Dolby

# NEW CONTENT MAPPING WORKFLOWS FOR THE HOME AND CINEMA

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Content Enablement

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HPA
TECH RETREAT 2022

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**Title:**
New Content Mapping Workflows for the Home and Cinema

**Description:**
With streaming platforms requiring theatrical versions,
plus compressed release windows and shrinking production timelines,
workflow efficiencies are more essential than ever.
Learn how the latest Dolby Vision release and workflow for
HDR and SDR content creation can deliver for the home and now
for the cinema as well.

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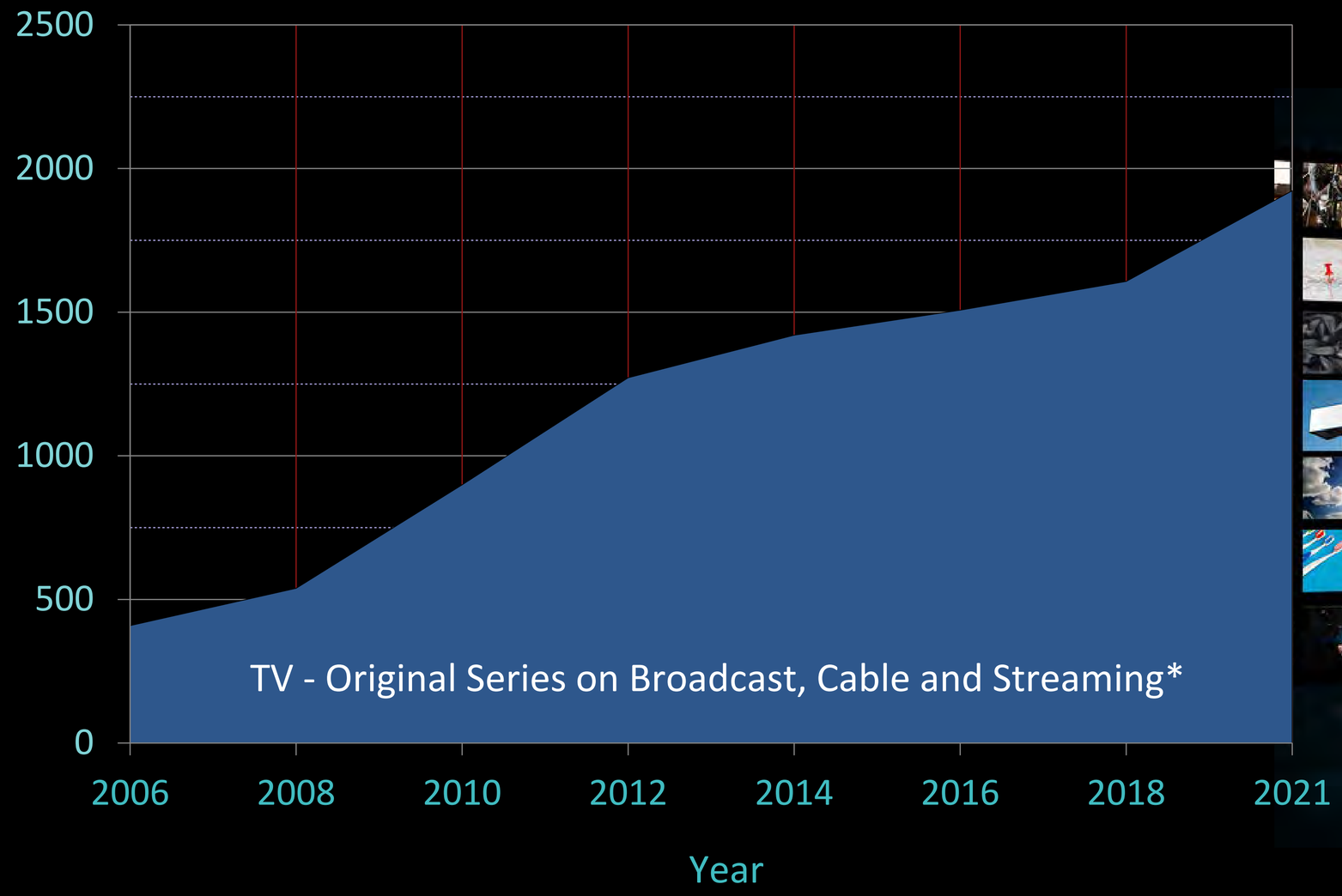
# Extensive Growth in TV Production



* Source - PeakTV / Variety

# Home Content Need Cinema versions for…

- Red Carpet Premieres
- Short/Small Theatrical Runs:
  - Awards Considerations
  - Press Screenings
  - Cast and Crew Screenings
  - Special Events / Internal Company Screenings

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Nov 22, 2019 6:06am PT

'The Irishman' Is Netflix's Biggest Theatrical Release at Home and Abroad

By Nick Vivarelli

nise / NETFLIX

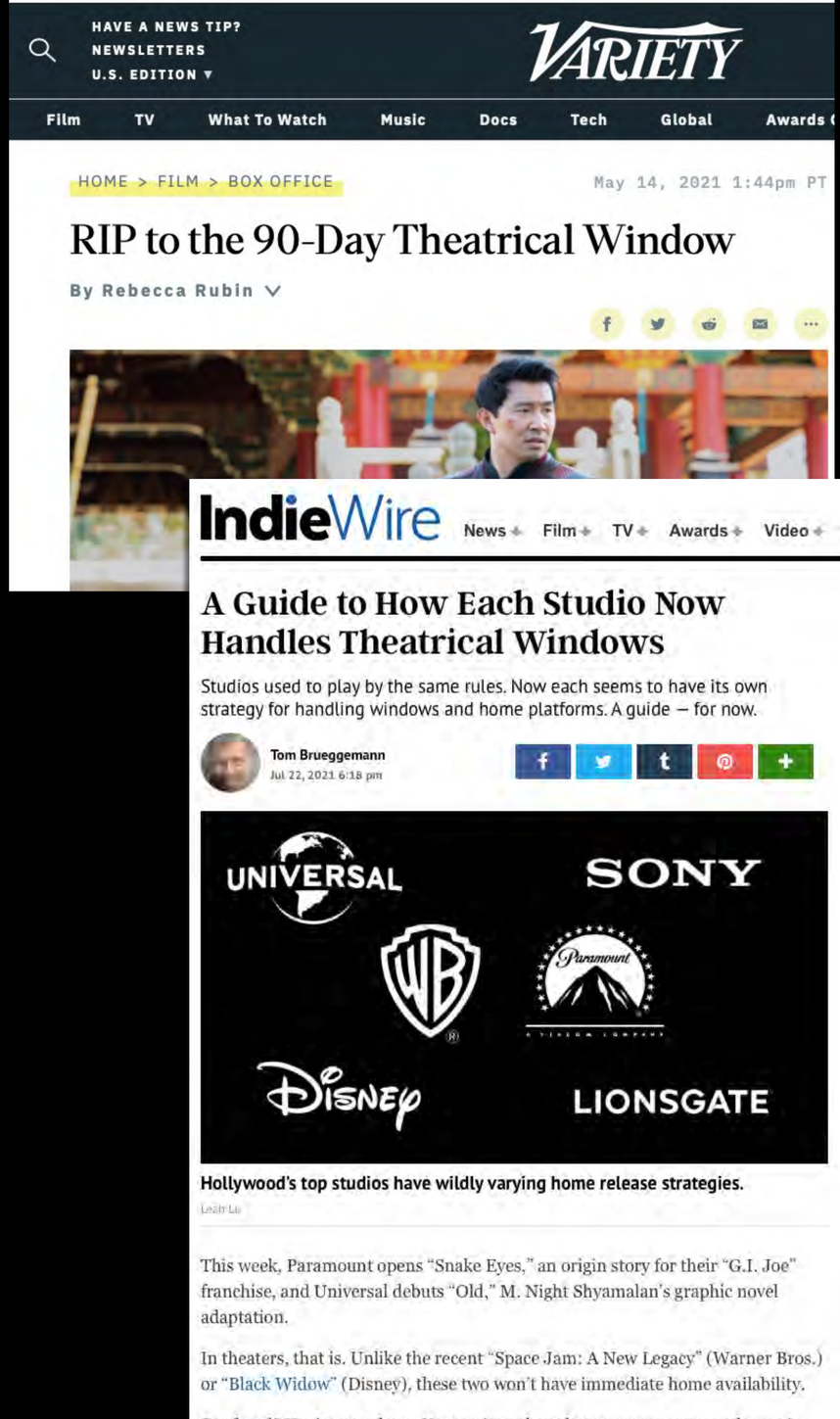
riction in the U.S. over its release in select cinemas, Martin
's "The Irishman" is enjoying the biggest theatrical rollout of
lix film to date, with key international markets screening the

