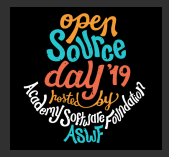
ACESNext...The Road to ACES 2.0



SIGGRAPH Birds of a Feather

July 30, 2019

Agenda

- Welcome (2:00 pm – 2:05 pm)
- Progress on ACES Development (2:05 pm – 2:10 pm)
- CLF VWG Update (2:10 pm – 2:15 pm)
- ACESclip VWG Update (2:15 pm – 2:20 pm)
- ACES 1.2 and Discussion (2:20 pm – 2:30 pm)
- Discussion of Roadmap to ACES 2.0 (2:30 pm – 2:40 pm)
- Call to Action! (2:40 pm – 2:45 pm)
- Next Steps and Discussion (2:45 pm – 2:50 pm)

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Welcome

We're here to:

- Update you on progress
- Confirm your needs
- Ask for your participation and help – we want this to be a discussion!

Welcome

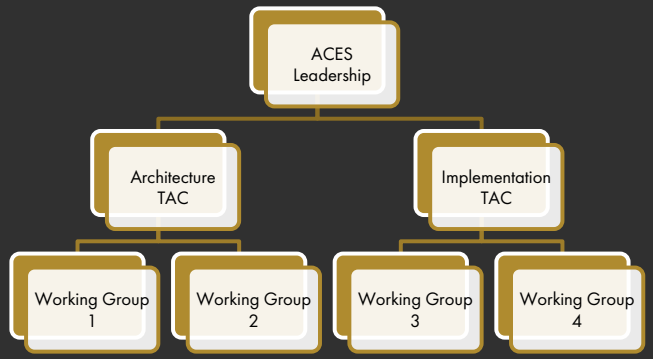
A few important things to mention...we're

- making real progress on ACES development
- coordinating with the OCIO Group
- operating in an "open source" style and thanks to ASWF for hosting this Open Source Summit
- These slides will be posted after the presentation

Progress on ACES Development

Progress on ACES - Governance

- We have a process
  - Based on ASWF/Linux Foundation principles
  - ACES 1.2 is proof of concept
  - Governance Document – https://aces.mp/P-2019-001
  - New Groups to announce



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Progress on ACES - New Groups to Announce

- Implementation VWGs
  - CLF - Doug Walker
  - ACESclip - Dan Tatut
- Architecture VWGs in Progress
  - IDT Group – Chair TBD
  - Gamut Study Group – Chair TBD
  - Compression - J Schulte
- Other Groups? Make a Proposal!

CLF VWG Update

CLF Virtual Working Group

What is the Common LUT Format

- XML based file format representing1D LUTs, 3x1D LUTs, 3D LUTs, Matrices, ASC CDLs, ...
- Covers most (if not all) existing LUT file representation types
- Supports Integer, Float, half-Float number encoding
- Node base for serializing any of the above transform, in any order, with as many nodes you'd like

What the Common LUT Format is not

- A specific ACES transforms file format

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CLF Virtual Working Group

Results of Spec Review Group

- Add <Exponent> Process Node
  - simple gamma, power w/ linear (sRGB, L*, etc.)
- Add <Log> Process Node
  - basic log, Cineon style, log w/ linear (camera logs, ACEScct)
- Other minor changes – remove IndexMap > 2, restructure, clarify

Tasks of Spec Generation Group

- Rewrite "specification" as a specification, incorporating new nodes

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ACESclip Update

ACESclip

Working Groups Status

1. Requirements review and revision group – Complete
2. Specification generation group – Underway
3. Implementation tools group – Upcoming (Chair: Dan Tatut)

The name has changed ...

