

CERN OSPO: changing (HENP) software world, pragmatically



Axel Naumann, CERN OSPO
CHEP 2024-10-21



CERN's OSPO

- Official body at CERN to support open-source hardware + software
 - Mandate approved May 2023
- Inter-departmental, cross-organization body: rare yet good uptake
 - Twelve official representatives (10..20% FTE each), almost all parts of CERN represented: experienced practitioners
- Substantial offer by CERN, for CERN staff and users
- Open-source seen as a relevant topic, lots of enthusiasm!





28-29.NOV.23

WELCOME TO THE OSPO

Our new open source program office.
Be there with us.

Keynote speakers



Alicia Gibb

World Health
Organization

Samuel Mbuthia



Bryce Lebach

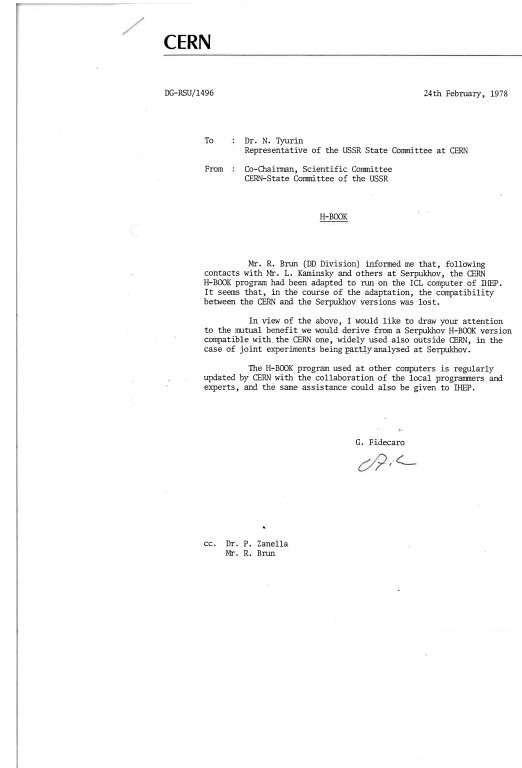
SCIENCE GATEWAY AUDITORIUM C —
Scan QR for details.





Motivation: Tradition

- Open source is part of CERN
 - Yes, the WWW
 - But so much more!



Motivation: Tradition

24th February, 1978

H-BOOK

Mr. R. Brun (SD Division) informed me that, following contacts with Mr. L. Kaminzky and others at Serpukhov, the CERN H-BOOK program had been adapted to run on the ICL computer of IHEP. It seems that, in the course of the adaptation, the compatibility between the CERN and the Serpukhov versions was lost.

In view of the above, I would like to draw your attention to the mutual benefit we would derive from a Serpukhov H-BOOK version compatible with the CERN one, widely used also outside CERN, in the case of joint experiments being partly analysed at Serpukhov.

The H-BOOK program used at other computers is regularly updated by CERN with the collaboration of the local programmers and experts, and the same assistance could also be given to IHEP.

G. Fidecaro

G.F.

cc. Dr. P. Zanella
Mr. R. Brun



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Open Source & Open Science

- Some of CERN's Open Science elements, from its Policy:
 - Open Access
 - Open Data
 - Open Source 
 - Research Integrity
 - Open Infrastructure
 - Research Assessment



Open Source & Open Science



CERN is committed to the advancement of science and the wide **dissemination** of knowledge by embracing and promoting practices making scientific research more **open, collaborative**, and responsive to societal changes. ... CERN accordingly recognizes the holistic practice of **open science as** one of its **guiding principles**.



Achievements: Technical Work




Policies: Changing the “How”

- “How to open source at CERN”
 - Different procedure for software and hardware
 - By default, software is open source at CERN!
- Building on top of past policies
- Processes based on trust rather than approval processes
 - Simpler, reality checked, and pragmatic
- Avoiding the policy weight: *recommendations!*



Technical Website

⚠ This website is work in progress. [Send your feedback on the OSPO forum](#) 



CERN OSPO Technical Documentation



Recommendations for copyright and licence notices

If you are open-sourcing software or [gateway](#), we recommend that you generally follow the [REUSE](#) guidelines for affixing copyright and licensing notices to your work.

A copyright notice is a brief statement that allows to assert the ownership of a work, and the time of its creation. It should indicate the copyright holder i.e. CERN, and the year of creation of the element of your work that holds this copyright statement, such as a source file or drawing. The indication of the initial year of creation is sufficient, and there is no need to indicate a time frame or a successive number of years.

The licence notice provides an indication of the licence under which the

- <https://ospo.docs.cern.ch>
- CERN-wide official recommendations about procedures and best practices
- Guidance on how to run open-source projects, hardware-specific aspects
- Public website: significant interest from outside CERN!



