HSF Licensing Meeting
Introduction

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Goals

- Experiments build on top of large stacks of software, both from the HEP community and outside
  - 100s of packages form the dependencies of the experiment software itself
- We want to ensure this software can be built and released as part of the open source world
  - Respecting the constraints of all of the components and the wishes of the experiment stakeholders
  - Aim to have as many people use it as possible, *including possible industrial collaborations*
- We should advise developers and experiments on the best license choices to achieve the above goals
  - This is beneficial to the HEP community, which has long neglected these issues of copyright and licensing
  - We often took advantage of outside open source projects, but did not reciprocate
Reminder on Copyright and Licenses

● Software needs to be owned
  ○ The owner is the copyright holder

● Software should then get a license
  ○ Without one it is implicitly ‘All Rights Reserved’ to the copyright holders
  ○ Copyright holders can both determine the license and relicense as they want (needs unanimity)
    ■ An open source license is one that grants additional rights to users

● Software packages usually rely on other code for their functionality
  ○ Almost all of our software is of this type
  ○ Their license has to be consistent with the license of code that it uses

Note that citations are independent of any license applied - HSF strongly encourages proper citation of all software packages used
License Compatibility

- Not all licenses are compatible with one another
  - GPLv2 and Apache 2 are incompatible
  - GPLv3 and (L)GPLv2 are incompatible
- Copyleft licenses impose their license terms on their clients
  - Use GPL code you have to also be GPL
  - This is disliked by some of our funding agencies and strongly disliked by some external partners

See summary table in backup
Experiment Viewpoint

• CMS decided some time ago to license CMSSW open source
  ○ Apache 2 is the favoured license

• ALICE also have open sourced
  ○ They have applied a BSD-3 clause license to their software

• ATLAS and LHCb both made significant progress on copyright and licensing
  ○ We have presentations from both on their status

• Belle ll have a licensing task force
  ○ We shall hear from them too and discuss open points
Recent Software Package Changes

- HepMC and HepMCv3
  - Have assigned copyright to CERN
  - Adopted the LGPL license instead of GPL
- AIDA2020 Projects (AidaTT, PODIO, DD4hep, DD*)
  - Copyright held by authors
    - AIDA2020, like the experiments, can’t hold (C)
  - Now seeking agreement to move from GPL to LGPL
- CERN Invenio and Indico
  - Are changing from GPLv3 to MIT
  - See very interesting discussion on GitHub for Invenio (ditto for Indico)
- FastJet
  - Changed from GPLv2 to GPLv2 or later
  - Helps compatibility with (L)GPLv3 and Apache 2, but obliges stack to be GPL as well
Next Steps

● Please sign up to the dedicated list for copyright and licensing discussion
  ○ hsf-licensing-wg@googlegroups.com

● We would like to track issues more regularly
  ○ So expect further meetings

● Most important topics?
  ○ That’s for us to decide on today
Backup
# License Compatibility Matrix

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<thead>
<tr>
<th>X</th>
<th>Public Domain</th>
<th>MIT/X11/Boost</th>
<th>BSD</th>
<th>Apache 2</th>
<th>Mozilla 2</th>
<th>LGPL 2.1</th>
<th>LGPL 3</th>
<th>GPLv2</th>
<th>GPLv3</th>
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Note that the GPLv2+ license can be taken as GPLv2 or GPLv3, but not both.

* In this special case the code must be dual licensed and the MPL2 code must allow for that
** Incompatible due to patent handling clauses