

BEYOND THE GREEN SCREEN: VIRTUAL PROJECTION'S REVIVAL IN MODERN VFX WORKFLOWS

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Chris Barnett – Virtual Projection Visionary, Christie

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What are we Solving:

"For storytellers to maintain precise creative control over their characters and scenes within emerging AI-driven workflows, strong visual references are essential. AI still struggles with complex compositing challenges—particularly water, transparency, and other refractive materials—where traditional workflows continue to require refinement.

Our solution is engineered to integrate directly into the existing VFX pipeline, providing higher-fidelity reference acquisition, controlled projection environments, and predictable lighting data that help stabilize compositing workflows and improve downstream render consistency".



Chris Barnett, Virtual Projection Visionary



Why Paramount Studio 3:

"Inspired by visionaries like Jim Cameron, Paul Debevec, Max von Braun, and the pioneers who shaped virtual production, Christie's Virtual Projection Solution unlocks exponentially greater light on Stage 3 bringing true photometric performance directly into the lens. The result is expanded creative latitude, natural in-camera realism, and a scalable, sustainable production workflow built for the future of broadcast and film".



Craig Weiss, Executive Creative Director CBS VFX

Why This Matters Now:

01

Rise of in-camera VFX studios driven by cost reduction yet need for greater creativity.

02

Known LED volume limitations (cost, scale, uniformity, refresh, moiré)

03

Need for scalable, cinematic high frame rate projection-based alternatives

04

Broadcast + Cinematic demand for agile stage solutions at a greater ROI with greater creativity .

This is not “projection vs LED.” It’s about expanding the virtual production toolkit

The road to CBS VFX partnership:

October 2024

First announcement of Virtual Projection as a Solution. HUB Montreal Event

July 2025

Christie and CBS VFX / Paramount enter a partnership to develop and test for efficiencies.

February 2026

Christie and CBS with integration partners build out Stage-3 as designed and tested as CBS begins testing on live production sets.

April 2025

First live demonstration with talent during JB&A Pre-NAB Show.

Aug - December 2025

Christie and CBS VFX open Stage 3 to validate broadcast cameras, blending, alignment while designing the projection and CarbonBlack screen wall layout.

April 2026

Stage 3 scheduled to capacity for CBS / Paramount productions.



STAGE
3

The Vision: Stage 3 Powered By Christie

- › 100' w x 24' h CarbonBlack screen wall required
- › Broadcast-grade P3 color fidelity
- › Camera-tracking compatibility
- › Direct focus on the screen images
- › Stage flexibility for episodic production
- › Uniformity and Zero moiré
- › Stylized and flexible environments
- › Process Plates / Render images & Car process
- › Sync Projection, media server and camera/s
- › Capture final pixel ICVFX

CBS VFX & Christie, a true collaboration:

01

Shared Objectives:

Final pixel quality with renewed creative agility within a disciplined budget.



02

Mutual Validation:

Legacy VFX processes, audio signature, heat signature, and all camera gear have all been validated.

03

VFX Requirements:

Multiple realities within one take utilizing "Unseen Light" embedded within the projected reference 60 fps image.

IE: Ghost Framming as know in LED).

04

Broadcast + Cinematic Standards

Christie Sapphire @ 480fps
Have achieved 24 fps (23.976 fps),
29.97 fps (59.94i / 59.94p) & 23.976
fps.



