OpenColorIO

ASWF TAC Update - March 2025

Contributor Update

Technical Steering Committee

Chair: Carol Payne (Apple)

Chief Architect: Doug Walker (Autodesk)

TSC Members

Remi Achard (DNEG)

Mark Boorer (ILM)

Mei Chu (Sony Imageworks)

Sean Cooper (ARRI)

Michael Dolan (Epic Games)

Zach Lewis (Method Studios)

Thomas Mansencal (Epic Games)

Cuneyt Ozdas (Autodesk)

Mark Reid (Animal Logic)

Mark Titchener (Foundry)

Kevin Wheatley (Framestore)

TSC Emeritus

Patrick Hodoul (Autodesk)

Carl Rand (Weta Digital)

Contributors

?????

Leaderboard: Most Active Contributors

Contributor	Active Days
doug-walker	*107 days active*
KelSolaar	*58 days active*
remia	*41 days active*
carolalynn	
cozdas	
zachlewis	
num3ric	

Leaderboard: Most Active Organizations

Organization	Active Days	Acti
Academy Software Foundation	*108 days active*	383
Wētā FX Limited	*47 days active*	122
DNEG	*44 days active*	120
Apple	*23 days active*	40 A
Method Studios	*18 days active*	39 A
Epic Games, Inc	*13 days active*	17 A
		17 A

Contributor Dependency

57% of your code activities are **performed by 3 people.**

Metric: Activities

Top **3** Contributors	**57%**
Next **94** Contributors	**43%**

Top 3 | Next 94

Rank	Contributor	Activities	Change	% Contributions
1	Doug Walker	378	-39	27.94%
2	Carol Payne	251	+221	18.55%
3	Thomas Mansencal	140	+49	10.35%

Organization Dependency

53% of your code activities are **performed by 2 organizations.**

Metric: Activities

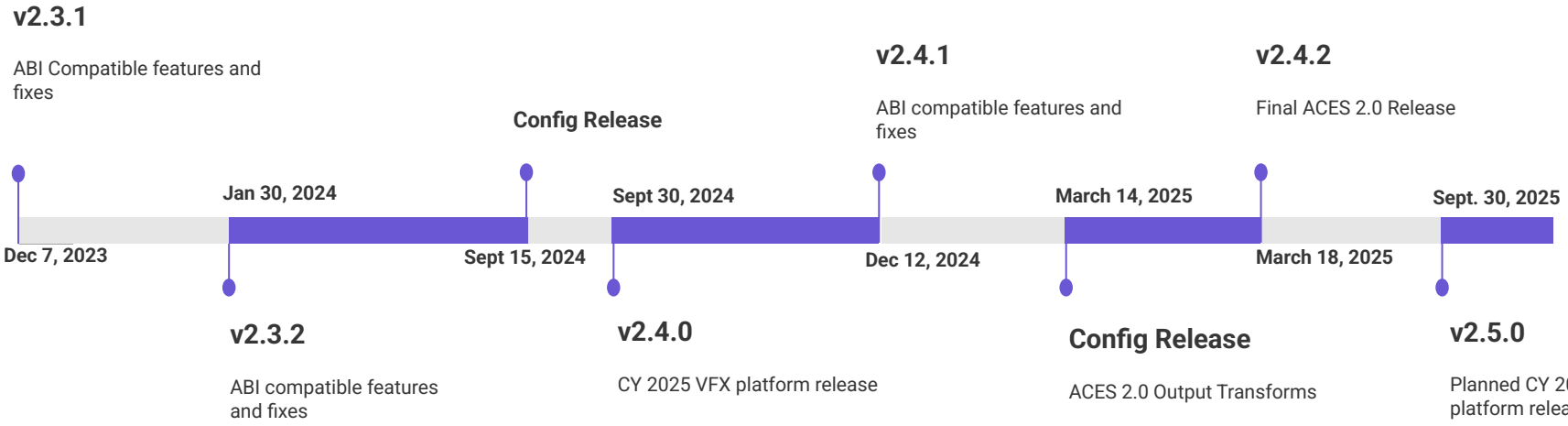
Top **2** Organizations	**53%**
Next **33** Organizations	**47%**

Top 2 | Next 33

Rank	Organization	Activities	Change	% Contributions
1	Academy Software Foundation	378	-39	33.48%
2	Netflix, Inc.	212	+182	18.78%

Since we last talked...