ACESclip

is now

ACES Metadata File

New: ACES Metadata File – Old: ~~ACESclip~~

ACESclip is now ACES Metadata File (AMF or .amf)

- The name was causing confusion.
  - It's metadata, not a sequence wrapper.
- Name change was:
  - recommended by the requirements review and revision group
  - debated by the Architecture TAC
  - accepted by ACES Leadership
- Details will be formally documented in ACES 1.2, with the release of the AMF specification

ACES Metadata File Update

- Spec Requirements Group
  - Revisited requirements of ACES viewing pipeline metadata file
    - Essential for VFX pulls
  - Debated core functionality required, comparing existing spec to a sparse strawman
  - Discussed barriers to adoption
- Tasks for Spec Generation Group
  - Generating new specification based on revised requirements
  - Current draft XML schema and examples can be found at: http://github.com/aforsythe/amf

Goals and Process
for Implementation Virtual Working Groups

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Goals and Process for Implementation Virtual Working Groups

- Implement functions and procedures developed by the Architecture VWGs
- Give feedback to the Architecture VWGs
- Soft Start = While Implementation VWGs expect completed documentation from the Architecture VWGs, the Implementation VWGs will be able to start working on a project before the work of the Architecture group finishes

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Goals and Process for Implementation Virtual Working Groups

- Members of an Implementation VWG may be ACES Product Partners, ACES implementers and users
- ACES reference images will be exchanged between implementations to validate correctness

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ACES 1.2 and Discussion

ACES version 1.2

- Release – Fall 2019
- New Features
  - New CLF specification
  - New ACES Metadata File specification with versioning support
  - Non-ACES grading and custom LMT application space support (via ACES Metadata File)
- Discussion

Discussion of Roadmap to ACES 2.0

ACES 2.0 Features Under Discussion

- New Features
  - Simplified RRT
  - Parametric Output Transform
  - Parametric Dim Surround Support
  - Production-ready reference implementation
    - Interchangeable Programmatic LMT format
    - Interchangeable IDT format
  - Improved End-User Documentation

Major Fixes

Gamut management

Top 10 Listening Tour Request

Rank	Issue	Release
1	RRT (invertible and separate the look)	2.0
2	ACESclip spec and implementation	1.2
3	LMT exchange and archive format	2.0
4	Fix negative values issues (gamut problems)	2.0
5	Realtime implementations	2.0
6	Custom IDTs	2.0
7	Parametric ODTs	2.0
8	Support for custom working spaces	1.2
9	Revisit AP0 and AP1	2.0
10	No look modifiers in RRT and ODTs	2.0

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Progress on RAE Requests

We've made progress on these RAE requests and are building other requests into the plan

Development process more open

- Published development process
- Established technical advisory committees
- Open working groups
- Public meetings
- Consistent updates

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Progress on RAE Requests

Public Records

- Meeting materials, transcripts, and recordings captured for later review
- Public presentations and papers archived on Zenodo.org
- Development topic discussions on ACESCentral.com

Better integration with OCIO

- Community members tapped to help with OCIO
- 1.x ACES config development
- OCIO 2.0 to have built-in, first-class support for
- ACES (no config needed)

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Progress on RAE Requests

Promote CLF adoption

- Top-to-bottom reassessment of CLF
- Updated spec to be released with ACES 1.2
- CLF implementation working group to be formed to address implementation barriers to adoption

Simplified ACESclip file format

- ACESclip (now ACES Metadata File) rearchitected from the ground up to address community feedback

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Progress on RAE Requests

Broadening of ACES scope to include video games

- Greater attention given to non-cinema applications
- Inclusion of gaming "thought" leaders on TACs

Better documentation of CTL reference code, constants, development decisions, etc

On-going process

- New development process helps and new documents where applicable (e.g. TB-2018-001 : Derivation of the ACES White Point Chromaticity Coordinates)

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Progress on RAE Requests - (con't)

Discussion

Have your needs changed since RAE paper and
our discussions on 'Listening Tour'?