# Home Content Need Cinema versions for…

- Red Carpet Premieres
- Short/Small Theatrical Runs:
  - Awards Considerations
  - Press Screenings
  - Cast and Crew Screenings
  - Special Events / Internal Company Screenings
- ‘Home’ Restoration Anniversary Re-Releases in Theaters
- Other territories - theatrical release is important to revenue

# Shrinking Windows & More Versions

- Pressures for tighter home/theatrical release windows
- Desire for simplified masters & deliverables
    - Managing so many versions
- More access to create Dolby Cinema HDR versions



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May 14, 2021 1:44pm PT

RIP to the 90-Day Theatrical Window

By Rebecca Rubin

IndieWire

News | Film | TV | Awards | Video

A Guide to How Each Studio Now Handles Theatrical Windows

Studios used to play by the same rules. Now each seems to have its own strategy for handling windows and home platforms. A guide — for now.

Tom Brueggemann
Jul 22, 2021 6:18 pm

UNIVERSAL
SONY
Paramount
Disney
LIONSGATE

Hollywood's top studios have wildly varying home release strategies.

This week, Paramount opens "Snake Eyes," an origin story for their "G.I. Joe" franchise, and Universal debuts "Old," M. Night Shyamalan's graphic novel adaptation.

In theaters, that is. Unlike the recent "Space Jam: A New Legacy" (Warner Bros.) or "Black Widow" (Disney), these two won't have immediate home availability.

# Use Case Summary:

1. Streaming TV Shows requiring limited use theatrical versions

2. Traditional Feature Films with compressed release windows and shrinking production timelines

# Deliverables Landscape

| | Dolby Cinema | DCI Cinema | Dolby Vision TV **(Home/Mobile)** | HDR10 TV (Home/Mobile) | SDR TV (Home/Mobile) |
|---|---|---|---|---|---|
| Color Profile | (HDR) PQ - P3 | (SDR) Gamma - P3 | (HDR) PQ - P3 or Rec 2020 | (HDR) PQ - P3 or Rec 2020 | (SDR) Gamma - Rec 709 |
| Metadata | No | No | Dynamic Metadata (Shot By Shot) | Static Metadata | No |
| Display (Grading) | Dolby Laser Projector | DCI Projector | HDR Reference Grade Display (at least 1,000 Nits) | HDR Reference Grade Display | SDR Reference Grade Display |
| Peak Brightness (Grading) | 108 Nits | 48 Nits | 1,000 - 4,000 Nits | 1,000 Nits | 100 Nits |
| Display (Playback) | Dolby Laser Projector | DCI Projector | Consumer Displays (LG, Sony, TCL, Vizio, Panasonic, Apple) | Consumer Displays (LG, Sony, TCL, Vizio, Panasonic, Samsung) | Consumer Displays (LG, Sony, TCL, Vizio, Panasonic, Apple) |
| Peak Brightness (Playback) | 108 Nits | ~48 Nits | ~300 - 2,000 Nits | ~300 - 2,000 Nits | ~100 and up Nits |

Dolby Vision

## COLOR GRADING SETUP

- Process starts with 1,000 nit or higher HDR (PQ) home grade
- Supports P3 or Rec 2020
- Next steps can be home or cinema metadata

1000 - 4000 Nit • P3 • D65

'Mastering Monitor'
Level 0 Metadata

Active Image Area (Blanking)
Level 5 Metadata

Dolby Vision

## COLOR GRADING TOOLS

Baselight ★

DAVINCI RESOLVE

AUTODESK® FLAME® 2021

Nucoda
Colour Grading and Finishing

grass valley Rio ★

SGO MISTIKA

★ *Cinema Targets/Trims version now shipping*

## HDR MASTERING MONITOR

Minimum Recommended Guideline:

- 1,000 nit (peak luminance)
- 200,000:1 (contrast ratio)
- 99% of P3 (color gamut)
- SMPTE 2084 EOTF (PQ)

SONY

FSI Flanders Scientific Inc.

Canon

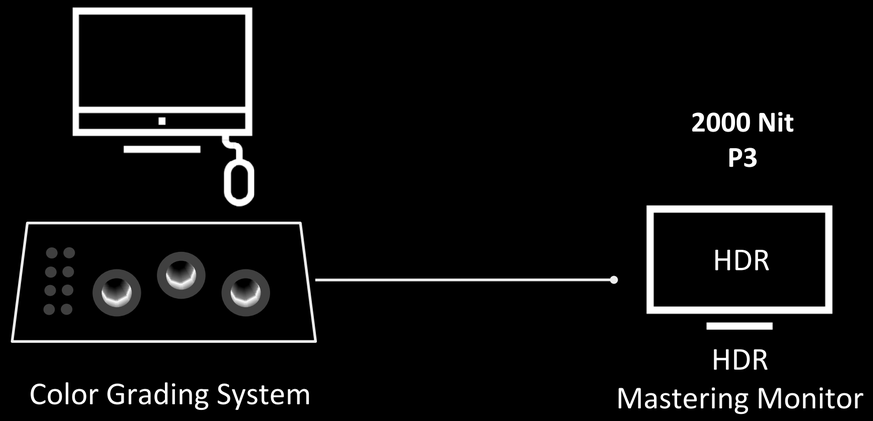
postium

EIZO

‘HOME’

# COLOR GRADING WORKFLOW

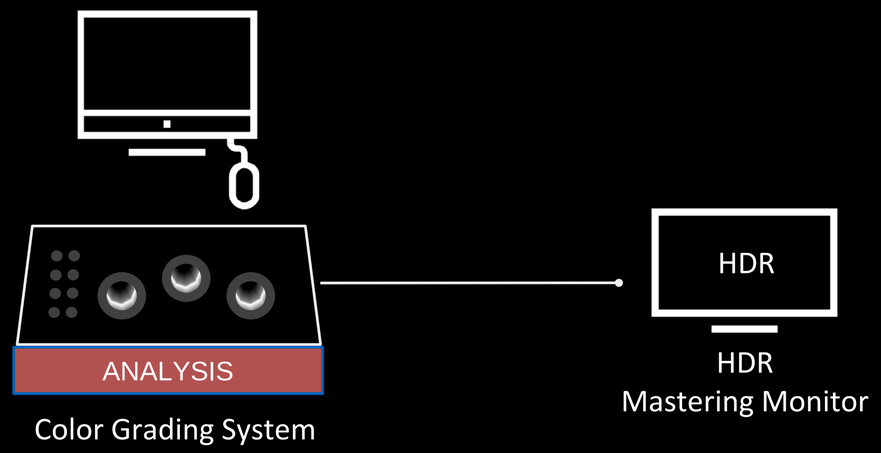
## CREATE FULL HDR GRADE



‘HOME’

