



StEM3

Standard Evaluation Material III
- Virtual Production (StEM3-VP)

A project by the
AMERICAN SOCIETY OF CINEMATOGRAPHERS - MOTION IMAGING TECHNOLOGY COUNCIL
Joint Committee on Virtual Production



About the American Society of Cinematographers and the Motion Imaging Technology Council

As the Entertainment Industry adopts rapidly changing production workflows, exhibition, and display technologies, it is vital to have a common standard visual reference material to evaluate those technologies. The goal is to provide material that:

- Everyone in the industry is familiar with
- Is freely and readily available
- Is well-documented regarding the process of creating the material and its intended technical exploitations

The Purpose of StEM



- ▶ Because of new developments in game engines and large LED volumes, in-camera visual effects (ICVFX) has become a common form of virtual production used by cinematographers.
- ▶ Yet there was no Standard Evaluation Material for ICVFX available to filmmakers - until now.
- ▶ **StEM3-VP provides:**
 - ▶ **Freely and readily available content to evaluate in-camera visual effects stages**
 - ▶ Reference footage illustrating how to shoot the StEM3 assets.
 - ▶ Behind The Scene material from the shoot

The Purpose of StEM3-VP

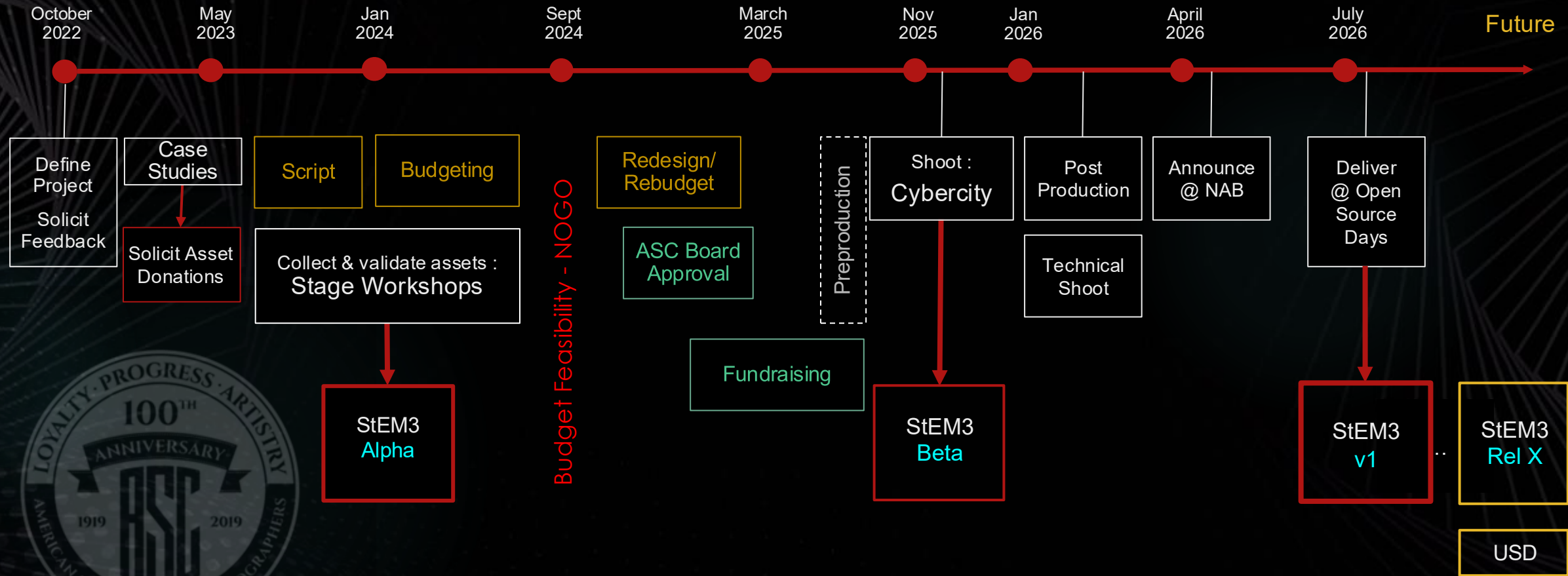


Who StEM3-VP is for

5

- ▶ **Cinematographer**
 - ▶ To evaluate an ICVFX volume and verify it performs as expected in planned color space and range
- ▶ **Production Designer & VFX Supervisor**
 - ▶ To evaluate integration with virtual and physical elements
- ▶ **VAD Artists**
 - ▶ To evaluate and verify alignment and calibration of LED panels with virtual software control
- ▶ **Gaffer**
 - ▶ To evaluate output, dynamic range and color of light from both LED panel & external fixtures
- ▶ **Digital Imaging Technician**
