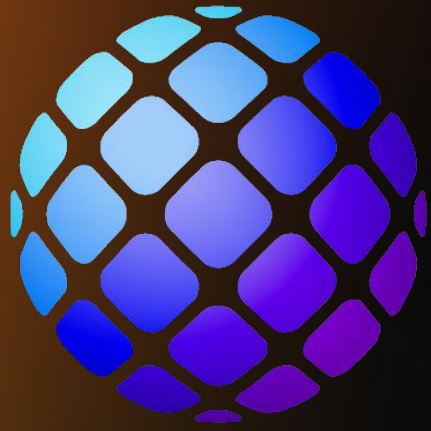




open
shading
language

TAC Annual Project Review

October 28, 2026

#ASWF



What is Open Shading Language?

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- Shading language for modern production renderers
- A compiler and efficient runtime for the language
- Leverages LLVM for execution on CPU and GPU
- Project just turned 18 years old (first commit Sept 3, 2008)
- ASWF member since 2020



What is Open Shading Language?

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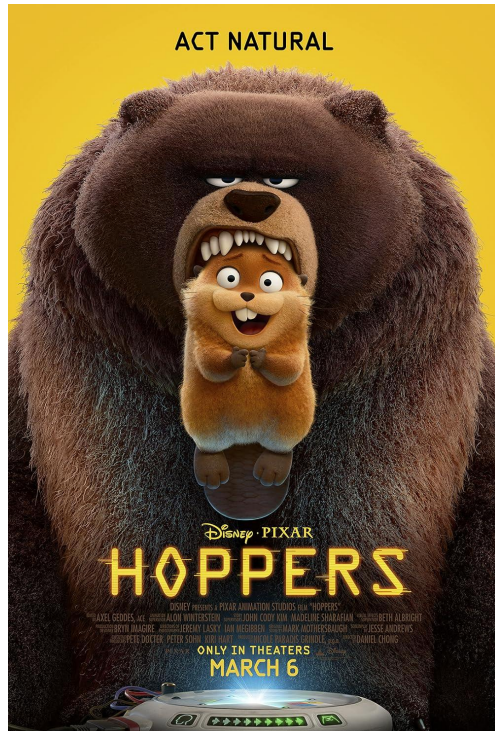


- Software supporting OSL:
 - 3ds Max, Autodesk Arnold, Blender/Cycles, 3delight, Renderman, V-Ray, Octane, Redshift, ...
- Studio renderers:
 - Netflix Animation/Animal Logic's Glimpse, Sony Imageworks' SPEAR/Arnold, Illumination Films
- Ties to other ASWF projects:
 - Dependencies: OpenImageIO, OpenColorIO, OpenEXR, OpenVDB
 - Used by: MaterialX, OpenColorIO
 - Collaborate with: OpenImageIO, MaterialX, OpenColorIO
- At least 220 films (that we know of... please tell us!)



Some recent films using OSL

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What is different about OSL?



- Shaders can be assembled into networks
 - Networks are evaluated lazily (unused sections are not evaluated)
- Entire graph is runtime optimized
 - Works across nodes in the shading graph
 - Scales to very large production shaders that have lots of features
 - Optimizer can remove 98% of instructions in such cases
- Automatic Differentiation for filtering and bump mapping
 - More accurate and more efficient than finite differences
- Shaders return *closures* instead of colors
 - Renderer decides how to integrate the lighting
 - Complex layering can be achieved by building closure trees



OSL Technical Steering Committee

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- Current members
 - Chris Kulla, Epic Games (TSC Chair)
 - Larry Gritz, Sony Pictures Imageworks (Chief Architect)
 - Alexey Smolenchuk, DNEG
 - Brecht Van Lommel, Blender
 - Eric Enderton, NVIDIA
 - Lee Kerley, Apple
 - Luke Emrose, Netflix Animation
 - Mitch Prater, Laika
 - Stephen Friedman, Pixar
 - Thiago Ize, Autodesk
 - ~~Alex Wells, Intel~~ ← retired



Code contributors in the last year

- Alexandru Biscoveanu (SFU)
- Alejandro Conty (SPI)
- Tomas Davidovic (NVIDIA)
- Alex Fuller (Flying Bark)
- Tim Grant (NVIDIA)
- Larry Gritz (SPI)
- Chris Hellmuth (SPI)
- Jinnie Kim (Wildbrain)
- Sv. Lockal
- Silvia Lopez (DevDays, now SPI)
- Owen O'Malley (Gnomon)
- Jean-Francois Panisset
- Jonathan Peters (SFU/DevDays)
- Miro Rogers (SFU/DevDays, now SPI)
- Roeland Schoukens (SFU)
- Sergey Sharybin (Blender)
- Alexey Smolenchuk (DNEG)
- Taraash
- Sophia Don Tranho (SFU)



Recent development highlights

- BSDL: implementation of production BSDF code (Alejandro Conty)
- More enhancements of GPU / OptiX back end (Tim Grant)
- Prototype “C++” back end (Larry Gritz)
- Volume rendering in testrender (Owen O’Malley)
- Ray Tracing in One Weekend – with OSL shading (Jinnie Kim)

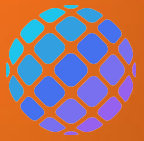


In progress / On the horizon

- OSL 1.16 release imminent!
- BSDL splitting into separate repo
- OIIO-compatible GPU/OptiX texture engine (SPI)
- AMD GPU back end (AMD)
- Alternate shading back end research (Luca Fascione, NVIDIA)



- Participated in May & Sept 2026 Dev Days
- One merged PR each time
- Reasons why it's hard for this project:
 - Tricky to find “good first issues”
 - C++, LLVM & compiler tech, GPU, rendering → most parts of OSL require lots of specialized knowledge
 - Lack of developer bandwidth
 - **Not good excuses**



Haven't had any problems yet.

Are we too obscure to attract attention?



“AI” (LLM) Code Generation Policy

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LLM coding assistants are permitted, with rules:

- Human must always be in the loop, and is the responsible party
- Interact with the project and community yourself, not by agent
- Disclose tools use: **Assisted-by: TOOL / MODEL**
- Don't waste maintainer's time with low quality PRs
- Don't stomp on Dev Days or Good First Issues
- Exempt: spell/grammar check, LLMs to teach/explain, audit for bugs, language translations, self-review prior to PR, trivial refactors

Full policy in repo: **[docs/dev/AI_Policy.md](#)**

Using extensively for development



How to Get Involved

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- TSC meetings are every other Thursday at 2pm Pacific Time (LA)
 - <https://calendar.openshadinglanguage.org/>
- Slack channel
 - <https://academysoftwarefdn.slack.com/>
 - #openshadinglanguage
- Github
 - <https://github.com/AcademySoftwareFoundation/OpenShadingLanguage>
 - <https://openshadinglanguage.org>