



\ ACADEMY COLOR ENCODING SYSTEM \

ACES Update IMAGO 2017

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ACES news

- Released ACES 1.0 in Fall of 2014
- 2017 New Leadership
 - Chair
 - Annie Chang – VP Technology, Marvel Studios
 - Vice-Chairs
 - Rod Bogart – Director of Production R&D, HBO
 - Joachim Zell – VP Technology, Deluxe EFilm
- New working model
 - Adopting a more open source organizational structure
 - Virtual Working Groups
 - Focus on outreach ... global organizations, educational institutions, international film makers
- Planning the Roadmap for future versions of ACES



ACES in Production

- Guardians of the Galaxy Vol 2.
- The Lego Batman *Movie*
- Steve Jobs
- Bahubali
- The Wedding Ringer
- Cafe Society
- Deliverance Creek



“I would never have been nominated for this
award without ACES.”

–Theo van de Sande, ASC

2014 Nominee – A.S.C. Outstanding Achievement in Cinematography in Television Movie, Miniseries, or Pilot

“Deliverance Creek”



Why ACES?

- The global standard for feature film and television production
- Protecting the creative vision
- Enabling new technologies (HDR, wide gamut, VR, gaming, etc.)
- Vendor agnostic
- Leverages commonalities – Avoiding “Snowflake” workflows



What is ACES?

- Not a single piece of software
- A set of digital production standards, best-practices, and specifications for building image pipelines.
- A system for end-to-end color consistency (what you see is what you get on set, in dailies, in VFX, in DI and in the archive)
- A potential cost- and time-saver (but it won't cost you any more)
- Free





PRODUCT PARTNERS

ARRI ARRI



A AUTODESK.

Canon

codex

colorfront IMM



DigitalVision



FilmLight



FOTOKEM
FILM . VIDEO . DATA



MARQUISE
TECHNOLOGIES

MTI FILM

Panasonic

POMFORT ^{fn}



:SGO

SHOTGUN

SONY



**THE
FOUNDRY.**



What ACES does for you

- Eliminates “secret sauce”
- Provides a common image interchange file format between all departments
- Simplifies communication between everyone handling and viewing images
- Enables non-proprietary high dynamic range (HDR) workflows
- Provides a standardized archival master file





