

# Experience producing OSS in the IT Department

OSS Policies Session




**Tim Smith** - IT Department

# Contents


- Context
  - CERN Policy on Open-ness
- IT and Open Software
  - Licence evolution
  - Current examples



# CERN and Open-ness: Open Access (I)

- Particle Physics community has always lived by an Open Access philosophy
  - 1953 CERN Convention “... *the results of its experimental and theoretical work shall be ... made generally available*”
- Drive free information exchange
  - Enabling technologies: web, preprint server, digital library  
  - Workshops: innovation in scholarly communication OAI1(2001)-OAI6(2009) 

# CERN and Open-ness: Open Access (II)

- Drive rewriting of the publishing model:  
scoap3.org 
- Publication Policy (2005)
  - Mandatory deposit policy: OC6 (2001)
- Signatory of Berlin Declaration
  - Author grants: free, irrevocable, worldwide, perpetual right of access
  - Store in repository: unrestricted distribution, interoperability, long-term archiving



# In Practice: Publications

**Physical Review Letters**  
moving physics forward

American Physical Society **APS**  
physics<sup>®</sup>

Log in | Create Account (what's this?)  
RSS Feeds | Email Alerts

Home Browse Search Subscriptions Help

Citation Search: Phys. Rev. Lett. Vol. Page/Article Go

Access provided through the subscription of CERN Library

APS » Journals » Phys. Rev. Lett. » Volume 105 » Issue 7 < Previous Article | Next Article >


**Phys. Rev. Lett. 105, 072002 (2010) [12 pages]**

**Midrapidity Antiproton-to-Proton Ratio in  $pp$  Collisions at  $\sqrt{s}=0.9$  and 7 TeV Measured by the ALICE Experiment**

Abstract References No Citing Articles

Download: PDF (378 kB) Export: BibTeX or EndNote (RIS)

K. Aamodt *et al.* (ALICE Collaboration)  
[Show All Authors/Affiliations](#)

 Received 29 June 2010; published 12 August 2010

Published by The American Physical Society under the terms of the Creative Commons Attribution 3.0 License. Further distribution of this work must maintain attribution to the author(s) and the published article's title, journal citation, and DOI.

© 2010 CERN, for the ALICE Collaboration

URL: <http://link.aps.org/doi/10.1103/PhysRevLett.105.072002>  
DOI: 10.1103/PhysRevLett.105.072002  
PACS: 13.85.-t

**Physics - spotlighting exceptional research**

APS's FREE online publication.

Read the latest from *Physics*:

- Viewpoint: Liquid-crystalline phases of ultracold atoms
- Viewpoint: Chiral symmetry breaking and charge order
- Trends: Fermi-surface reconstruction and the origin of high-temperature superconductivity



# In Practice: MultiMedia

Single muon highlights the M in CMS | Flickr - Photo Sharing!

http://www.flickr.com/photos/uslhc/4688338032/in/set-72157624148085408/

Google

Work Life Apple Google Maps YouTube Wikipedia News (94) Popular

flickr from YAHOO!

Home The Tour Sign Up Explore Upload

You aren't signed in Sign In Help

Search

Actions Share this

← Prev Next →

CMS Experiment at LHC, CERN  
Data recorded: Tue Mar 30 12:58:48 2010 CEST  
Run/Event: 132440 / 2738170  
Lumi section: 124  
Orbit/Crossing: 32326252 / 1

Photo 2

Photo 3

By uslhc  
US LHC

This photo was taken on June 10, 2010.

209 views 5 comments 1 favorite

This photo belongs to

uslhc's photostream

This photo also appears in

Event of the Week (set: 21)

first photo

Physics (group: 4,422)

CERN (group: 847)

Large Hadron Collider (group)

Advertisement

Shoot. Upload. Share.  
All on your mobile device

Single muon highlights the M in CMS

Copyright CERN for the benefit of the CMS Collaboration



# MultiMedia: Terms of Use

copyright.cern.ch : Terms of use for CERN audiovisual media

http://copyright.cern.ch/

Work Life Apple Google Maps YouTube Wikipedia News (94) Popular

European Organization for Nuclear Research

## Terms of use for CERN audiovisual media

Use of CERN audiovisual media denotes agreement with the following terms:

1. CERN provides the image free of charge for educational and informational use.
2. The image is provided "as-is" and the user shall hold CERN free and harmless in connection with its use.
3. The image may not be used in a misleading, inappropriate or offensive manner, in a military context, in advertising or promotion, or in a manner that suggests any kind of endorsement by CERN or its personnel.
4. CERN is to be credited as the source of the image.
5. CERN retains copyright in the image. Download and use of the image does not amount to a transfer of intellectual property.
6. The image may not be sold, distributed or otherwise made available for use by third parties.
7. CERN reserves the right to alter or delete images without notice.

Please contact us by using the [contact form](#) if you have any questions or comments with respect to CERN content; if you are unsure whether your intended use meets these terms; or, if you seek permission for use that does not fall within these terms.

CERN appreciates your interest in its work. More information about CERN is available at [www.cern.ch](http://www.cern.ch).

*Copyright abuse on any CERN website should be reported using the contact form.*

# Software

- Ensure visibility of CERN contributions
- Open-ness: Always!
  - No policy
  - Various iterations of recommended practices
- Result
  - Copyright assertion
    - Generally, but not uniformly
  - Terms of use
    - GPL.v2, GPL.v3, EDG.v1, EDG.v2, Apache.v2
    - None, Closed
    - In header, Licence, or README files, or web page
  - Disclaimer (Liability / Warranty)





# Licence History: Constrained

- 1990s: free or GPL.v2
- Era of awareness
  - And growing EU project involvement
    - Business outreach element
  - Definition of OSS consistent with CERN's unique status and constraints, and industry friendly
- 2001: EDG.v1
- 2002: EDG.v2
  - Obtained the OSI label
  - Didn't bring the expected dividend
    - Still barriers to acceptance/uptake
    - Clients need to go through their legal services anyway as *new*
- 2005: TT Open Source Strategy
  - Updated EDG.v2 and made even more industry friendly
  - OSI declined as too similar



# Licence History: Current Practice

- **EGEE**
  - Surveyed business partners – unease with GPL
  - Avoid barriers of home-grown licence
  - Sought the most similar already existing
    - Apache.v2
    - Exceptions: if extending GPL released code
  - Copyright statement
    - Members of the EGEE consortium
    - Legal entity, but transient
- **Experience**
  - SW audits necessary
    - Before – understand the basis of the building blocks
    - During – avoid modification or suppression
  - Anticipate end of project at start!



# OSS in Action (I)

- Proliferation: External instances
  - Indico: >100
  - Invenio: >40
  - Quattor NCM components: >20
  - Many others >2
  - Scientific Linux CERN: >5000
  - Several: 1
- External contributions
  - Feedback
  - Bug reports
  - Bug fixes
  - Translations
  - Enhancements



# OSS in Action (II)

- Software process and quality
  - External and internal expectations to meet
  - FSF recommendations
  - Enhances understandability and reusability
  - Modularisation, packaging
- Proliferation
  - SW production, testing and distribution
- Centralised governance
  - Tasks usually agreed in advance
    - RFEs in pipeline, wanted with different priority
    - One institute dispatched to a Company (ePayment module) for development
  - MoUs sometimes





# Conclusions

- OSS is alive and well at CERN
  - In many different forms
- Policies and Best Practices needed
  - Decision making process
  - Licences
  - Supporting infrastructure