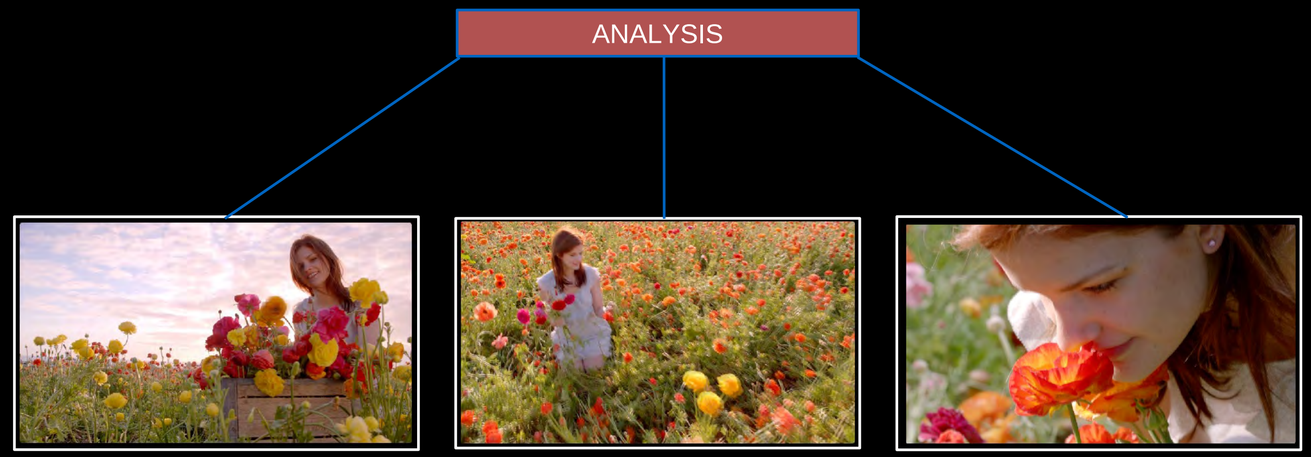
# COLOR GRADING WORKFLOW

## ANALYZE HDR GRADE




Dolby Vision

## SHOT BY SHOT



# COLOR GRADING WORKFLOW

PER SHOT LEVEL 1 METADATA

MAX VALUE

MID VALUE

MIN VALUE

Dolby Vision Metadata

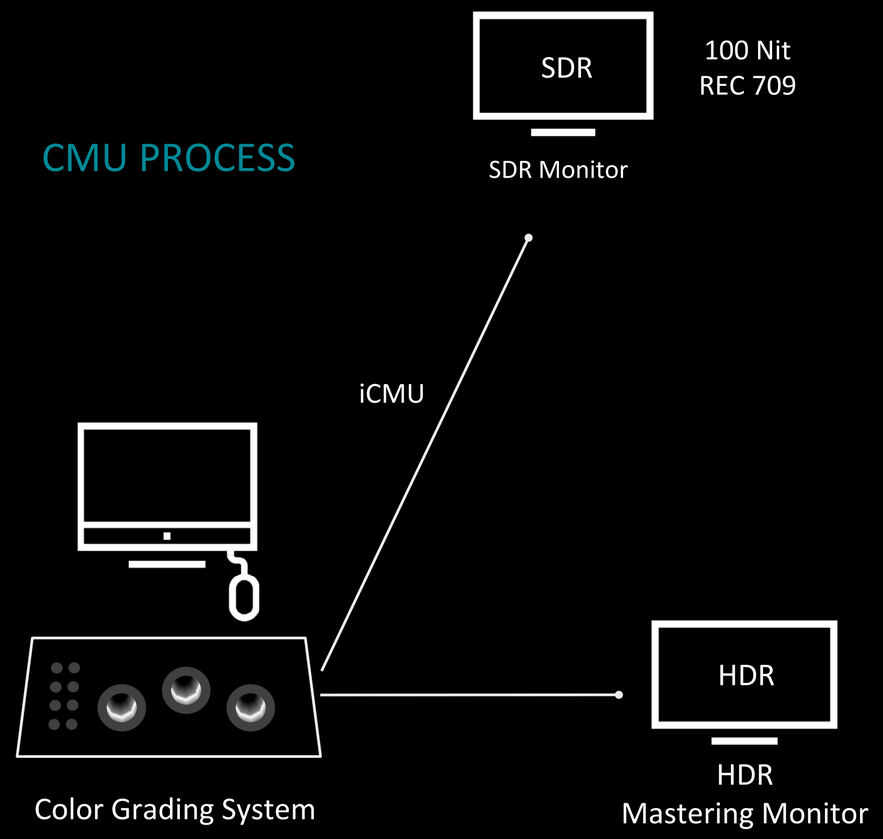
Dolby Vision Metadata