 - ▶ To validate color space integration, video-based playback and camera integration with LED panels
- ▶ **Camera Assistant**
 - ▶ To test and configure camera integration with virtual controls of tracking and focus
- ▶ **Volume Control Artists**
 - ▶ To validate and examine integration of virtual elements, especially prior to VAD delivery.

StEM3 Timeline



THE AMERICAN SOCIETY



OF CINEMATOGRAPHERS

Loyalty • Progress • Artistry

“Warped : Cybercity” & the StEM3 assets
are released on July 19th 2026 on



/* ACADEMY SOFTWARE FOUNDATION



The American Society of...
Cinematographers



Ruby 1.9B V2

The Premium Virtual Production Solution

www.roevisual.com



Subscribe



HOME SOCIETY AMERICAN CINEMATOGRAPHER CLUBHOUSE CONVERSATIONS ASC AWARDS MASTER CLASS ASC+ STORE



[Home](#) » Standard Evaluation Material 3

ASC StEM3 - Standard Evaluation Material 3

STEM3 HOME PAGE

DPEL HOME PAGE



THE AMERICAN SOCIETY



OF CINEMATOGRAPHERS

Loyalty • Progress • Artistry



<https://theasc.com/society/stem3>

StEM3-VP Published Assets

StEM3-VP : suite of assets

12

Includes:

2D elements for evaluation/validation

- ▶ Color, exposure, alignment and focus

3D assets for evaluation/validation

- ▶ Scene reference
 - ▶ Day, night, interior, exterior
 - ▶ Dynamic lighting for image-based lighting

Reference footage utilizing the included assets

Shoot in HDR using ACES

Lookbook available upon request

MovieLabs Ontology for Media Creation (OMC)

The Outcome of StEM3-VP



Content donated to StEM3:

13

- Epic Games Interior Saloon
- Craftology (ICVR) Forest and Cybercity scenes
- Mels Studio Montreal backalley and subway scenes
- Nant Studios Himalaya Base Camp scene
- Spheris Array Los Angeles Driving plate
- Vū Studios Lightning bolt video
- Tim Kang Color Checker stills



StEM3: Forest



StEM3: Base Camp



Espace client

- Espace client
- Espace client
- Espace client
- Espace client
- Espace client
- Espace client

