/* ACADEMY SOFTWARE FOUNDATION

Annual Review for MaterialX

Jonathan Stone – Lucasfilm ADG

ASWF TAC Meeting, February 4th, 2026

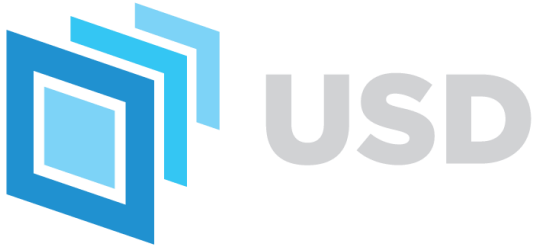
What is MaterialX?

- Represents CG materials independently of individual tools and renderers
- Launched at Industrial Light & Magic in 2012
- First production use on *Star Wars: The Force Awakens* in 2015
- Released as open source in 2017
- Joined the ASWF in 2021
- Graduated as an adopted project in 2024

/* ACADEMY SOFTWARE FOUNDATION
#ASWF

MaterialX Governance Updates

- Karen Lucknavalai becomes the first TSC member from Pixar OpenUSD team
- Lee Kerley becomes the first voting TSC member from Apple
- Frankie Liu becomes the first voting TSC member from NVIDIA
- MaterialX TSC now has seven voting members and ten stakeholders



/* ACADEMY SOFTWARE FOUNDATION
#ASWF

MaterialX 1.39.4 Release

- Adds support for *hex-tiled images*, based on design and engineering work at NVIDIA
- Also adds support for WebGPU shading language, NanoColor names, lat-long images, and animated materials
- Including many contributions from ASWF Dev Days 2025 participants

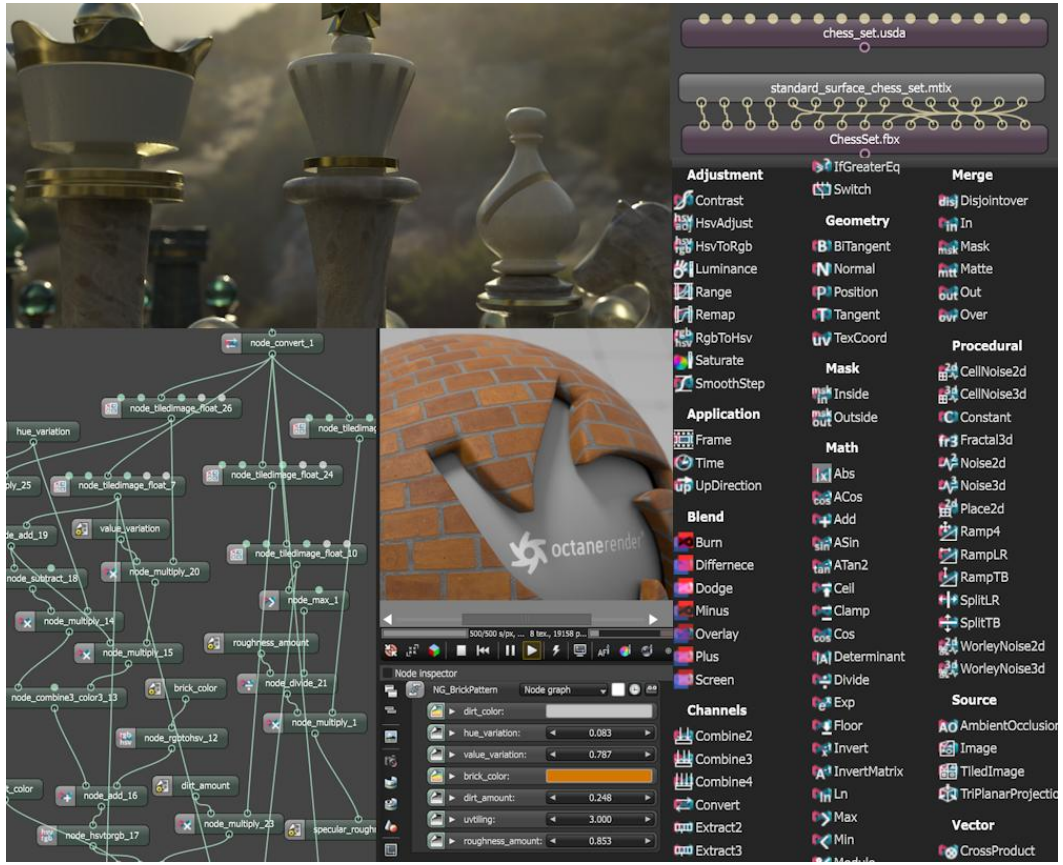
OpenUSD and MaterialX

- OpenUSD 25.05 becomes the first release that defaults to *MaterialX v1.39*
- The result of a major collaboration between the MaterialX and OpenUSD teams
- Including important contributions from Autodesk and Apple
- Makes *asset versioning* a stronger concept within OpenUSD