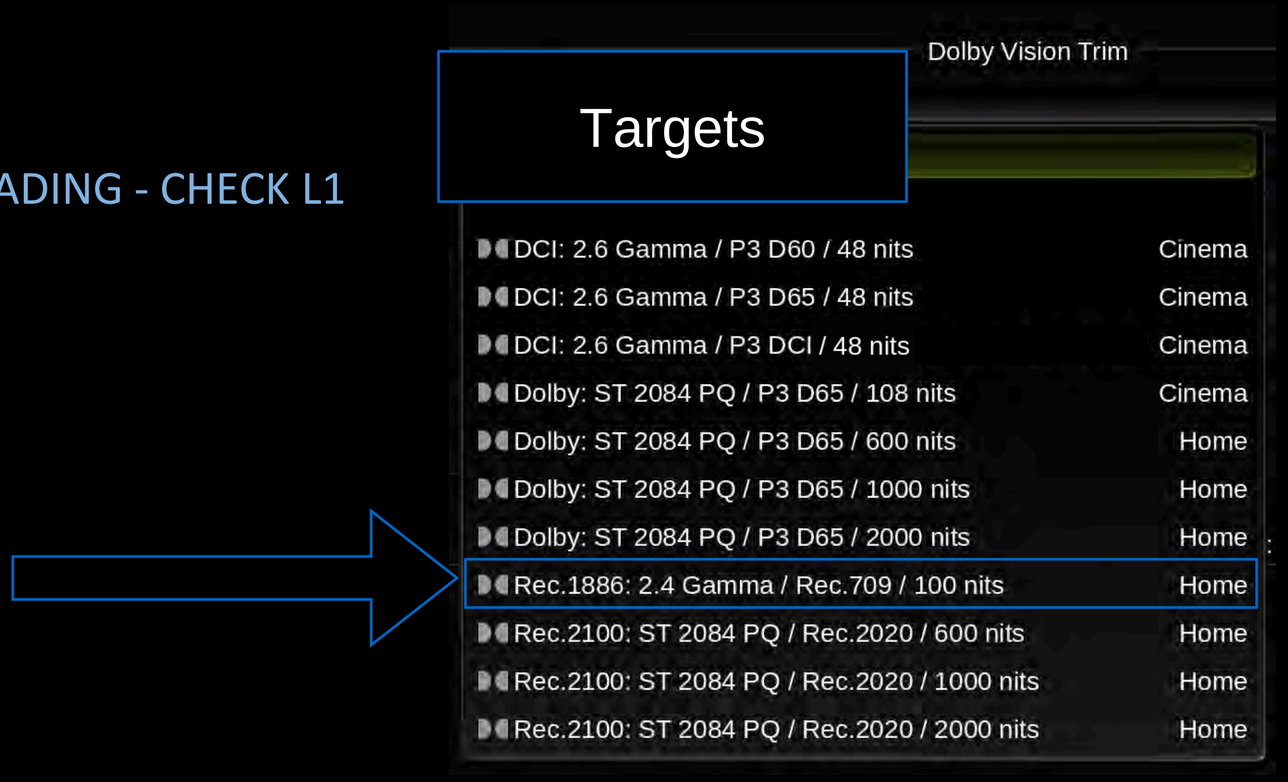
Dolby Vision Metadata

# ‘HOME’

## COLOR GRADING - CHECK L1

### CMU PROCESS




Dolby Vision Metadata

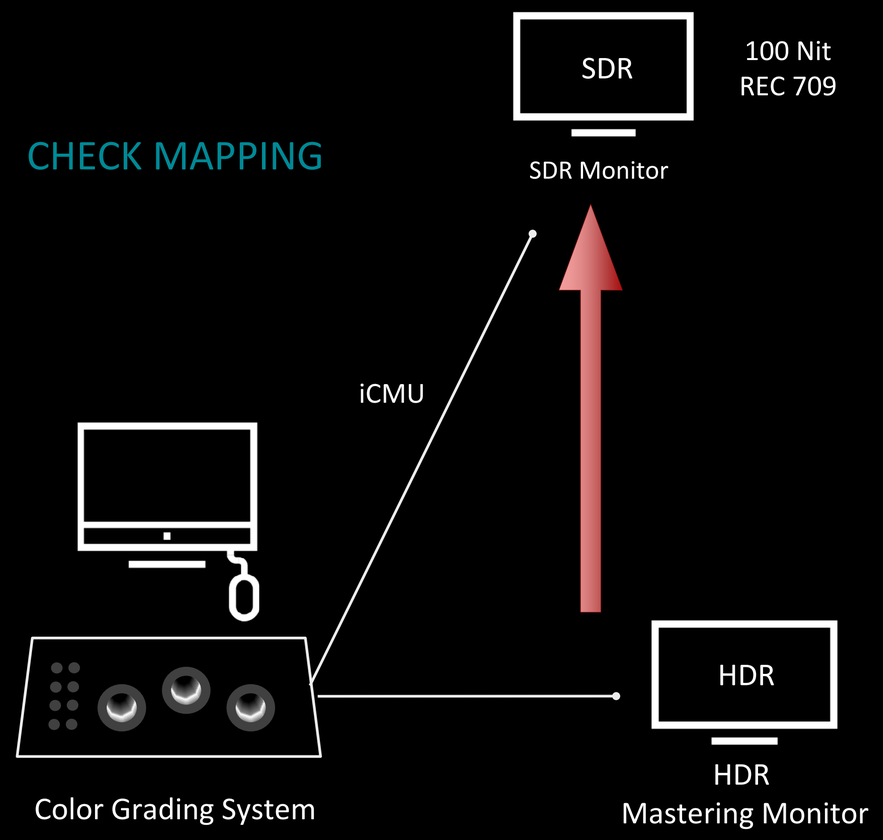
Dolby Vision Metadata

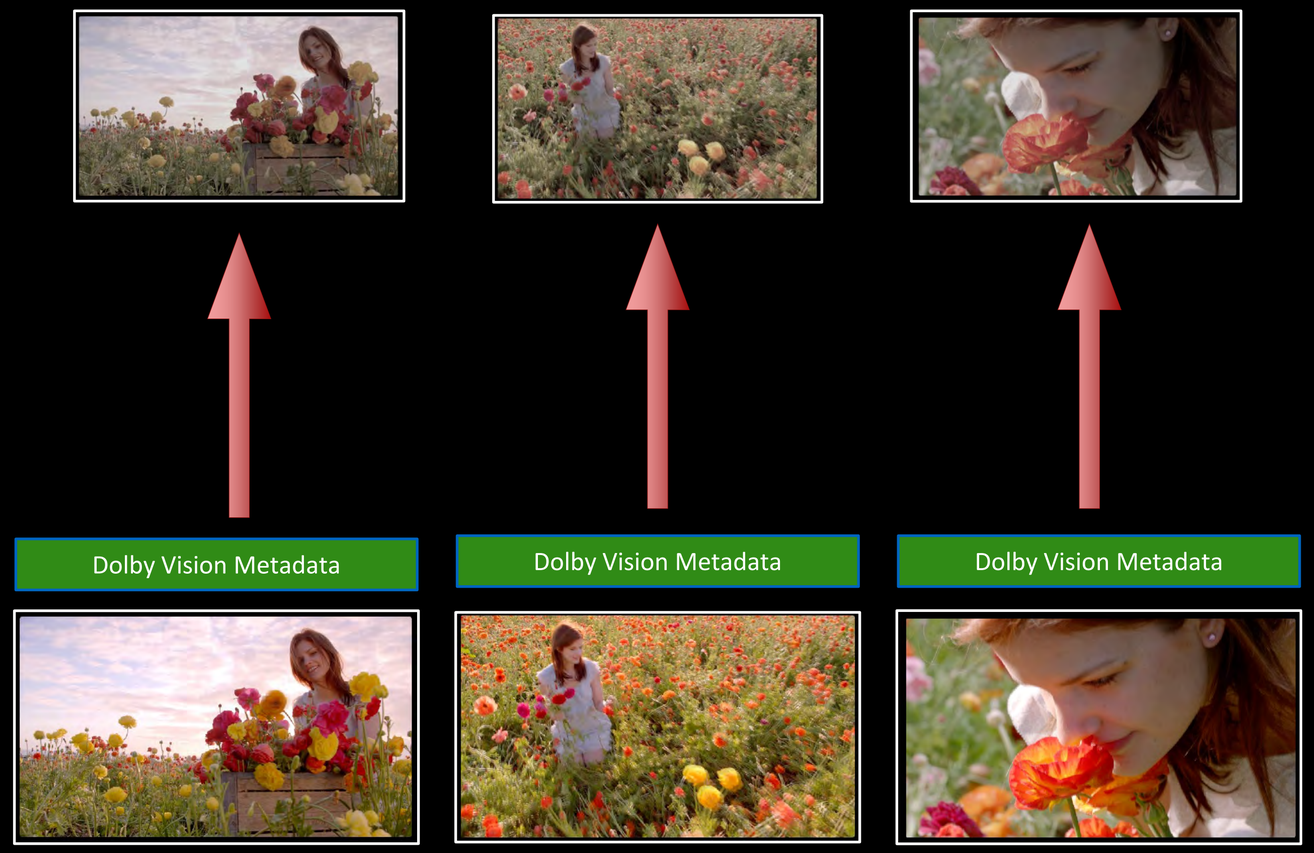
Dolby Vision Metadata

‘HOME’