Release Cadence



Development Highlights

OCIO 2.4

- Built-in ACES 2 Output Transforms
- Updated configs for ACES 2.0
- More LUT-free transforms
- + Many smaller enhancements

In-progress for a future release

- NanoColor collaboration
- Config merging

ACES 2.0 Output Transforms

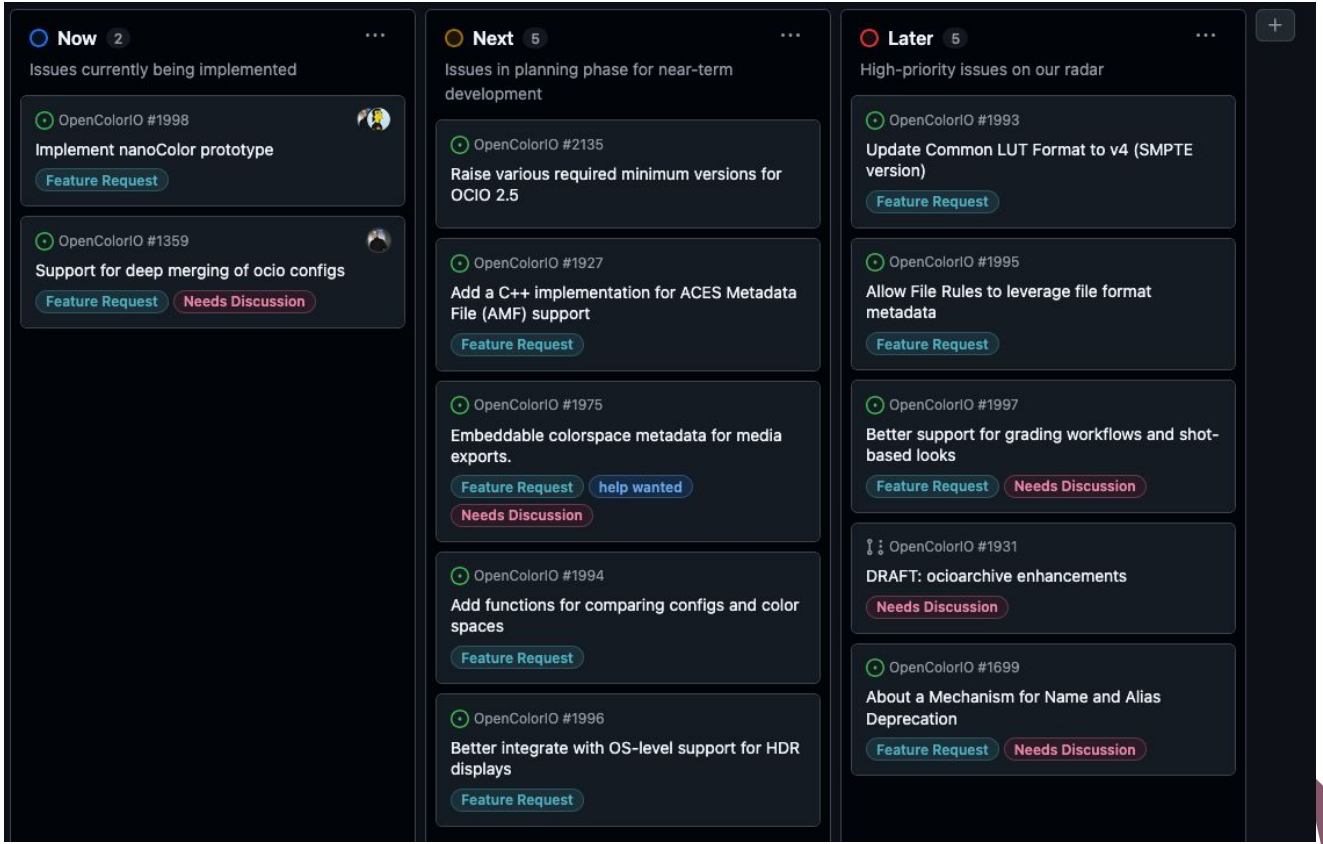
- This work took a large share of our resources for the last year
- Very complex algorithm (much, much more than ACES 1)
  - New custom color appearance model
  - Advanced gamut mapping
- OCIO is the first to do a non-LUT-based implementation
- Filled a vacuum for the industry as a robust, open source implementation
  - Supported the ACES team by validating, optimizing, and productizing their developer releases

