Requests and Ideas from Experiments

CERN OSPO Community Workshop

29 November 2023

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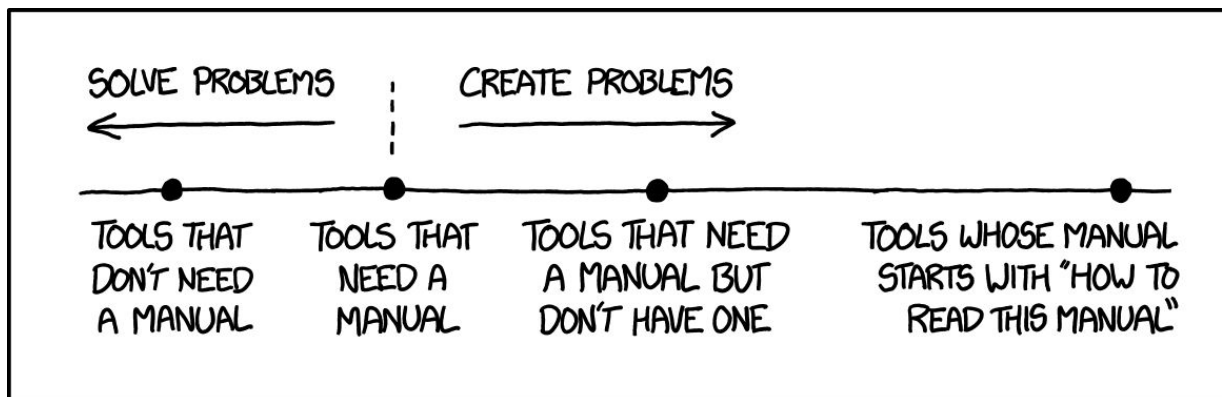*On behalf of the LHC experiment S&C community*

Copyright

- Our code's copyright is held "by CERN for the benefit of the _____ Experiment"
  - Is the "for the benefit …" addition relevant/correct? It originates from "Software Licence Agreements HSF Policy Guidelines"
- What do we do for small (inter-experiment?) projects? Who holds the copyright?
  - If copyright devolves to the institute, how are we dealing with files with many editors, even of the same line?
  - Even for the experiments, is there a central description of the understanding of how and why the copyright transfer takes place? Institutes and people regularly ask.
- When we identify code that belongs to an experiment that has not been explicitly placed under copyright, what should we do?
  - For example, some system DAQ code that doesn't have a copyright statement — can we simply write in a new copyright? Do we need to check with all contributors? With their institutes?
  - Can the OSPO provide some guidance?
- Can/will the OSPO review the MoU language around IP sharing?

Licensing

- There remains *lots* of confusion among licenses and their interaction
  - Can the OSPO help with physicist-readable language explaining the situation? Training?
- CMS (CMSSW) and ATLAS (Athena) are both licensed under Apache 2.0; LHCb uses GPLv3, with Apache 2.0 for Allen and Gaudi
  - Is this also an appropriate license for physics analysis code and frameworks or should we rather require another license (GPLv3, MIT)?
- Many small projects use GPL(v3), which is incompatible upstream of Apache 2.0
  - Often our impression is that there is no strong reason for choosing this license
  - Can the OSPO help us following up these small projects (e.g. Event Generators) to ask them to change licenses for future versions?
- Can the OSPO provide e.g. a flow-chart for picking a license?
  - Maybe a bespoke version of https://choosealicense.com/?
- Can the OSPO provide guidance on re-licensing large code bases?
  - To change licenses in a codebase with 100 contributors, what do we do?
  - To apply a new license in a codebase like that (without one previously), what do we do?
- What guidance should we give on the use of ML coding tools (CoPilot, ChatGPT)?