# COLOR GRADING - CHECK L1

## CHECK MAPPING



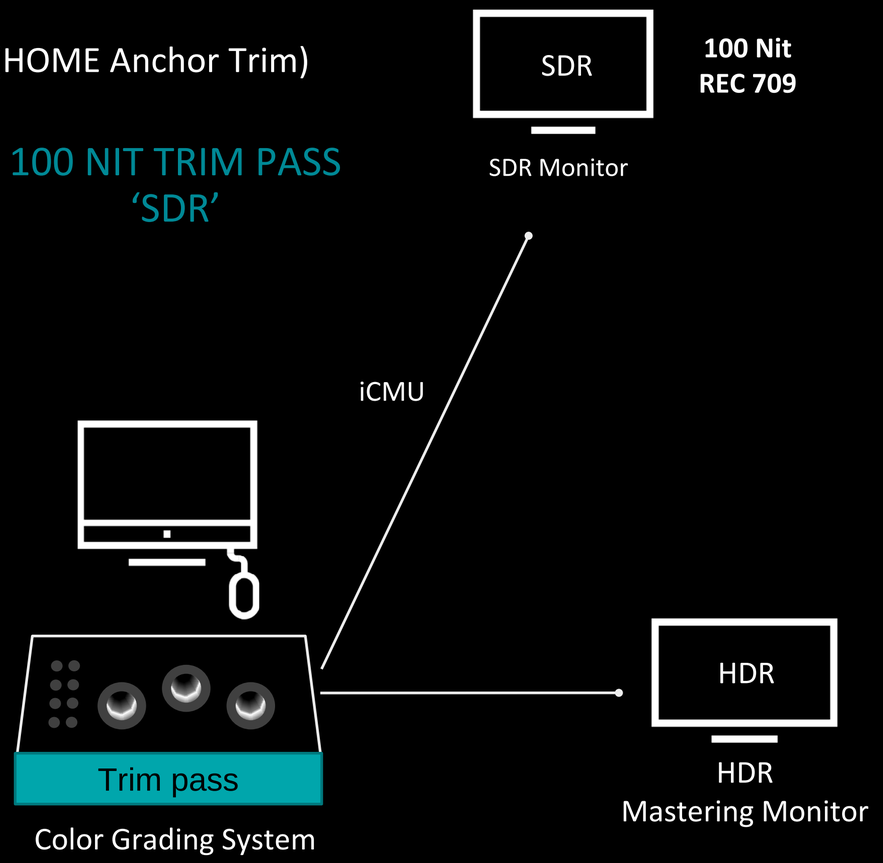



# ‘HOME’

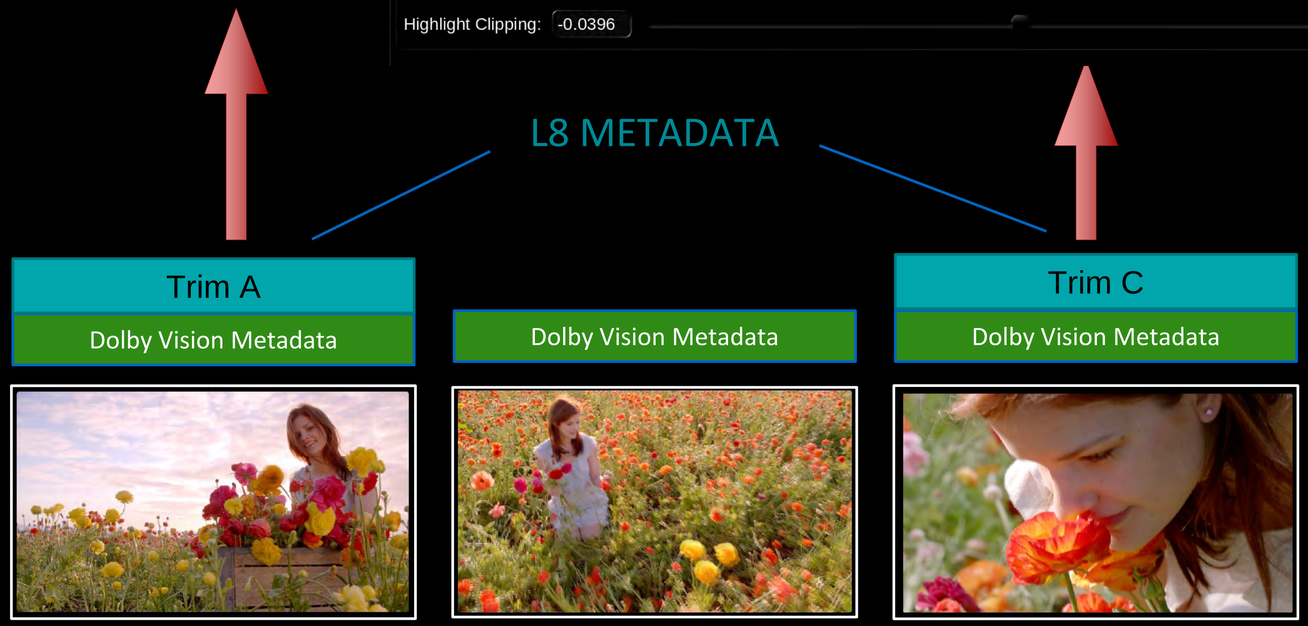
# COLOR GRADING - TRIMS

(HOME Anchor Trim)

## 100 NIT TRIM PASS ‘SDR’



## L8 METADATA



# ‘HOME’

## COLOR GRADING - TRIMS

(6-Vector)

(HOME Anchor Trim)

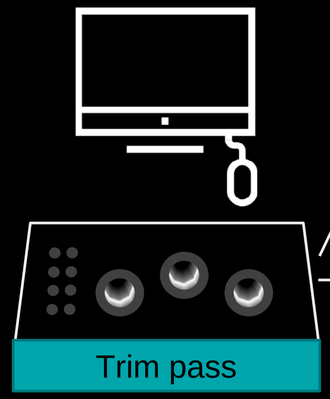
100 NIT TRIM PASS
‘SDR’

SDR

**100 Nit**
**REC 709**

SDR Monitor

iCMU




Color Grading System

HDR

HDR
Mastering Monitor

L8 METADATA

Trim A

Dolby Vision Metadata

Dolby Vision Metadata

Trim C

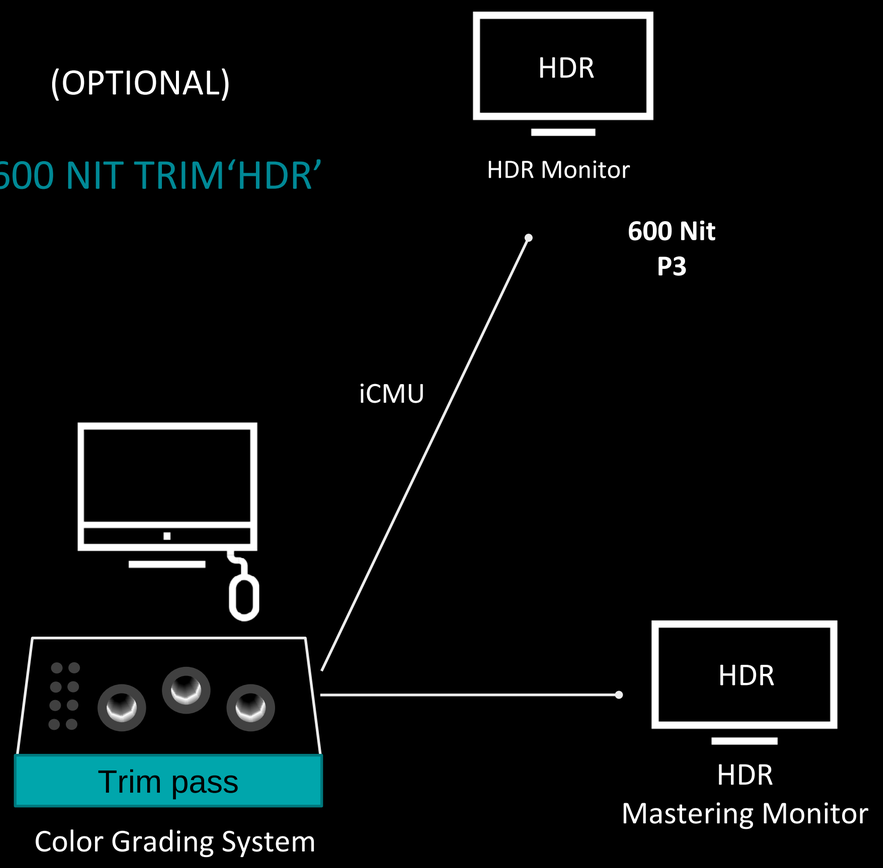
Dolby Vision Metadata

# COLOR GRADING - TRIMS

## ‘HOME’

(OPTIONAL)