Normal Exposure

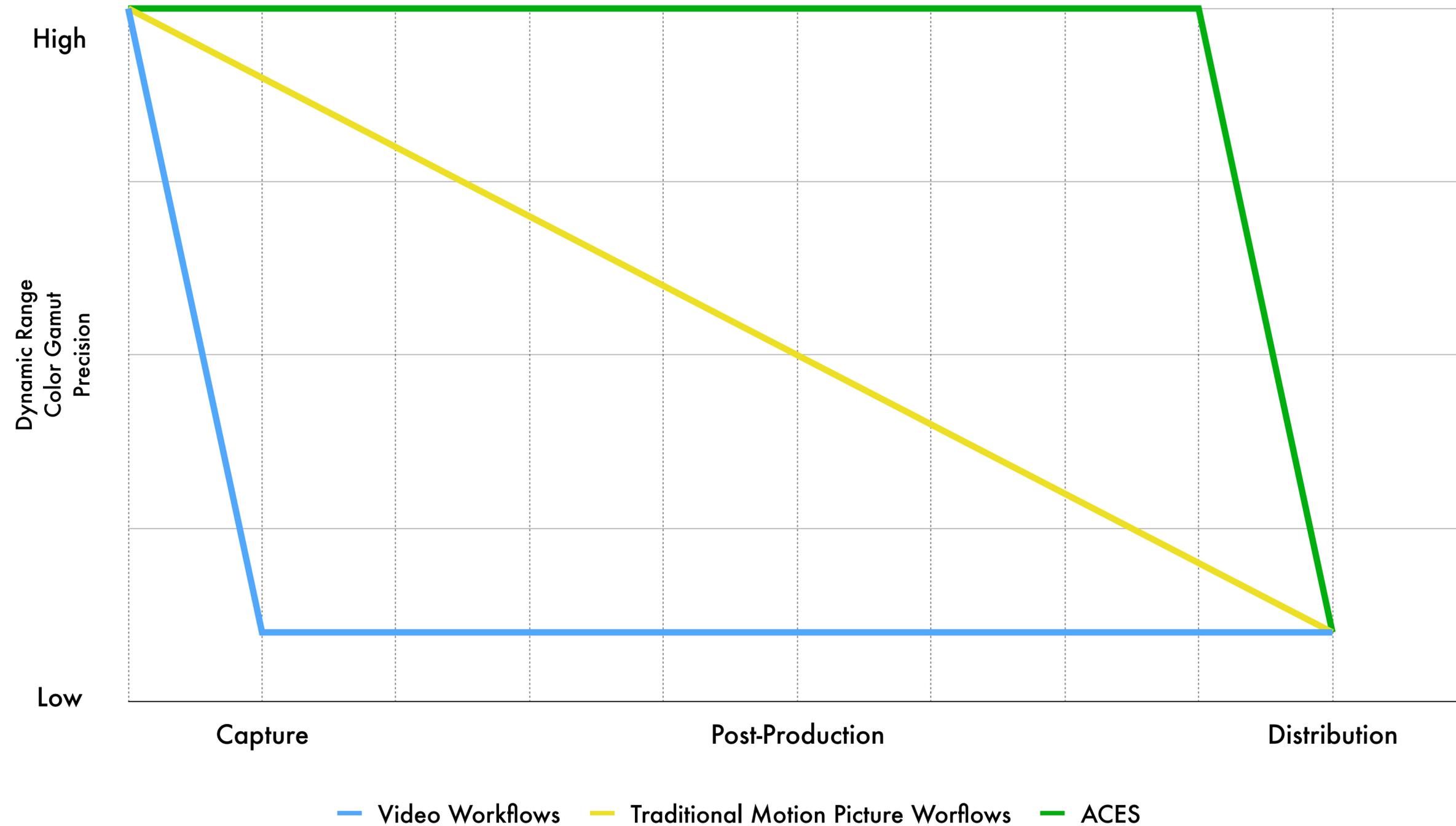


-2 Stops using Rec.709

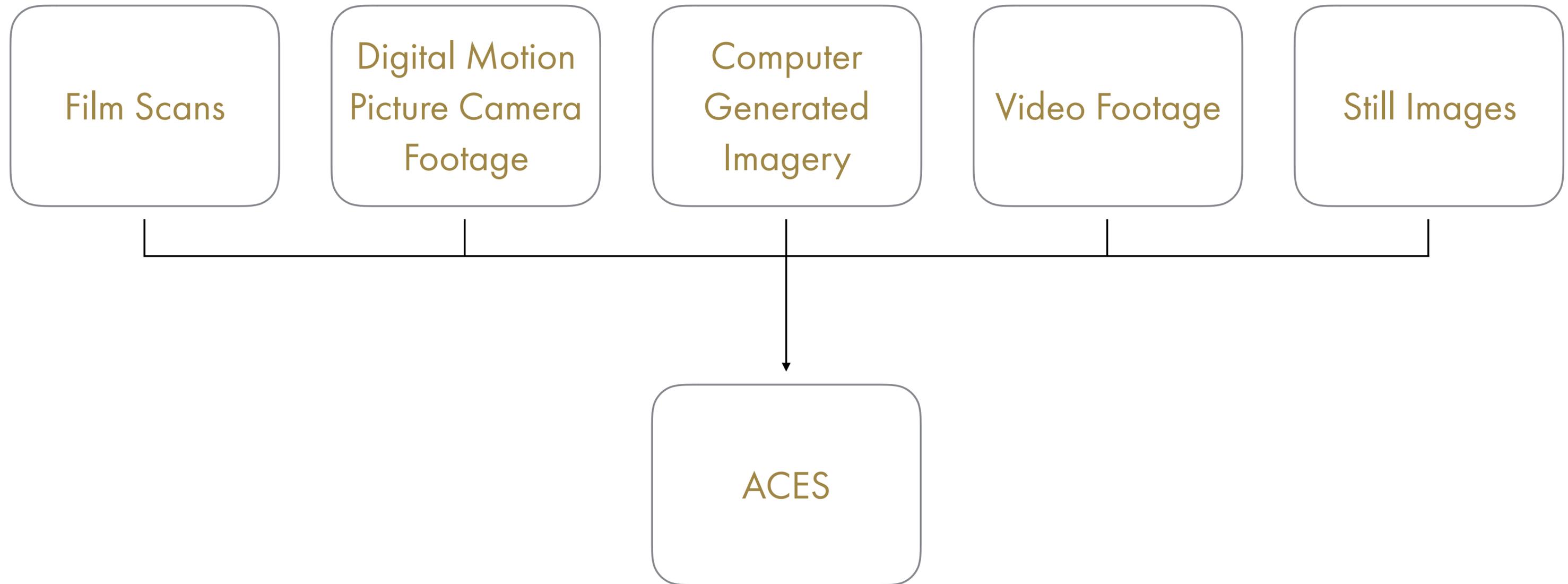


-2 Stops using ACES

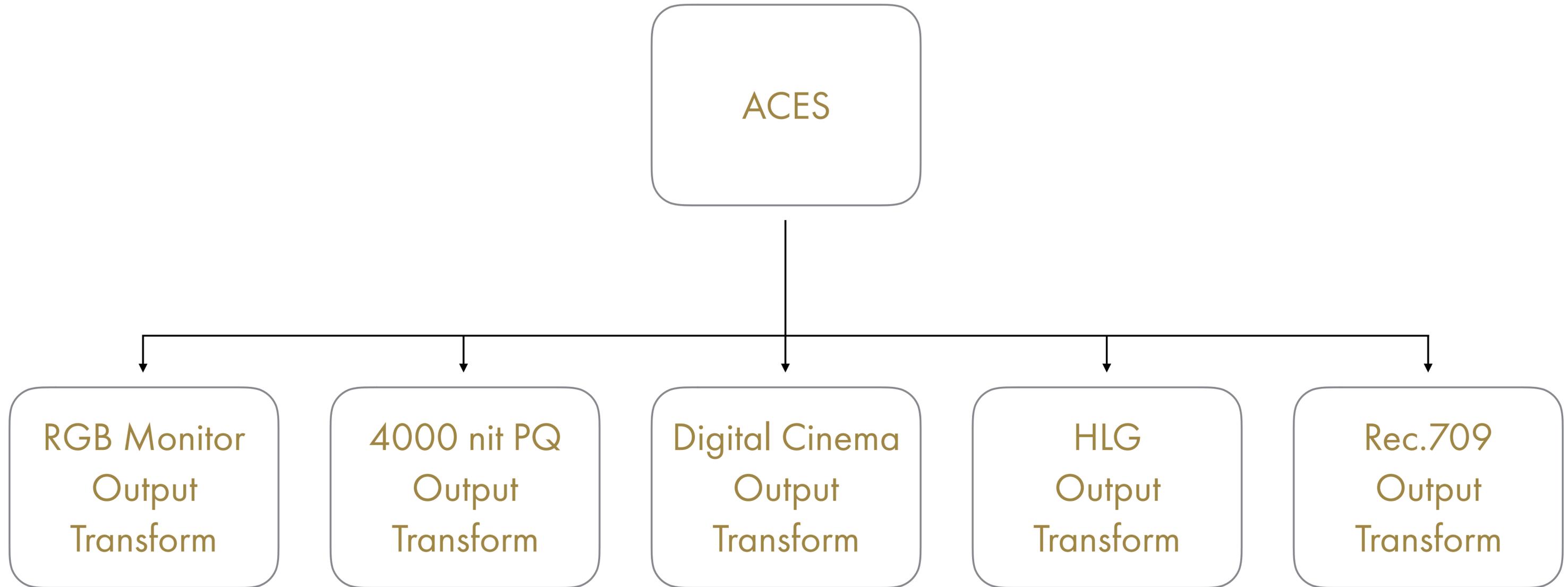
Image quality throughout the workflow



