

# Look Management Transforms and Show LUTs

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# Agenda

- What is a Show LUT?
- Where does it come from?
- Where does it go?
- How do you make a Show LUT?
- What are the benefits?



# What Is A Show LUT?

- **A single look for the whole show**
  - **NOT** one per camera
  - **NOT** one per scene
  - Some exceptions e.g. day for night and flashbacks
- **Neutral exposure**
  - **CAN** change dynamic range, contrast and color temperature
- **Moderate effect**
  - **NOT** the final look
  - **CAN** be adjusted with CDL
- **HDR compatible**
  - **NOT** display referred
- **Color Managed**



# Where Does It Come From?

- Collaboration between Colorist, DIT and Cinematographer
- Should be generated or checked by Color Scientist or Color Supervisor
- Created either empirically (graded) or analytically (calculated)



# Where Does It Go?

- It is used on set by DP, DIT, Director and Producers
- It is used to check VFX
- It is embedded in the dailies and editorial copies
- It is used in Grading and Finishing, either as part of the grade, or as a guide



# Applications

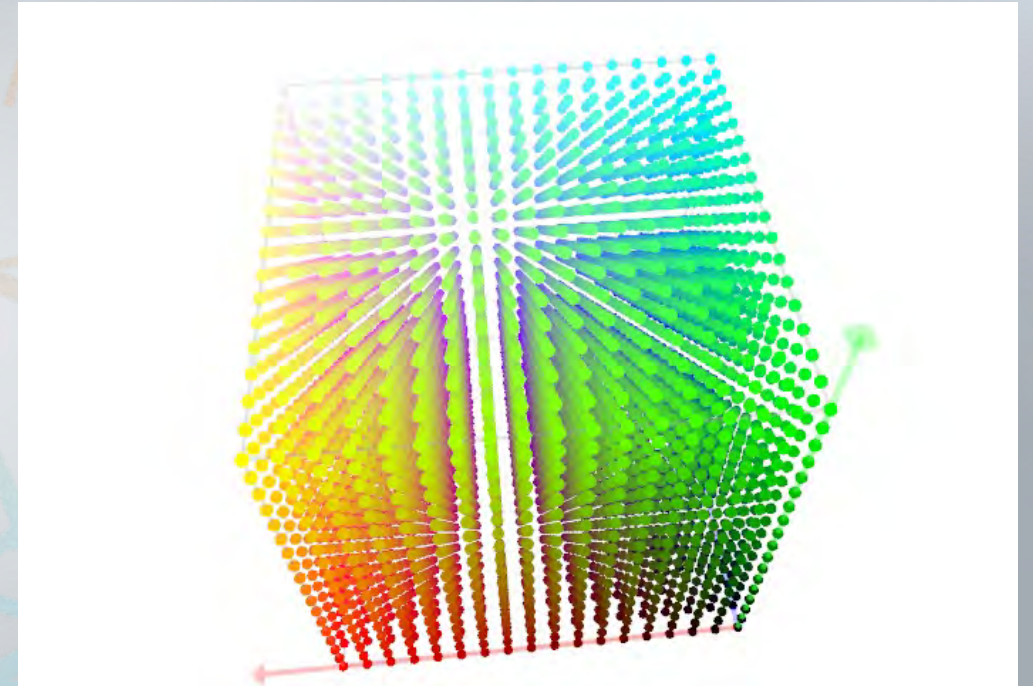
- In Camera specialist files (.aml .art)
- In LUT box concatenated with ODT
- On Set Grading CDL before LMT before ODT
- Post production LMT



# Quality Control

## Main Characteristics To Check

- **Size**
  - 17, 33, or 65 size grids
    - Bigger is better but slower
- **Clipping**
  - Hard clipping or soft limiting
    - Softer is better for judging exposure and lighting
- **Smoothness**
  - Check all possible values
    - Check both camera tests and digital patterns
- **Pipeline**
  - input profile and output profiles must be correct
    - Different cameras need different IDTs



Grid number	Expression	Number of tables	File Size (.cube example)
17 grids	$17^3$	4,913	135KB
33 grids	$33^3$	35,937	983KB
65 grids	$65^3$	274,625	7,510KB



# What Are The Benefits?

- DP can make decisions with the grade in mind
- Everyone sees the media as it was intended
- The look is planned from the start
- It is easier, quicker, and better than unmanaged workflows

“There are four purposes of improvement: easier, better, faster, and cheaper. These four goals appear in the order of priority”

**Shigeo Shingō**  
Japanese Industrial Engineer  
1909-1990



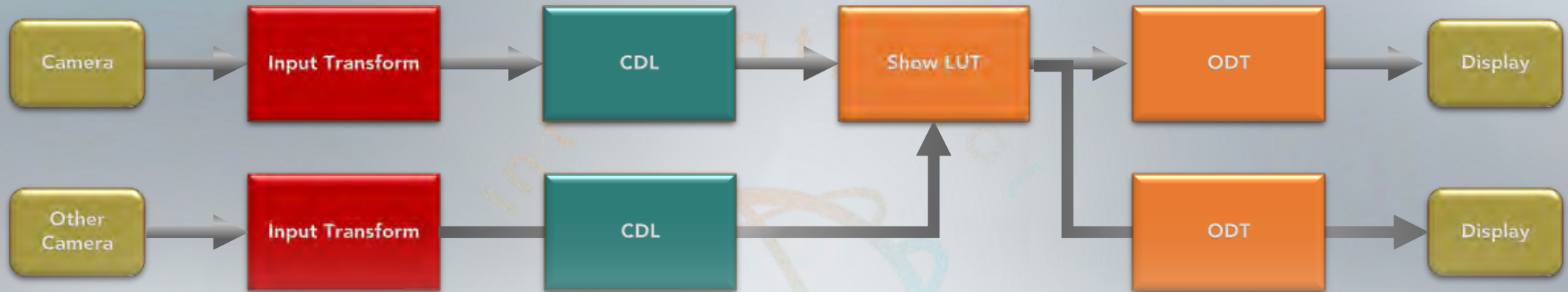
# Legacy Color Managed Pipeline



- Input transforms may not be completely transparent
- Show LUT can only work on a single display
- Less likely to work in final grade
- Display limitations are included in the look and may limit the look



# Color Managed Pipeline



- Suitable for all cameras
- Standard input transforms
- Standard output transforms
- Look is scene referred and independent of camera and display
- Designed to work in final grade
- HDR ready
- Less work
- Highest quality
- Input formatting is source based

# Q & A

## LMTs AND SHOW LUTs

# Thank - You



Presented By

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