600 NIT TRIM‘HDR’



Trim D Interpolated Interpolated Trim E

Dolby Vision Metadata

Dolby Vision Metadata

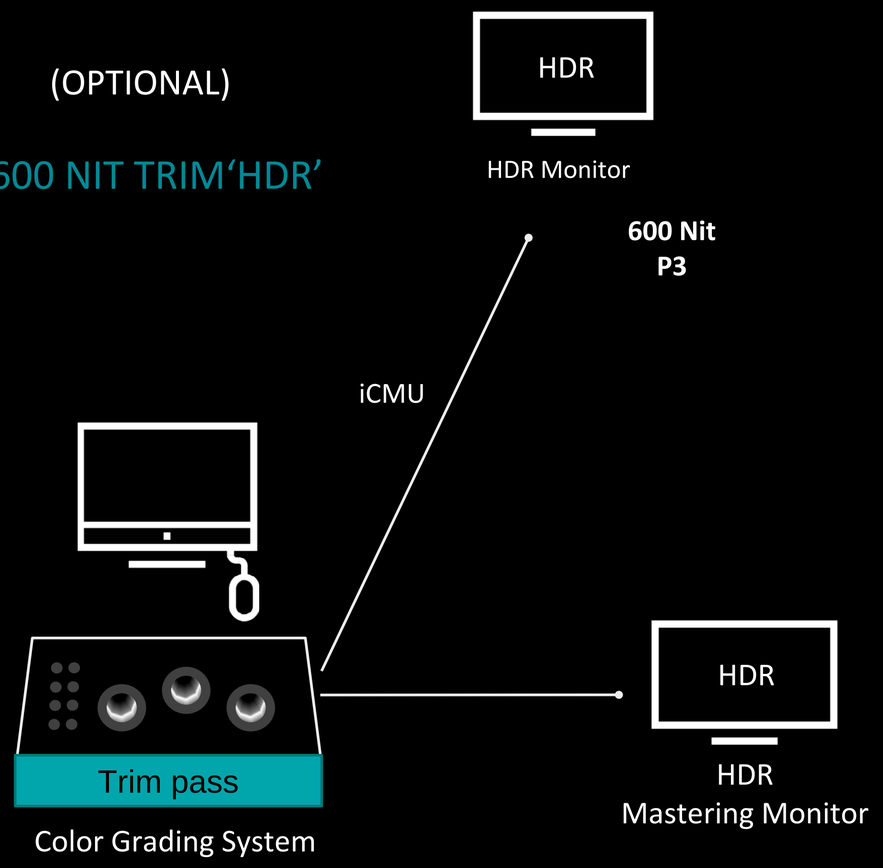
Dolby Vision Metadata

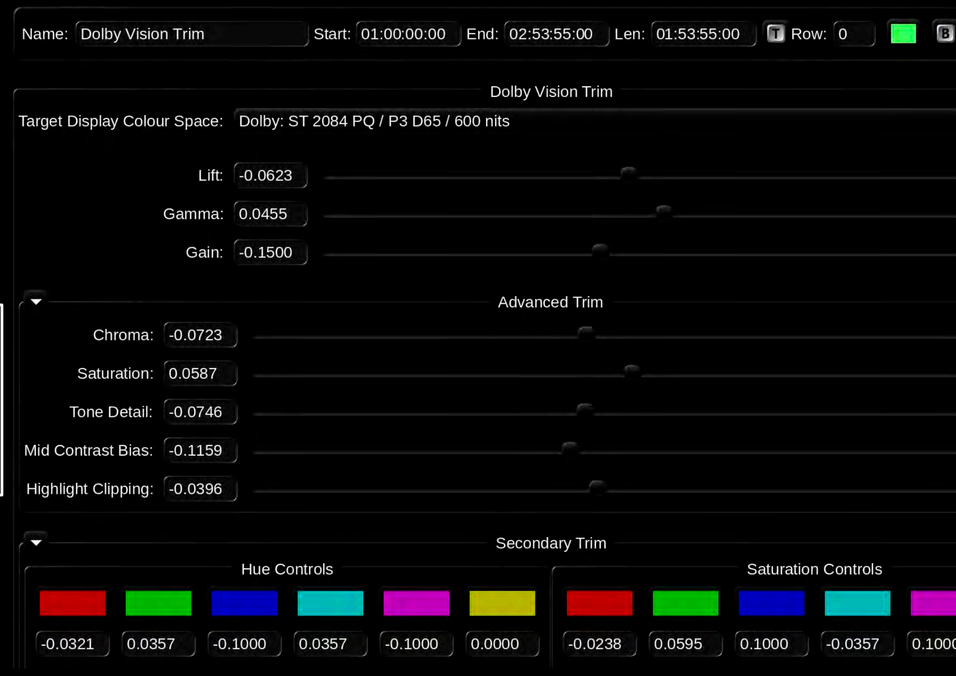
# ‘HOME’

# COLOR GRADING - TRIMS

(OPTIONAL)

## 600 NIT TRIM‘HDR’



Trim D Interpolated Trim D Interpolated Trim E

Dolby Vision Metadata | Dolby Vision Metadata | Dolby Vision Metadata

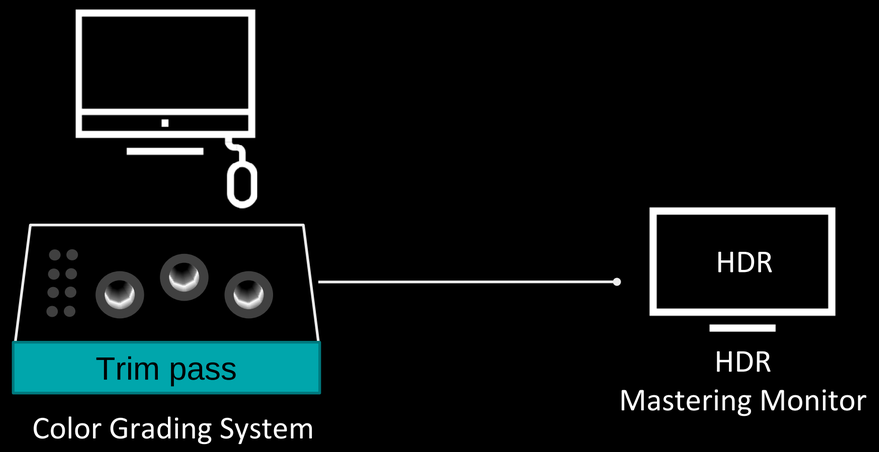
‘HOME’

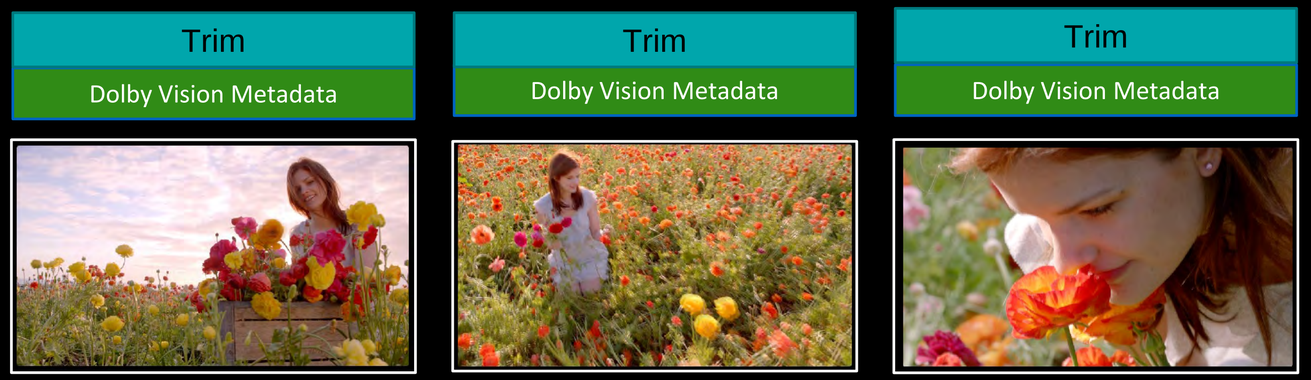
# COLOR GRADING WORKFLOW

Dolby Vision

(Finished HOME Master)