Technical Recommendations: Highlights

- Introduction to (c), license, due diligence, hardware, gateware
- Put (c) year when file is created, don't update / add
- Keep original licenses, don't add "CERN is an international organization with special rights and immunities"
- Adapt REUSE (SPDX) for license and (c) declarations
 - Will be recommending new version – human and tool readable REUSE.toml!



Contributor License Agreements

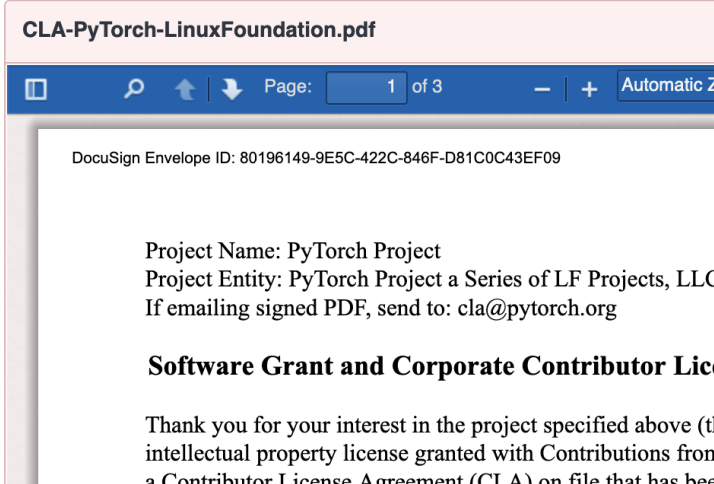
- Central entity to handle CLAs for CERN

PyTorch CLA (LinuxFoundation)

CERN OSPO 

Organizational Contributor License Agreement for CERN personnel wishing

Files



CLA-PyTorch-LinuxFoundation.pdf

DocuSign Envelope ID: 80196149-9E5C-422C-846F-D81C0C43EF09

Project Name: PyTorch Project
Project Entity: PyTorch Project a Series of LF Projects, LLC
If emailing signed PDF, send to: cla@pytorch.org

Software Grant and Corporate Contributor Lic

Thank you for your interest in the project specified above (tl
intellectual property license granted with Contributions from
a Contributor License Agreement (CLA) on file that has been



Catalog(ue)s!

Providing open-source hardware and software catalogs



See CERN OSPO's Catalogue Initiative

Tomorrow, 15:00, Track 6
(Room 2.A)

The screenshot shows the homepage of the CERN OSPO Open-Source Software Catalogue. At the top, there is a navigation bar with the CERN OSPO logo, links for Home, Repositories, Pages, Contact, and Forum, and a Submit button. The main heading is "OPEN-SOURCE SOFTWARE CATALOGUE", followed by the text "Brought to you by CERN's Open Source Program Office." Below this is a search bar labeled "Search Repositories ...". The page is divided into two main sections: "LATEST RELEASES" and "BROWSE". Under "LATEST RELEASES", there is a card for "CAiMIRA" (CERN Airborne Model for Indoor Risk Assessment) with a release note for "Calculator-v4.1.6.1 - Fixed error with fraction of infectious virus (f_inf)..." dated July 15, 2024. Under "BROWSE", there are two cards: "CAiMIRA" with 37 days ago, 500+ stars, and 5 forks; and "jens" (The Puppet librarian for those who collide particles) with 222 days ago, 352 stars, and 41 forks.



“Achievements?!”

- CERN is *diverse*: analysis software ↔ lifesaving software
 - Extreme differences in requirements and expectations
 - Varying relevance of open source
- OSPO ≠ open-source evangelists
 - Impact through small, pragmatic steps
- OSPO approval process took two years: *big achievement!*
- Agreeing across all of CERN: *big achievement!*



Achievements: Outreach Work



CERN OSPO as Outside Window

- Creating alliances, networks
 - open source + international organizations
 - open source + science institutes
 - open source + member states
 - open source + Europe
 - open source + funding,...
- Center of expertise, providing KPIs and story telling!



Example: UN + CERN OSPO = a Love Affaire!



- Invited as external advisor to UN open-source retreat
 - Input on rationale for open source; policies-in-practice; on-premises gitlab; license vs int'l org; etc
- Invited to UN's OSPOs for Good event, showcasing CERN's potential in open source
- Presented open source motivation and recommendations to UN Secretariat



Conclusion



OSPO Since September 2023

- Extremely productive first year
- Carried by incredible enthusiasm within CERN, from the outside – and also within the OSPO!
- We have many plans for 2025
 - Example: project with Software Heritage
 - But I'm curious to hear what *you* think we should be doing!



CERN OSPO

We hope to be helpful to all of HE(N)P!



Links + Contact

<https://opensource.cern>

Public-facing website

<https://ospo.docs.cern.ch>

Technical documentation

<https://ospo.web.cern.ch>

Discussion forum (CERN account required)

Open.Source@cern.ch

CERN OSPO

axel@cern.ch

Just me: 2024 OSPO chair