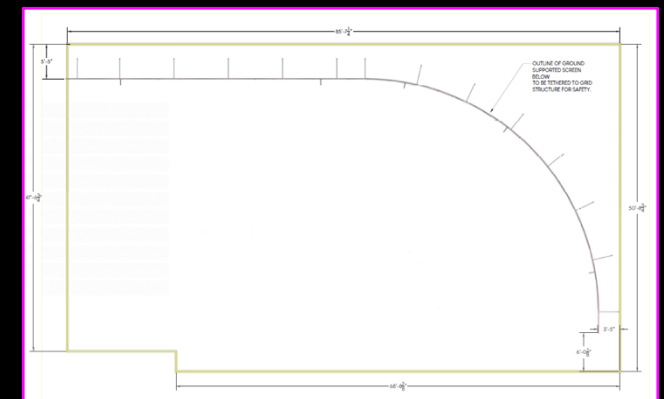
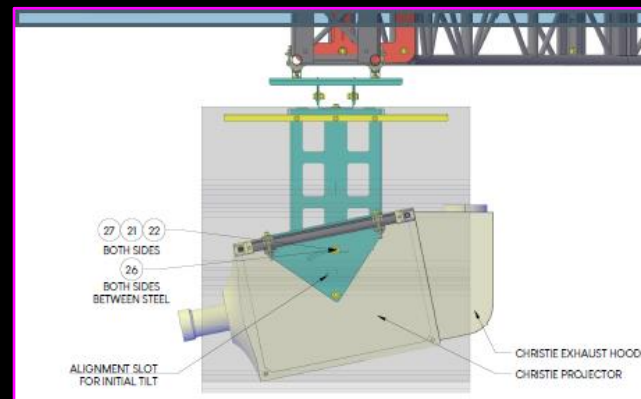
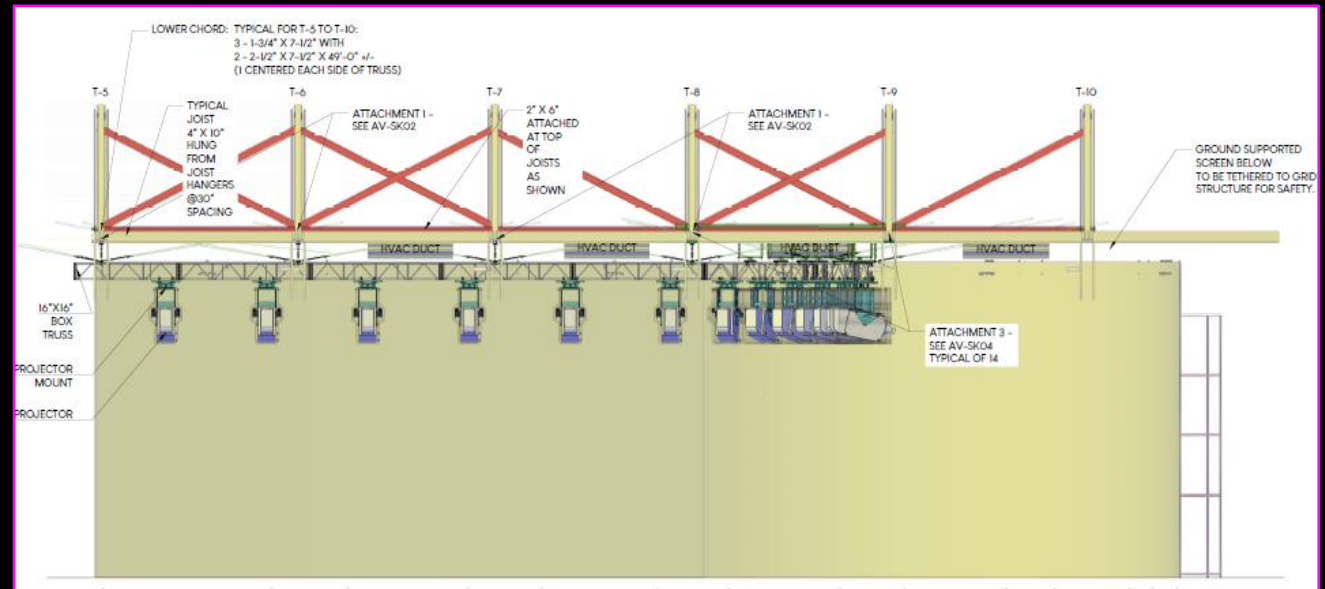
Core Technical Architecture

•14x Christie Sapphire (RGB/H) Projectors

- True pixel blending at massive scale
- High dynamic range optimization
- Serviceability + modular scaling
- Lower long-term operational cost curve
- High Frame Rate Firmware
- Mystique auto-calibration & blending

•CarbonBlack Hybrid Screen Wall

- Full Exposure Performance
- Camera-Optimized Imaging
- 180° Viewing & Projection Flexibility
- Large-Format Scalability
- Studio-Validated Precision
- Moiré Suppression Geometry



THANK YOU

SEE YOU IN MAY @ STAGE 3 DEMO/EVENT

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Q&A