L1 + L8 METADATA



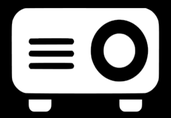



# COLOR GRADING WORKFLOW

## ‘CINEMA’

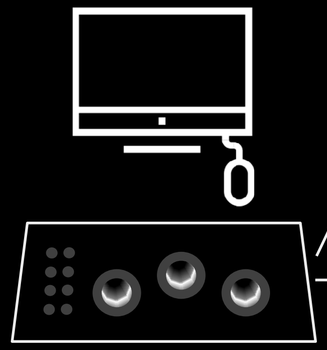
NEW

48 NIT (DCI)
CINEMA PROJECTOR



**48 Nit**
**DCI or P3**

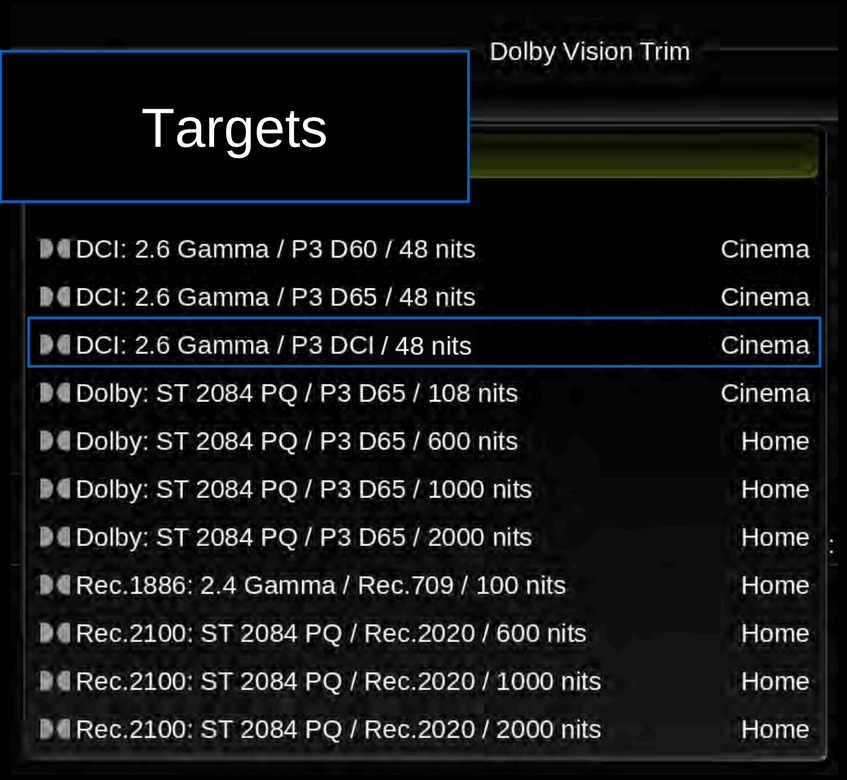
iCMU



Color Grading System

HDR
Mastering Monitor

## Targets




Dolby Vision Metadata

Dolby Vision Metadata

Dolby Vision Metadata

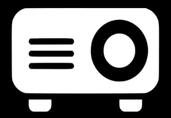
# COLOR GRADING WORKFLOW

## ‘CINEMA’

NEW

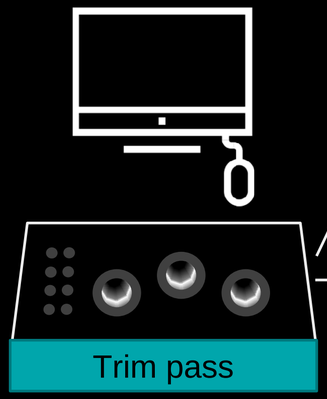
(CINEMA Anchor Trim)

48 NIT (DCI)
CINEMA PROJECTOR



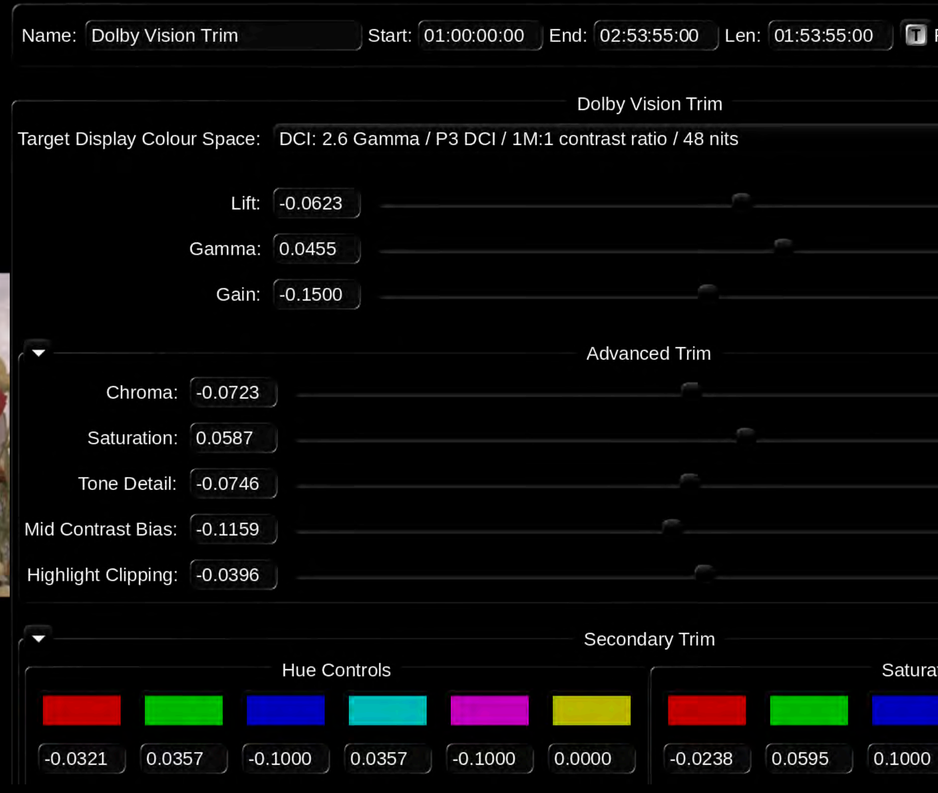
48 Nit
DCI

iCMU




Color Grading System

HDR
Mastering Monitor




| Trim J | Trim J | Trim K |
|---|---|---|
| Dolby Vision Metadata | Dolby Vision Metadata | Dolby Vision Metadata |

# COLOR GRADING WORKFLOW

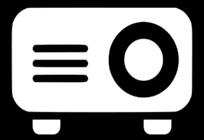
## ‘CINEMA’

NEW

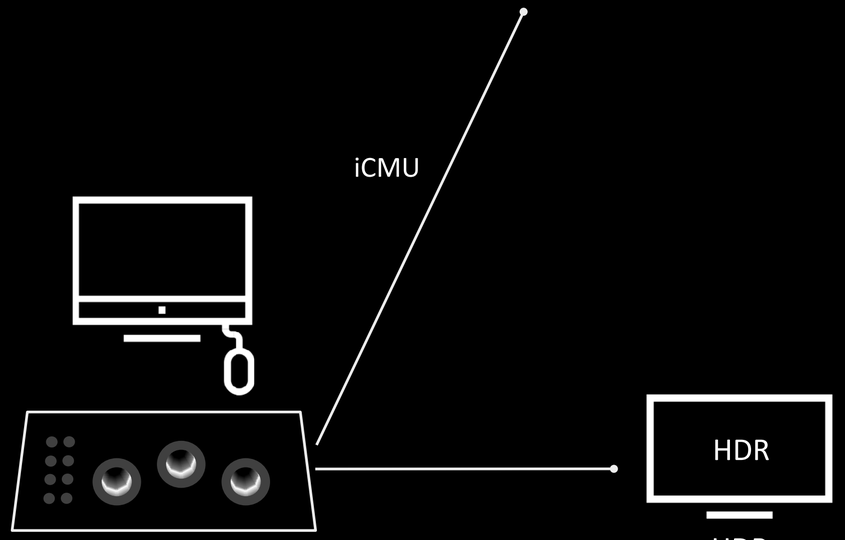
(OPTIONAL)

108 NIT DOLBY CINEMA HDR

Dolby Vision



**108 Nit**
**PQ P3**




## Targets

Trim P — Dolby Vision Metadata

Interpolated

Trim P — Dolby Vision Metadata

Interpolated

Trim P — Dolby Vision Metadata

# COLOR GRADING WORKFLOW

## ‘CINEMA’

NEW

(OPTIONAL)

