

# Open Source at CERN: our OSPO

Javier Serrano on behalf of the CERN OSPO Team

CERN, Geneva, Switzerland

CERN Open Source Program Office Inaugural Event  
28 November 2023

# Outline

- 1 Introduction
- 2 Why an OSPO
- 3 Interlude: some CERN examples of Open Source
- 4 How the OSPO will operate
- 5 The team

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# Dissemination



# How to interpret one's dissemination mandate in the 21<sup>st</sup> century

Free and Open Source Software

Open Hardware

Open Data

Open Access

World Wide Web

open source

Open Hardware Repository

INSPIRE

An Updated Historical Profile of the Higgs Boson

John Ellis (prg@cl.cam.ac.uk), Mary K. Gaillard (j.k.g@cern.ch), Charles V. Misner (charles.v.misner@cern.ch)

Apr 27, 2015 - 22 pages

KCL-PH-TN-2015-20, LCTS-2015-10, CERN-PH-TN-2015-086  
ePrint arXiv:1504.02117 [hep-ph] [INSPIRE]

CERN DD/DC  
Information Management: A Proposal  
Tim Berners-Lee, CERN, EP  
March 1989

Information Management: A Proposal  
Abstract

This proposal examines the management of general information about activities and experiments at CERN. It discusses the problems of loss of information about complex meeting systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Preprint control

# The CERN OSPO

The CERN OSPO is an open and inclusive service, working internally across departments with and for the entire CERN community, and externally as a visible interface to potential partners and the interested public. It is a consultation body providing advice.

See <https://cds.cern.ch/record/2879995> for its abridged mandate.

# Our mandate in a nutshell

## Internally

- Consult, advise, train on Open Source best practices, tools, licenses, etc.
- Advise on open-sourcing CERN software, gateware and hardware.
- Identify/track FOSS dependencies for critical services.
- Advise CERN management on Open Source matters.

## Externally

- Showcase CERN contributions to Open Source.
- Facilitate partnerships with external entities.
- Promote CERN as an Open Source lab.

## Other things the OSPO will do:

- Maintain a catalogue of open-source software and hardware published by CERN.
- Organise courses in collaboration with Learning & Development Group.
- Liaise with Purchasing Group in matters regarding the procurement of open-source products.
- Define metrics for Open Source adoption at CERN and publish a yearly report.



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# To answer recurrent questions

## From designers/developers

“I want to open-source my work. How should I do it? How to find the time to open-source right? How to create and nurture a thriving community around my project?”

# To answer recurrent questions

## From management

“How are we fulfilling our Open Science mandate as regards software and hardware? What pieces of open-source software do we strategically depend on? How are we making sure they are sustainable?”

# To answer recurrent questions

## From outside CERN

“What is CERN’s contribution to the world in software and hardware? What is the position of CERN on issue xyz related to Open Source?”

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# The Web

**CERN DD/OC**

**Tim Berners-Lee, CERN/DD**

**Information Management: A Proposal**

**March 1989**

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## Information Management: A Proposal

### Abstract

This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext system.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control

See <https://home.cern/science/computing/birth-web/licensing-web>

# Indico (https://getindico.io/)



## CERN Open Source Program Office (OSPO) Inaugural Event

November 28, 2023

CERN

Europe/Zurich timezone

There is a [live webcast](#) for this event.



### Overview

Timetable

Registration

Videoconference

Speakers

How to get there

### CERN OSPO Team

✉ [Open.Source@cern.ch](mailto:Open.Source@cern.ch)

### Welcome to CERN's OSPO!

Please join us for the inaugural event to celebrate its birth, whether you are a member of the community or an interested guest!

Below is the registration for joining the inaugural event in person on November 28th. A [live webcast](#) is also available for that day. Join us!

The inaugural event is followed by a more community/CERN focused workshop on the next day (Nov 29th). Details for the second day are available [here](#).



**Starts** Nov 28, 2023, 2:30 PM

**Ends** Nov 28, 2023, 7:00 PM

Europe/Zurich



**CERN**

81/R-003C - Science Gateway Auditorium C

[Go to map](#)

# InvenioRDM partners

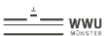
<https://inveniosoftware.org/products/rdm/>



data futures




Front Matter





# ROOT Data Analysis Framework (<https://root.cern/>)

 **ROOT**  
Data Analysis Framework

[About](#) [Install](#) [Get Started](#) [Forum & Help](#) [Manual](#) [Blog Posts](#) [Contribute](#) [For Developers](#) 

## ROOT: analyzing petabytes of data, scientifically.

An open-source data analysis framework used by high energy physics and others.