- ATLAS (Athena) and LHCb (+Gaudi, Allen) code lives on CERN gitlab
- CMS (CMSSW) and ROOT code lives on github
- New projects must pick one
- Both have advantages and disadvantages:
  - Github is not as easily integrated with CERN resources for CI runners etc; it is not as easily integrated with CERN for permissions (egroups / LDAP)
  - Gitlab does not allow anonymous contribution (even to issues), and does not allow 'just anyone' to have an account (even a lightweight CERN account is not enough) — similar issues for e.g. JIRA if that's used for tracking issues
- Can the OSPO help us ensure that gitlab is more attractive / open even for projects expecting external contributions?
  - If not, can the OSPO help us with documentation for deploying CERN tools for authentication, runners, etc on github?
  - Of course, we need workflows and recommendations for how to integrate external contributors (e.g. copyright assignment), and when that becomes necessary
- Any differences for e.g. projects published on PyPI (e.g. apd)?

Open Source at CERN

- To what extent is the OSPO here to help guide projects — especially those that *should* be abandoned?
  - Declaring an open source project 'dead' (especially making that opinion known externally) is extremely tricky; are there some guidelines that can be created? Can guidance be given (e.g. do not depend on this, it is too high risk)?
  - Telling developers "this is a great idea, but something similar already exists at CERN; could you contribute there?" is critical sometimes as well — but also tricky.
- To what extent is the OSPO here to advocate for open source at CERN?
  - We have some tough recent examples of abandoning open source; are these discussions that the OSPO wants to get into?
- Could the OSPO advance the CERN hiring / advancement criteria to be more open-source software friendly?
  - There are other groups discussing this; is the OSPO involved?
  - Does the OSPO want to advocate for more publications of open source software (JOSS-style)?
  - Does the OSPO want to advocate for more / different *citation* of software in CERN publications (following e.g. discussions in the HSF last year)?

Documentation

- Documenting some of these things for the CERN community would be great
- Documenting these things for the HEP community would be even better!
- To what extent can the OSPO make these sorts of things public?
  - Important for us when discussing with institutes or non-CERN projects to be able to show them the documentation at hand
  - Helpful for non-CERN HEP developers wondering about these problems
- To what extent would the OSPO be ready to field questions about these issues more broadly from HEP projects?
  - If the documentation is public, you may get questions, of course!

SOLVE PROBLEMS ← | → CREATE PROBLEMS

TOOLS THAT DON'T NEED A MANUAL

TOOLS THAT NEED A MANUAL

TOOLS THAT NEED A MANUAL BUT DON'T HAVE ONE

TOOLS WHOSE MANUAL STARTS WITH "HOW TO READ THIS MANUAL"

Training

- Perhaps the OSPO could run some training sessions?
  - Why open source is important
  - How to be a good open source citizen
  - Pointers to tools for the development of open source projects
  - Best practices for new policies (copyright, licenses, contrib policies, etc)
  - Best practices for documentation?
  - Mechanisms for advertising, how to grow a project, what to do as it grows?
- There are lots of people around CERN who have experience with these things and might be willing to share their experience and lessons; OSPO would be a great place to centralize this knowledge

Brief Summary
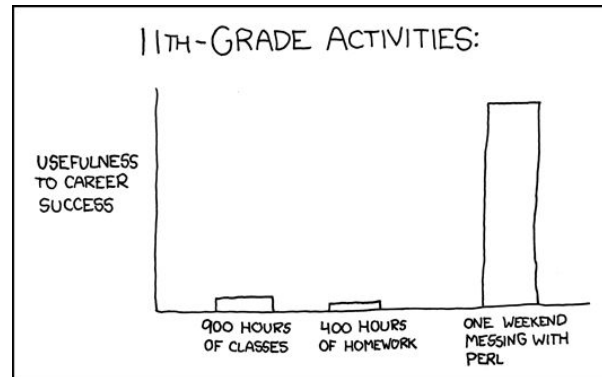
- The experimental community is rather diverse, and has a broad range of needs
- There are lots of issues that we'd love help with!
- The OSPO seems like an excellent initiative and might be the right place to take (some of) these on
- We look forward to working with you all on some of these!

Thanks!

And thanks to Concezio Bozzi, Vangelis Kourlitis, Mario Lassnig, and Liz Sexton-Kennedy for input