108 NIT DOLBY CINEMA TRIM PASS

Dolby Vision

108 Nit
PQ P3

iCMU

Trim pass

Color Grading System

HDR

HDR
Mastering Monitor

Trim P — Dolby Vision Metadata

Interpolated

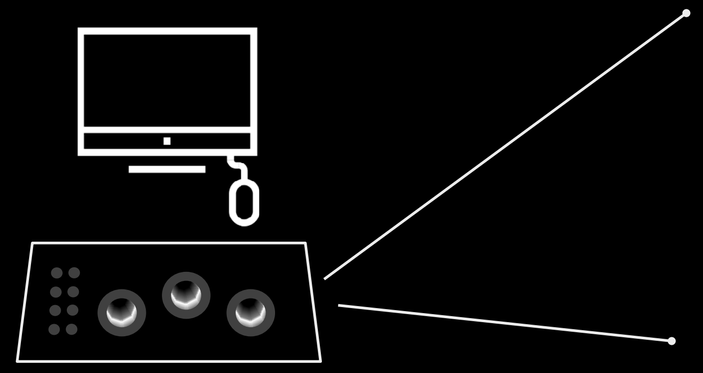
Trim P — Dolby Vision Metadata

Interpolated

Trim P — Dolby Vision Metadata

# COLOR GRADING WORKFLOW

## EXPORT FINISHED MASTER



Color Grading System

**Dolby Vision IMF Mezzanine**

MXF
12 Bit RGB, J2K
+ Metadata

OR

**HDR Pro Res 4444XQ Master**
**Plus sidecar Vision XML**

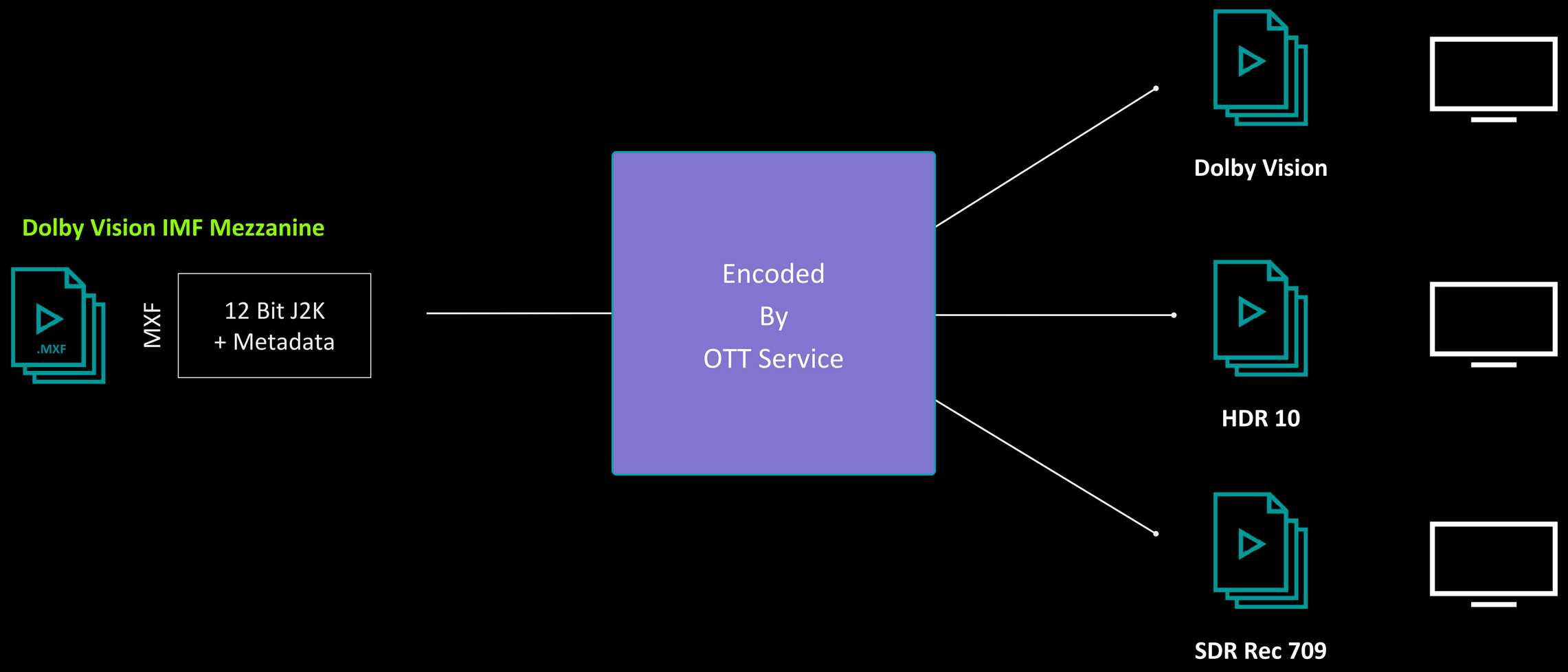
+

Dolby Vision
metadata

Single Master will contain mapping to Home and Cinema Targets

| | |
|---|---|
| HDR Home Master | ✓ |
| SDR Home Master | ✓ |
| SDR Cinema Master | ✓ |
| Dolby Cinema HDR Master | ✓ |

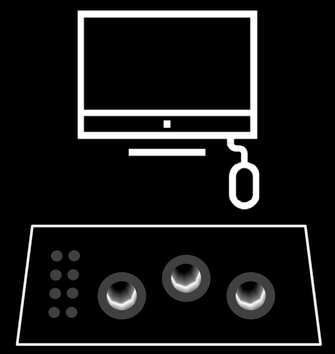
# ENCODE - DELIVERY



# CINEMA - DELIVERY

NEW

RENDER FINISHED CINEMA DELIVERABLES



Color Grading System

**Dolby Vision PQ P3 108 Nit DCDM**

**Dolby Cinema DCP**

**SDR Gamma P3 48 Nit DCDM**

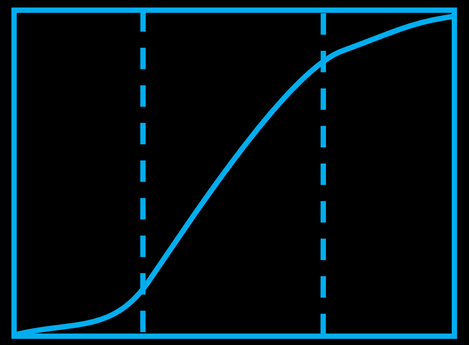
**Standard Cinema DCP**

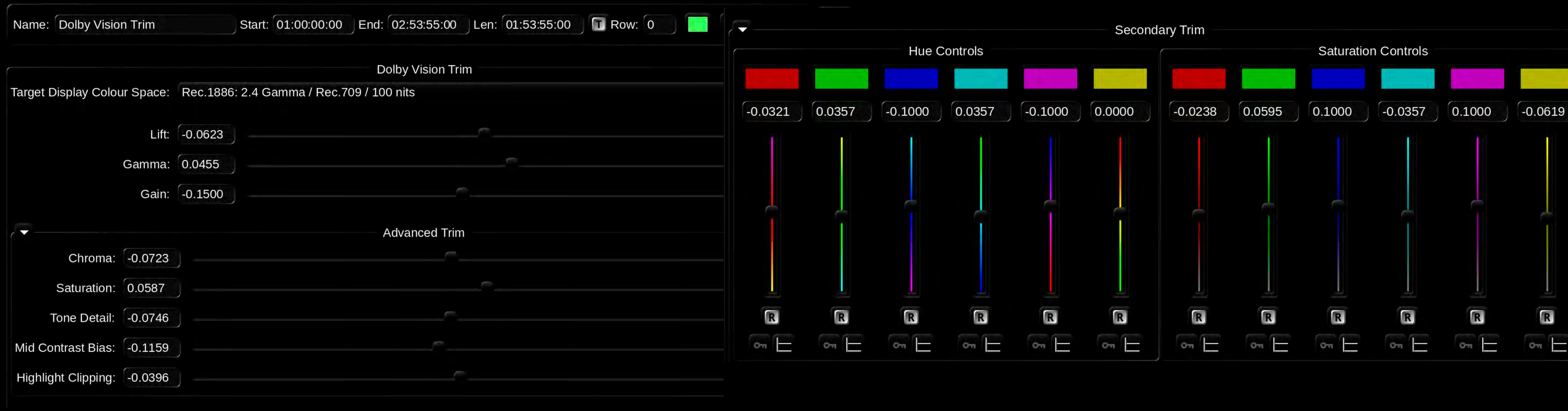
# Dolby Vision CM 4.0

## An expanded Toolset for Creatives = 21 total controls

- Better content mapping starting point
- New controls act more like true 'Lift + Gamma + Gain' -
- Full 6-Vector Hue and Saturation aids in color shift control from P3 or Rec 2020 to Rec 709
- Mid Tone Offset control allows adjustment of L1

**CMv4.0**
***3-Segment***
***Tone Curve***





# Summary

TV Shows requiring theatrical versions have new streamlined and powerful options which may also be relevant for traditional theatrical releases as well

Dolby

HPA TECH RETREAT 2022

# Q&A

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Head of Dolby Vision
Content Enablement

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