/* ACADEMY SOFTWARE FOUNDATION
#ASWF

MaterialX in OctaneRender 2026

- OctaneRender 2026.1 ships with native support for MaterialX
- The first *spectral* production renderer with MaterialX support (that we're aware of)
- Includes design and engineering contributions to MaterialX from OTOY



MaterialX in RenderMan XPU

- Presented by Fran Gonzalez from the Pixar RenderMan team at OSD 2025
- Upcoming native support for the MaterialX BSDFs in RenderMan XPU
- Opening the door to fully portable look development in RenderMan

Slang and MaterialX

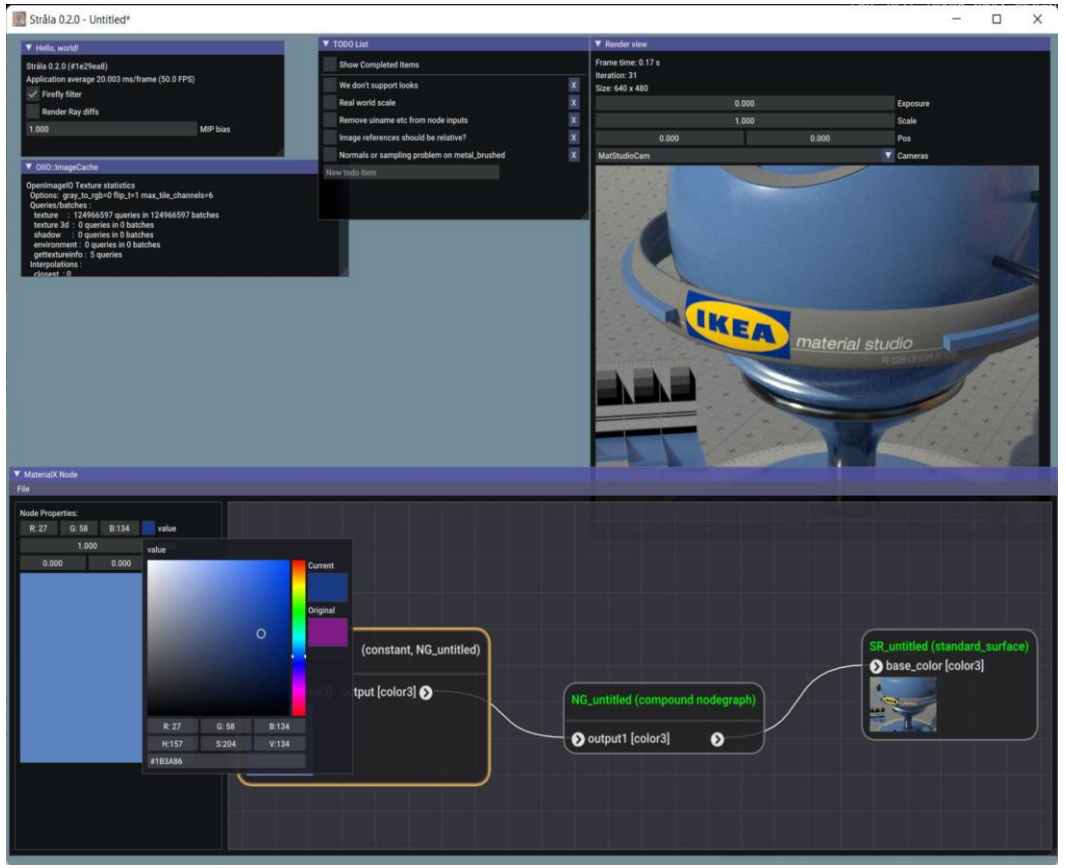
- Khronos and NVIDIA contribute support for Slang shader generation in MaterialX
- Enables future machine learning and inverse rendering workflows in the MaterialX and OpenUSD ecosystem
- Could be the start of a compelling collaboration between ASWF and Khronos

Roadmap: OpenPBR Volume

- A new project proposed by Autodesk and SideFX
- Borrowing ideas from Houdini Pyro Shader and Arnold Standard Volume
- Governed as part of the OpenPBR subproject of MaterialX
- Contributing improvements to underlying VDF nodes in MaterialX

Roadmap: Reference Path Tracers

- The MaterialX community has highlighted the importance of *reference path tracers*
- Providing gold-standard renders that can be compared against production tools
- One natural approach is to integrate OSL testrender into our graph editor
- Other rendering options are WebGPU Shading Language and MDL



TAC Open Discussion