[i Learn more](#) [i Install v6.28/06](#)



Start



Reference

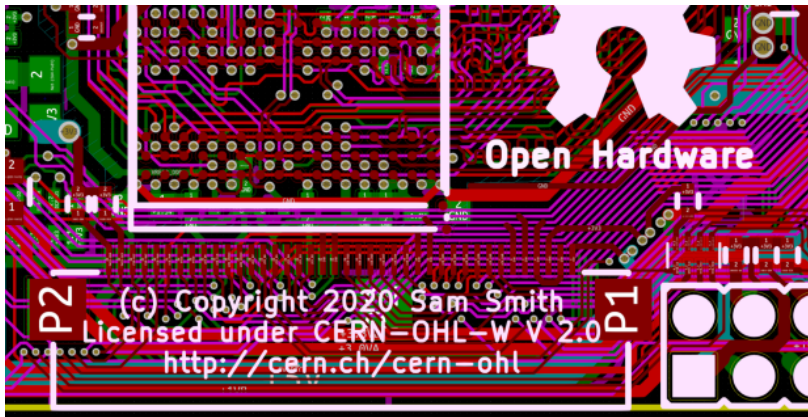


Forum



Gallery

# KiCad



@supyrow 9 years ago

That is the sexiest thing I have seen in a long time. THANK YOU THANK YOU CERN!!!



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Reply

(from <https://www.youtube.com/watch?v=CCG4daPvuVI>)

# White Rabbit

## WR Switch

Seven Sol, Spain  
Creotech, Poland



OPNT, Netherlands  
SyncTechnology,  
China

## Simple VME FMC carrier (SVEC)

Janz Tec AG,  
Germany



## Simple PCIe FMC carrier (SPEC)

Creotech, Poland  
INCAA, Netherlands  
Seven Solutions, Spain  
ISD S.A., Greece

## Compact Universal Timing Endpoint (Cute-WR-DP)

SynTech, China



## Digitizers

Struck, Germany  
SP Devices, Sweden



## GPS Disciplined Oscillator

Seven Solutions, Spain

## ZEN TP-32 BNC

Seven Solutions, Spain



## PXI module

Sundance,  
UK



## Companies selling White Rabbit:

[www.ohwr.org/projects/white-rabbit/wiki/wrcompanies](http://www.ohwr.org/projects/white-rabbit/wiki/wrcompanies)

# Open *and* commercial

	Commercial	Non-commercial
Open	<b>Winning combination. Best of both worlds.</b>	Whole support burden falls on developers. Not scalable.
Proprietary	Vendor lock-in.	Dedicated non-reusable projects.

We are currently exploring this combination with the support of CERN's Knowledge Transfer Group.

# HPM7177 ADC



Re: HPM7177 ADC from CERN

« Reply #148 on: April 08, 2021, 05:19:07 pm »

(from <https://www.eevblog.com/forum/metrology/hpm7177-adc-from-cern>)

CERN must be a gold mine for us electronic engineers! I am really glad that CERN is making the 8,5 digit DVM open to the public! Is the LTC2378-20, LT1236, THS4531-based driver and SMN resistor networks also open to the public?

@Dr.JohnnyLemonhead 2 years ago

That feeling when you take 30 minutes of your day to bask in the raw magnificence of a beautiful machine coming together. Wonderful work Marco and nothing but love to CERN for open sourcing this. Magnificent work by everyone. Thank you for sharing.



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Reply

(from <https://www.youtube.com/watch?v=D28uSzCs7-k>)

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# The main use case: “I want to open-source my project”

## Software

Get in touch by writing to [Open.Source@cern.ch](mailto:Open.Source@cern.ch)

## Hardware

The entry point for dissemination in this case is KT. Contact them for advice and the OSPO will be involved if you decide to open-source the designs.

# Most common questions will hopefully be answered in:

## The OSPO website (<https://opensource.cern>)

This site contains information about the OSPO itself and is more “outreachy” in nature.

## The documentation website (<https://ospo.docs.cern.ch>)

- Best practices for open-sourcing sw/gw/hw
- Advice on how to participate in external projects
- Also how to integrate external open-source components



## “My question is not answered in any of the above”

For questions which you feel at ease discussing in public:

Ask in the forum (<https://ospo.web.cern.ch/>). In that way, others will also benefit from the discussion.

For any other question:

Write to [Open.Source@cern.ch](mailto:Open.Source@cern.ch) or get in touch directly with any member of the OSPO.

See the list at [https://opensource.cern/who\\_we\\_are](https://opensource.cern/who_we_are).

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# The team

The CERN OSPO is a community endeavour. We want many people to participate. This is the current list of members: Matthias Bonora (TE), Hamza Boukabache (HSE), Andriy Boychenko (HSE), Sunje Dallmeier-Tiessen (RCS-SIS), Han Dols (KT), Philip Elson (BE), Axel Naumann (EP, Chair), Giacomo Tenaglia (IT), Javier Serrano (BE) and Alexander Yohei Huss (TH), with the precious help of Victoria Huisman Sigcha (IT-CA) Hafsa Saboor (RCS-SIS) and Antonia Winkler (RCS-SIS).

# Links and further discussion



OSPO website: <https://opensource.cern>

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

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

OSPO email address: [Open.Source@cern.ch](mailto:Open.Source@cern.ch)

Join us for more in-depth discussion tomorrow at 14:00 in the Main Auditorium: <https://indico.cern.ch/event/1327563/>.