

# An Open Source License for LSST

## Introduction

LSST as a project has a mandate to publish all of its software as open source. There are a multitude of open source/free software licenses to choose from. At the same time, LSST has a few specific desiderata to take into consideration when choosing the "right" license:

- Acknowledgement and credit of authorship
- Establishing ownership without restricting use
- Preserving all non-commercial use
- Enabling community extension and contributions
- ~~Allowing, but not necessarily encouraging, commercial use~~ (*dropped 2009-03-27*)

Another issue to take into consideration is that of copyright. Code written using LSST funds would have the approved LSST copyright notice, all other code would have the appropriate copyright notice instead. Whatever license is chosen should allow the specification and preservation of different copyright notices.

## Proposal

All code written by the LSST project for the LSST Data Management System shall be licensed under the GNU Public License Version 3 (GPLv3) or later. This enables the following:

- Users of the software are allowed to do so free of charge.
- Others may copy, redistribute, extend or modify the software
- Others can use the software for private purposes without any restriction as long as the software is not redistributed.
- Allows LSST to use and link against other GPLed software, as well as other open source software with GPL-compatible licenses.
- The software may be linked against certain proprietary software through well defined interfaces that are documented as special exceptions (?Ref.)

At the same time, the GPL license makes the following restrictions

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- GPLed software cannot be combined with other software and redistributed unless the other software is covered by a compatible license (or meets the above mentioned exceptions) *and* the combined result is also released under the GPL license.
- GPLed software cannot be used as part of proprietary software.

Software distributed under GPL is provided as is (i.e. without any warranty of any sort).

## Implementation

To apply GPL to LSST software, we will need to

1. Add to each source code file a licensing notice that includes:
  - ◆ a copyright statement
  - ◆ a licensing/copying statement
2. Distribute with LSST packages a file called COPYING containing:
  - ◆ a copyright statement
  - ◆ a copy of the [?GNU v3 License text](#)
  - ◆ copies or notices of the other compatible licenses

See Ref: [?How to use the GNU licenses for your own software.](#)

## Licensing Notice to be included in Source Code

The following is an example of the notice for C++ header (\*.h) and source (\*.cc) files.

```

/*
 * LSST [name of application, software package, or system]
 * Copyright 2008, 2009, 2010 LSST Corporation.
 *
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 */

```

### Notes:

- Other source files should use the same text but apply the appropriate commenting mark-up.
- The start of this text should appear within a few lines of the top of the file
- For simplicity, the name of the software (in the first line) can start off as "LSST Data Management System"; authors of the file may change it later to be more specific.

## COPYING: the License statement

The COPYING file will contain the following:

- Statement Identifying Licensor and Authors

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Copyright 2008, 2009, 2010 LSST Corporation.

This product includes software developed by the
LSST Project (http://www.lsst.org/) with contributions made at LSST partnerr
institutions:

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- \* The LSST Corporation
- \* The NASA Infrared Processing and Analysis Center at Caltech University
- \* The National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana-Champaign
- \* The National Optical Astronomy Observatory (NOAO)
- \* Princeton University
- \* The Stanford Linear Accelerator Laboratory (SLAC)
- \* University of Arizona, Steward Observatory
- \* University of California Davis
- \* The San Diego Supercomputing Center (SDSC) at the University of California San Diego
- \* University of Washington

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### Notes:

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  - ◆ No effort will be made to update this list for packages that have already been released
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## History

The development of this Open Source License policy can be found previous versions of this document; see in particular: [?version 15](#). The original proposal to the TCT, developed in roughly August 2008 by Francesco Pierfederici, was to use the Apache 2 License to allow commercial use of the software. This raised questions concerning the combination and redistribution of our code with other GPLed software. Four alternatives were then put on the table for discussion:

1. Apache 2 plus GPL for combined binary distributions
2. Modified BSD plus GPL for combined binary distributions
3. Public Domain plus GPL for combined binary distributions
4. Pure GPL Licensing

Choice 4 was chosen because it offer the least legal ambiguity. This meant that commercialization could not be supported.

## Further Resources

1. [?the Apache 2 License](#)
2. [?OSS Watch discussion of the Apache License 2.0](#)
3. [?Wikipedia Article on Apache License 2.0](#)
4. [?A listing of open source licenses from ?opensource.org](#)
5. [?GNU's evaluation of compatible OSS licenses](#)
6. [?The Modified BSD License](#)
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