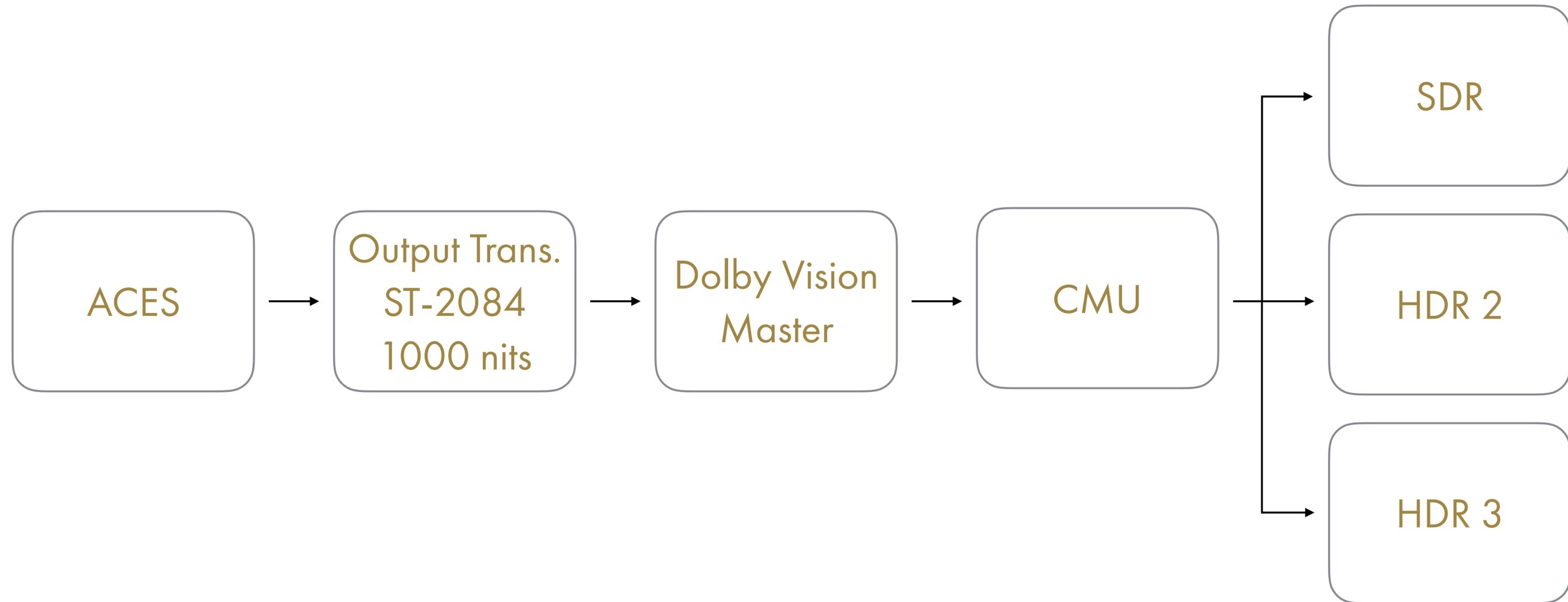
Maintaining image quality in ACES



Viewing ACES images



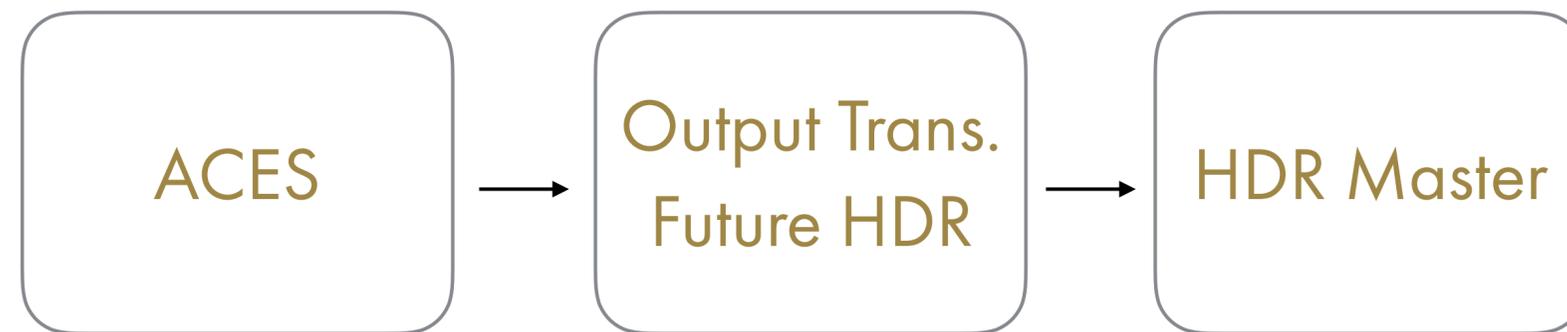
Working with HDR systems – Dolby Vision



Working with HDR systems – Hybrid Log-Gamma



