Project Contribution Proposal

Name of the project (existing or proposed): OpenVDB

Requested project maturity level: Adopted

Project description (please describe the purpose and function of the project, its origin and its significance to the ecyosystem):

OpenVDB is an Academy Award-winning open-source C++ library comprising a novel hierarchical data structure and a suite of tools for the efficient storage and manipulation of sparse volumetric data discretized on three-dimensional grids. It is developed and maintained by DreamWorks Animation for use in volumetric applications typically encountered in feature film production.
It offers an effectively infinite 3D index space, compact storage, fast data access, and a collection of algorithms specifically optimized for the data structure for common tasks such as filtering, CSG, compositing, numerical simulation, sampling, and voxelization from other geometric representations.

It has been extensively adopted into industry tool sets, both commercial and proprietary.

Please explain how this project is aligned with the mission of ASWF?

OpenVDB was released to unify the industry on a volumetric representation, and provide a common toolset and API for manipulation of volumetric data. It has multiple industry contributors who have advanced the capabilities over that time-frame. Moving this widely adopted project from a single company's control into an open governance project is in line with ASWF's goals of sharing resources and facilitating collaboration. DreamWorks also believes this demonstrates the industry's belief in the ASWF as a key, viable organization to drive our key open source standards forward.

Please explain how the project will benefit from inclusion in the ASWF?

The project will gain a neutral harbor for contributions, a transparent governing board external to a single organization, CM support towards testing platforms and multi-OS releases, additional eyes and responsibilities for maintaining the project and tending to its growth.

What is the project's license for code contributions?
[Mozilla Public License Version 2.0](#)

Is there a current Contributor License Agreement?
http://www.openvdb.org/download/OpenVDBContributorLicenseAgreement.pdf

What tool or platform is <u>utilized</u> (FYI: spell corrected from initial form) **for source control (GitHub, etc.) and what is the location (e.g. URL)?**
Github https://github.com/dreamworksanimation/openvdb

What are the external dependencies of the project, and what are the licenses of those dependencies?

Requirements

- A C++11-compatible compiler, such as
  GNU GCC (gcc.gnu.org), version 4.8 or later,
  Clang (clang.llvm.org), version 3.8 or later,
  or Intel ICC (software.intel.com), version 15 or later

- GNU gmake (www.gnu.org/software/make/), version 3.81 or later

- Boost (www.boost.org), version 1.53.0 or later; 1.57.0 or later
  for the Python module
  (Linux: yum install boost-devel; OS X: port install boost +python27)

- libz (zlib.net)
  (Linux: yum install zlib-devel)

- OpenEXR (www.openexr.com), for the 16-bit float Half class in half.h
  and for .exr file output in vdb_render

- Intel Threading Building Blocks (threadingbuildingblocks.org),
  version 3.0 or later

Other compilers or versions might work but have not been tested.

Optional:

- Doxygen 1.8.11 or later (www.stack.nl/~dimitri/doxygen/), for documentation

- CppUnit (www.freedesktop.org/wiki/Software/cppunit), version 1.10 or later
  (Linux: yum install cppunit-devel)

- Houdini HDK (http://www.sidefx.com/get/download-houdini/), version 15.0
  or later

- Blosc compression library (www.blosc.org), version 1.5.0 or later

(included in the Houdini HDK as of version 14.0)

- Ghostscript (www.ghostscript.com), version 8.70 or later, for documentation
  in PDF format

- pdfLaTeX (www.pdftex.org), version 1.21 or later, for documentation
  in PDF format

- log4cplus (log4cplus.sourceforge.net), version 1.1.2 or later,
  for error logging

- GLFW 2.7 (www.glfw.org), for the OpenVDB viewer

- OpenGL 3.2 or later, for the OpenVDB viewer

- Python 2.5, 2.6 or 2.7, for the Python module

- NumPy (www.numpy.org), for the Python module

- Epydoc (http://epydoc.sourceforge.net/), version 3.0 or later,
  for Python module documentation

Other versions might work but have not been tested.

**What roles does the project have (e.g. maintainers, committers?) Who are the current
core committers of the project, or which can a list of committers be found?**
http://www.openvdb.org/about/

What mailing lists are currently used by the project?
Lead: ken.museth@gmail.com
Developers:
openvdb@gmail.com
Discussion Forum:
openvdb-forum@googlegroups.com

What tool or platform is leveraged by the project for issue tracking?
GitHub: https://github.com/dreamworksanimation/openvdb/issues
http://www.openvdb.org/forum/
JIRA is used internally at DreamWorks currently to track issues, but this can be externalized.

Does the project have a Core Infrastructure Initiative security best practices badge? Do you foresee any challenges obtaining one? (See: https://bestpractices.coreinfrastructure.org)

It does not have a CII badge. There should not be an issue with obtaining one.

http://www.openvdb.org/forum/

What social media accounts are used by the project?
None currently.

What is the project's release methodology and cadence?
Releases are made available from the project website and via GitHub.
http://www.openvdb.org/download

Cadence is generally every six months or so.

Are any trademarks, registered or unregistered, leveraged by the project? Have any trademark registrations been filed by the project or any third party anywhere in the world?

Yes, OpenVDB logo and wordmark. These will be assigned to the LLC if accepted.