ACES 2.0 Studio & CG Configs Release

- Highlight: New ACES 2.0 Output Transforms
- User facing artifacts — an unusual deliverable for an ASWF project
  - https://github.com/AcademySoftwareFoundation/OpenColorIO-Config-ACES/releases
- Lots of discussion about naming, user experience, etc.
  - Decisions show up directly in application menus
- ACES 2 configs will be built into the OCIO 2.5 library

What's next...

OCIO Library Roadmap: *roadmap.opencolorio.org*



Initiative Updates

ASWF *Color Interop Forum*

Goal: Encourage color space interop across industry projects

- **Who:** everyone who deals with color interop, even if not using OCIO
  - ACES, camera vendors, experts from VFX, animation, games, post
- **Why:** color is hard enough without alignment — we aim to create a space to have conversations and tackle initiatives with broad industry impact
- **What:** mainly documentation, implementation guides, recommendations. But sometimes supporting code in OCIO and other ASWF projects

ASWF *Color Interop Forum*

Color Space Encodings for Texture Assets and CG Rendering

- Completed in 2024
- Baseline set of standard color spaces for use in CG
- Only includes scene-referred spaces for a specific interop challenge — future work may add more
- https://github.com/AcademySoftwareFoundation/ColorInterop/blob/main/Recommendations/01_TextureAssetColorSpaces/TextureAssetColorSpaces.md

ASWF *Color Interop Forum*

OpenEXR Color Metadata

- Current group initiative
- Proposal is to add two new metadata fields to OpenEXR to describe color space name and OCIO config
- Work will include documentation for implementers on use as well as handling the old chromaticities metadata

ASWF *Color Interop Forum*

This is new ground for the ASWF

- Publishing recommendations instead of code
- ASWF is not a formal standards group (e.g., SMPTE, ISO, IEC, ITU)

Project Collaborations

- Completed
  - OpenFX – Introduced OCIO support in OFX 1.5
- In-progress
  - OpenUSD – NanoColor collaboration
  - MaterialX – NanoColor collaboration
  - OpenEXR – Color Interop Forum project
  - ACES Output Transform working group
- On our radar
  - OpenTimelineIO – Thread started regarding color management

NanoColor

NanoColor Working Group Charter

OpenUSD, MaterialX, and many other libraries and rendering systems include their own minimal color processing functions to prepare color values for a renderer, but there's a desire to replace bespoke individual solutions to this problem with a single universal approach organized around the OpenColorIO project's goal of developing a lightweight component for that purpose.

The goals of the working group are to:

1. Collaborate on the development of a lightweight, asset-focused version of OpenColorIO with an implementation that is suitable for use in OpenUSD, MaterialX, and potentially other asset formats in the future, such as glTF.
2. Agree on a minimal set of reserved baseline color space encodings that are universally available in addition to definitions of user-defined spaces (i.e., the meaning of "lin_rec709" may not be modified). This set of color spaces would initially be based upon the spaces that MaterialX and OpenUSD support today, and deliverables will include an OCIO config that documents the agreed upon names and transforms for the baseline set.
3. Agree on a set of supported color processing operators allowed within this lightweight system, consisting of various analytic functions with a closed-form inverse.
4. Ensure that, for the supported color operators from point 3, the data model provides smooth interop for applications using "full" OCIO with both OpenUSD and MaterialX workflows.

NanoColor

- Collaborate on the challenges of color management in the OpenUSD & MaterialX ecosystem
  - Develop solutions that are technically sound and flexible while also adhering to the various requirements and constraints of each project
  - Deeply explore the implications of various color managed workflows
- Ensure smooth interop between projects
- The group of OpenUSD, MaterialX, and OCIO experts meets regularly and work continues

Discussion