Working with HDR systems – Future HDR workflows



ACES Digital Archiving Standard

- The digital equivalent of the finished film negative for the archive
- Uncompressed, full dynamic range, color gamut and precision
- Fully specified encoding and intended display conditions
- All 6 Major Studios are investing in ACES archiving standards work at SMPTE
- Look for “ACES/IMF” coming soon...



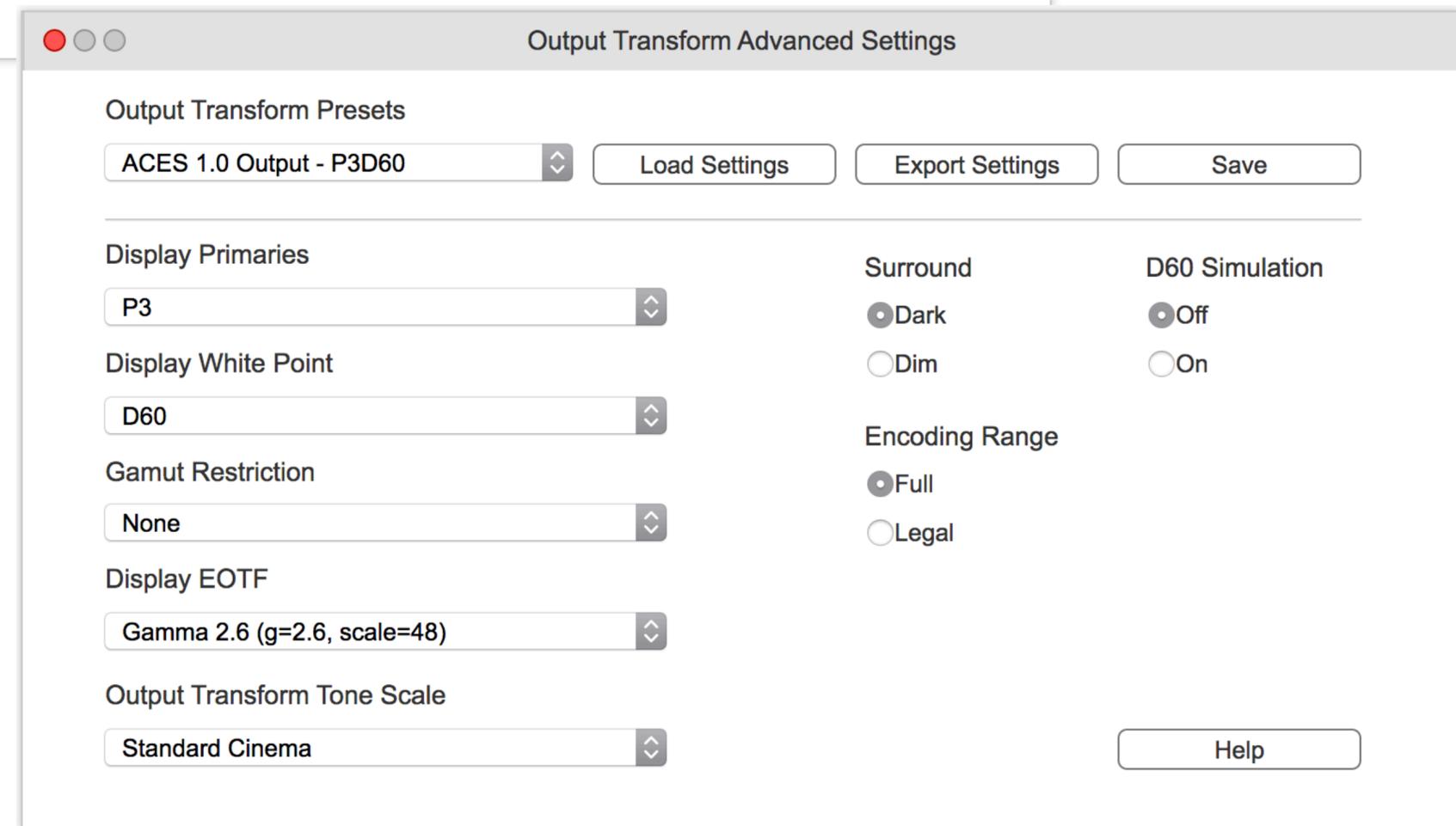
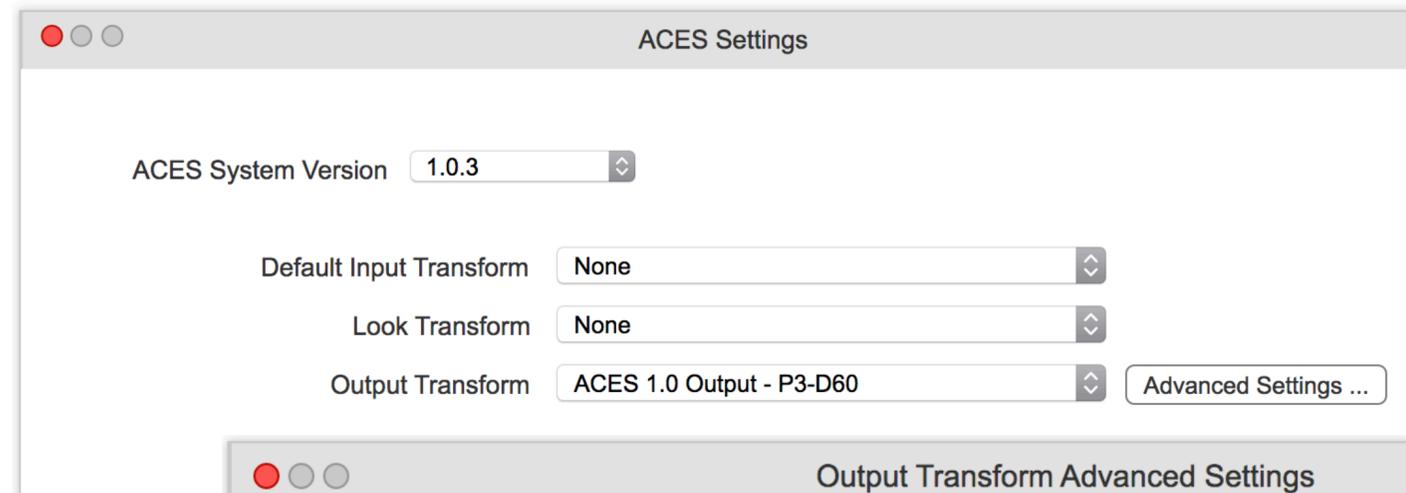
Standards update