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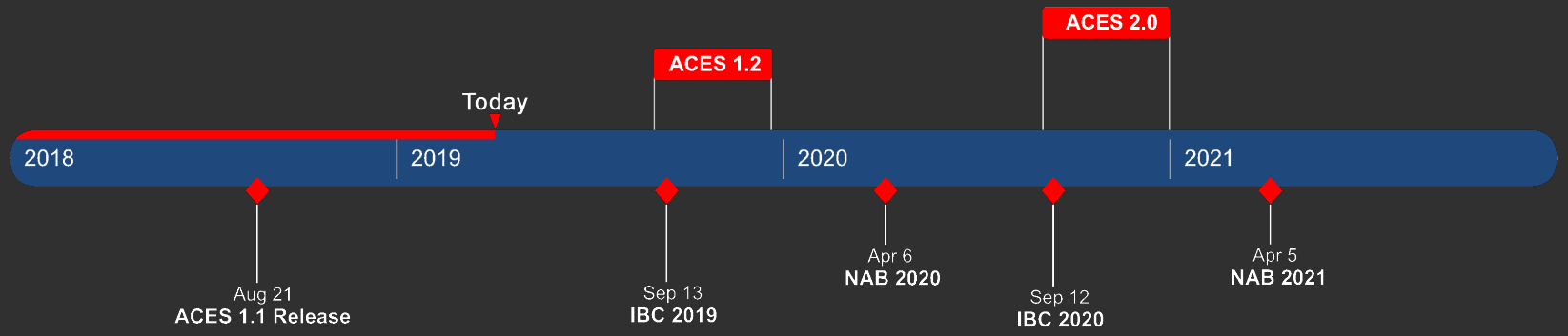
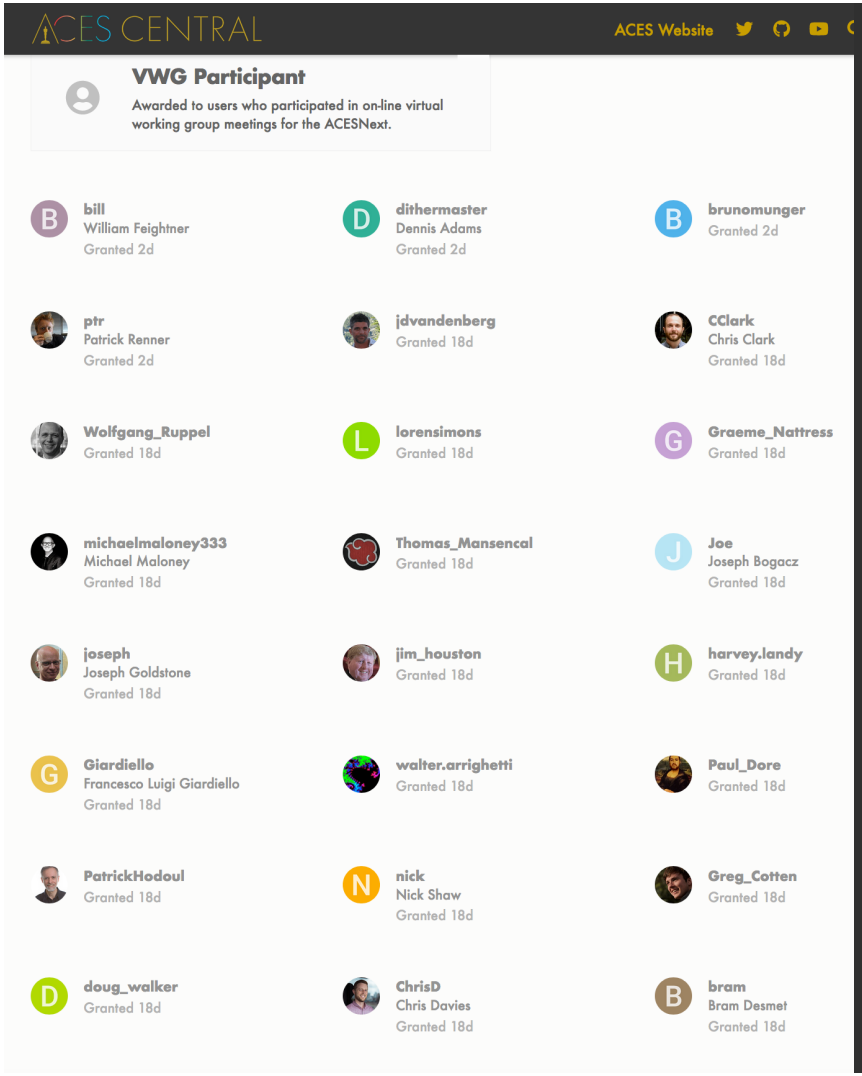
Release Timeline – for Discussion



Call to Action!



Call to Action!

- We are looking for proposals for 2.0 VWG and for people to step up to lead the new groups
- Proposal Form – https://aces.mp/wg_proposal_template_v1

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Thanks!