



\ ACADEMY COLOR ENCODING SYSTEM \

ACES Implementation TAC Meeting

July 14, 2020

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Agenda

- Welcome - Agenda - Expected Outcomes (5 mins)
- Discussion of the role of the TACs (20 mins)
- Short review of the ACES 1.2 release (5 mins)
- The road to ACES 2.0 (45 mins)
 - On-going working group progress
 - New working groups / working group proposals
- TAC discussion of ACES priorities, process, strategy (15 mins)

Expected Outcomes

- TAC members...
 - have robust discussion on the role of the Technical Advisory Councils in the development of ACES.
 - are provided a recap of the ACES 1.2 release and high level plans for ACES 2.0.
 - receive an update on the status of on-going implementation working groups.
 - are presented the proposals for new implementation working groups.
 - provide feedback on the overall direction of the ACES project and working group alignment with the projects goals.
 - take action to review and provide feedback on updated ACES Logo Program documents

Discussion – Role of the TACs

- TAC members are key ACES stakeholders, industry experts and thought leaders.
- We need your guidance in making sure we're addressing the industry's needs.
- Champions ... TAC members should be champions for standards-based workflows and help us make sure ACES is fulfilling its promise.
- Engagement ... TAC members are encouraged to dig into the details, join working groups, test proposed and final solutions within their organizations, discuss with the ACES and wider motion-picture, television and gaming community.
- Ask the hard questions!

Review – ACES 1.2 Release

- ACES 1.2 released April 1, 2020
- Key new features
 - New version of Common LUT Format (CLF)
 - ACES Metadata File (AMF) to replace ACESclip
 - Other minor improvements
- Most community driven ACES release to date.
 - Created using new ACES project governance structure. 2 release candidates. Significant community input through virtual working groups.
- Excellent post-release community uptake (e.g. ACES 1.2 webinar, early integration into products, etc)
- ACES Logo Program documents are being updated to reflect the new release. Please review the draft documents when released and provide feedback to ACES Leadership.

The Road to ACES 2.0

- High level goal of ACES 2.0 is to "delight" the industry
- Priorities on community feedback on ACES 1.0. What works? What doesn't?
- Current top priorities for ACES 2.0
 - New, more "neutral", output transforms (RRT+ODT) based on parametric transforms introduced in ACES 1.1
 - Robust gamut mapping
 - Validation tools for CLF and AMF
 - Better reference implementations, documentation, and best practices
 - Revisiting film ... tools, test materials, input transforms
- Considering staged approach ... e.g. ACES 2.0, 2.1, 2.2 ... roll features out as they are ready.

On-going Working Group Progress

- 2 active implementation working groups
 - CLF implementation working group
 - Chair – Doug Walker, Autodesk
 - Group Start Date – 10/31/2019
 - AMF implementation working group
 - Chair – Dan Tatut, Marquise Technologies
 - Group Start Date – 10/31/2019

On-going Working Group Progress – CLF implementation

- Thorough CLF implementation now available in OpenColorIO master branch
- Deliverables in progress:
 - Set of sample CLF files (straw man collection available)
 - Set of processed reference images (target source image almost done)
 - Implementation Guide (very rough draft on Google docs)
 - Working on test program for validating a processed set of test images

On-going Working Group Progress – AMF implementation

- Phase 1 (November 2019)
 - Started 11/2019, completed 05/2020
 - Various specifications for AMF in EDL/ALE/FCP XML/etc, test vectors and reference material
 - Interop tests with a small set of vendors
 - Covered various aspects AMF (Input/Output Transforms, embedded CDLs)
- Phase 2 (May/June 2020)
 - Started 06/2020
 - Focus on external referencing (LMTs & IDTs), interop with CLF
 - “Real-world” test based on Phase 1
 - Proposed additions/extensions to AMF (specification in progress, test in August 2020)

New Working Groups

- 2 new implementation working groups
 - IDT implementation working group
 - Chair – Josh Pines, Technicolor
 - Group Start Date – 07/21/2020
 - Compression best practices working group
 - Chair – J. Schulte, Industrial Light and Magic
 - Group Start Date – TBD

New Working Groups – IDT implementation

- Practice has shown unexpectedly large variability when the same scene is captured with multiple digital cameras and converted to ACES using the manufacturers' currently published IDTs.
- Some issues that camera vendors have requested assistance with:
 - agreement on what exposure corresponds to 18% reflectance
 - methodology to insure that grey scale over/under exposures track
 - methodology to deal with off-neutral colors
 - agreement on a repeatable physical test setup all vendors can use
- Recommendations are currently outlined in Academy Procedure "P-2013-001 – Recommended Procedures for the Creation and Use of Digital Camera System Input Device Transforms (IDTs)" but no tools to calculate or verify IDTs are provided.
- This working group will create tools, recommendations and test procedures to aid in the development of IDTs

New Working Groups – Compression Best Practices

- Lack of compression support in ACES 2065-4 makes interchange during production burdensome.
- OpenEXR supports numerous compression methods.
- This group will determine a series of use case specific best practices for the use of compression when interchanging unfinished production content.
- Use cases will primarily focus on VFX workflows

TAC discussion of ACES priorities, process, strategy

- Freeform discussion topics
 - Are we missing anything big? What working groups do we not have, but need?
 - From your perspective, does the new ACES development process seem to be working?
 - How can you better advance implementation and adoption?
 - Would you rather see multiple ACES 2.x releases, or one big release?
 - How can we amplify our message and use of the online community (ACESCentral.com)?

Thank you for your participation

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