- SMPTE Standards
 - ST 2065-1 – Academy Color Encoding Specification
 - ST 2065-2 – Academy Printing Density
 - ST 2065-3 – Academy Density Exchange Encoding
 - ST 2065-4 – ACES Image Container File Layout
 - ST 268:2014 – File Format for Digital Moving – Picture Exchange (DPX)
 - ST 2065-5 – MXF – Mapping ACES Image Sequences into the MXF Generic Container
 - ST 2067-50 – Interoperable Master Format – Application #5 ACES (DRAFT)
- SMPTE Standards will be elevated to ISO standards via TC36



On-going Work

- Metadata via ACESclip
- Standardization of Academy Common LUT Format (CLF)
- Refined HDR ODTs
- Unified / Parametric Output Transform Model



WELCOME

TO



CENTRAL

THIS IS IT!

THE FILMMAKER'S PORTAL TO
EVERYTHING YOU NEED TO
KNOW ABOUT THE ACADEMY
COLOR ENCODING SYSTEM.

We need your help ...

- Sign up for ACEScentral
- Follow ACES on Twitter @AcademyACES
- Let the ACES community know who they should be talking to
- Give ACES a try
- Send us your feedback :
ACEScentral or aces@oscars.org
- Let us know about ACES productions
- Wear your ACES hat!

