalogued per year, publication references added by hand

# arXiv

## - the start of the digital library

- Created in 1991 by Paul Ginsparg, Los Alamos
- Provided a simple interface for authors to submit basic bibliographic details and the full text of their papers
- Offered an enormous improvement in speed and ease of preprint communication
- By 1992, some institutes announced they would stop the costly distribution of paper preprints

# Integrating Old and New

- UPLOADER – program to “harvest metadata” from arXiv
- Manual input of paper preprints continued, many also scanned.
- arXiv represents about 50% of our documents, but from 1998 added other sources – now have around 100

# Author Submission

- Originally designed for capturing in-house CERN documents
- More than 30 web submission forms, each one tailored to a specific document series or type of information resource
- Submitter fills in the bibliographic data and gives the path to the full text files
- Can handle confidential and multi-status documents



# Expanding the Digital Library

- CDSweb – inhouse online web catalogue/  
database
- Single search interface for many different  
digital collections
- Now includes – presscuttings, committee  
papers, photos, webcasts, archives,  
exhibition objects and more
- Submission forms expanded in parallel

# Links

- Electronic preprint records contain URL of fulltext in record
- Link to corresponding journal article via GoDirect
- Links to related documents
- Links to external databases
- Citations linking

# Future Developments

- Full text indexing
- Automatic keywording
- Lexi
- Grace

*(<http://library.cern.ch/HEPLW/>)*

# Conclusions

- About 95% of the particle physics literature is available to us electronically
- Database contains around 500,000 documents, add about 50,000 per year
- Electronic documents have changed *how* we do things but not *what* we do