stm

StEM3: Subway Station



STEM3: Back Alley



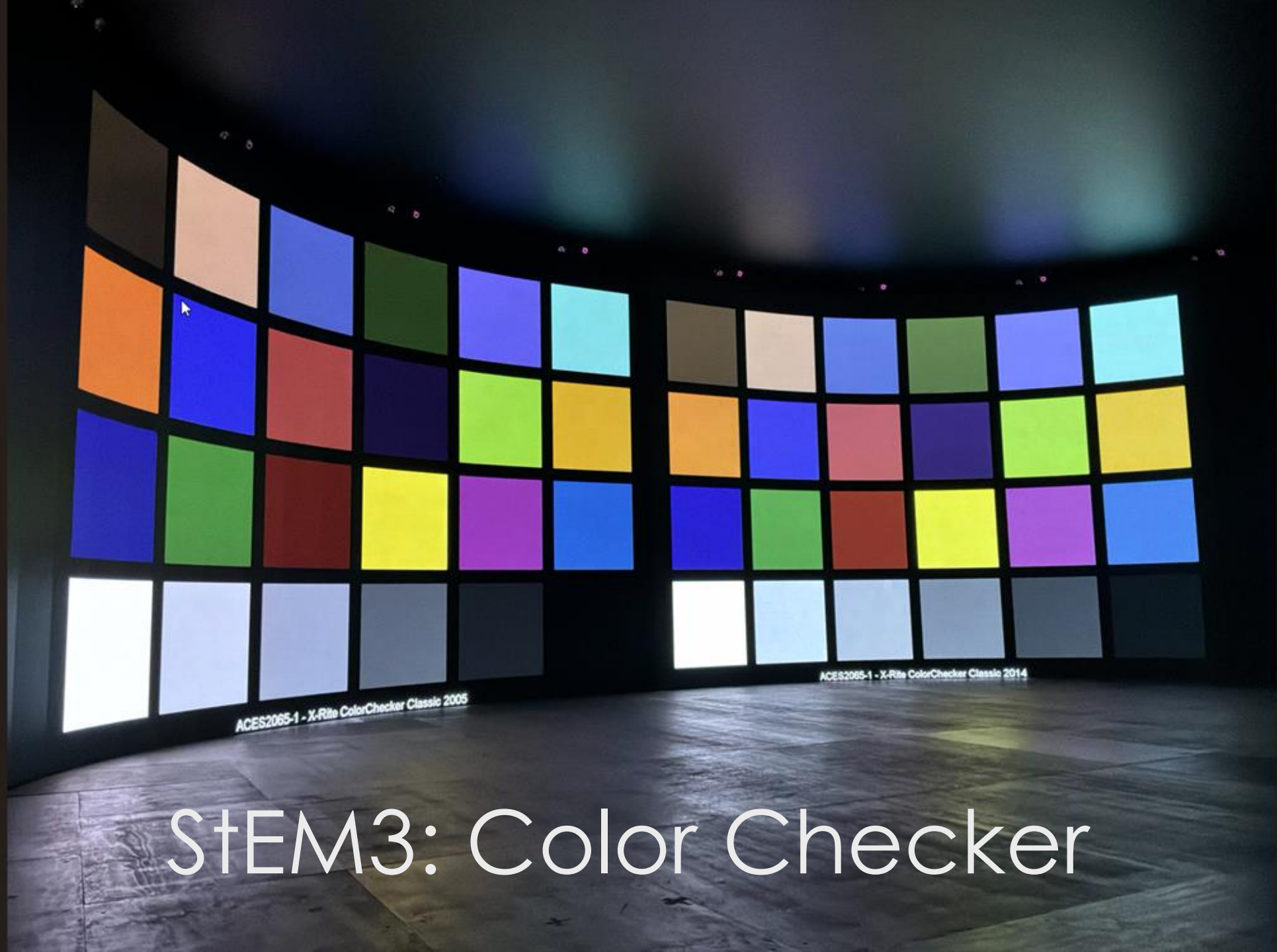
StEM3: Saloon

A street-level view of a city at dusk. On the right, a large, modern building with a glass facade reflects the golden light of the setting sun. To its left is a tall, white, rectangular building. The street is filled with traffic, including a large white bus in the foreground, a dark van, and a white pickup truck. The sky is a mix of blue and orange. The text "StEM3: Driving Plate" is overlaid at the bottom.

StEM3: Driving Plate



StEM3: Lightning



StEM3: Color Checker

Featuring:

“Warped : Cybercity”

A short sequence demonstrating the use of the StEM3 Cybercity asset

StEM3-VP

“Warped: Cybercity” Production Stills









StEM3-VP

“Warped: Cybercity”
Behind The Scenes Intro

StEM3-VP

“Warped: Cybercity”



MELS



SONY



Vū





Thank you!

AMERICAN SOCIETY OF CINEMATOGRAPHERS - MOTION IMAGING TECHNOLOGY COUNCIL

Joint Committee on Virtual Production - StEM3-VP project