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2011

The Convergence of Finishing and Color Grading in Commercial Post

The purpose of this paper is to help artists and owners better prepare their facilities for a converged services model that combines color grading and visual effects as the new approach to high-end finishing.

In commercial post, color grading is finding its way into the supervised finishing suite turning the traditional workflow for high-end commercial post on its head. Forward-thinking facilities are building new business models around a converged workflow that takes advantage of this industry shift, and gives VFX artists more creative control.

Overview

Color grading has reached the tipping point of democratization. Contributing factors include the popularity of acquiring content in raw digital formats, increased accessibility to color data in all-data workflows, and the availability of low-cost color grading tools. These trends have created a demand for grading at all levels of post-production and have eroded the value of specialized color grading services in high-end finishing.

While color grading remains an important component of commercial post-production, today's advertising clients are challenging post-production facilities to streamline processes and save costs, while still delivering superior finished results. A natural solution has surfaced: bringing real-time color grading into the finishing suite alongside 3D visual effects. This new single process gives small- to mid-size facilities the opportunity to attract and retain clients with professional color grading services, and provides finishing artists with more creative control over color, lighting, and 3D compositing.

"A converged color and visual effects pipeline is like adding a new department to your company."

Tim Crean | Lead VFX Artist/VFX Supervisor | SUSPECT

To meet client expectations in high-end commercial post, facilities depend on skilled finishing artists. These artists have broad ranging creative skills, many of which lend themselves to, or include, color grading. Color and light are already core to creating believable 3D compositing toolset, and adding professional tools for real-time color grading provides skilled artists with more creative freedom via access to a wider array of tools to meet their clients' creative and financial needs.

The convergence of 3D visual effects and color grading is a pivotal moment for the commercial post-production industry. Many facilities that hesitated during the move from linear to nonlinear editing or from analog (film) to digital/video lost ground to competitors who embraced the change. Facilities that adopt a converged model while maintaining a high level of service will remain competitive and those that ignore the trend may find themselves behind the revenue curve.

Market Dynamics

Advertising revenue is expected to stay flat, with more budget share shifting from television to online.¹ While agencies and clients still value high-quality finishing, they are challenging trusted post-production facilities for cost-effective, expeditious ways to manage the entire scope of complex projects. One obvious area under question when cost-savings becomes the central discussion is the expense of traditional finishing workflows where color grading and visual effects finishing are performed in multiple facilities or by multiple artists.

While hardware-based telecine transfer still plays a part in film post, it is no longer a requirement before finishing begins in data-centric workflows. Today, all-data workflows are commonplace, with artists accessing native source files at nearly every stage of post-production. Led by rapid growth and adoption of digital acquisition formats like ARRI and RED[®], modern finishing workflows allow for color grading throughout the finishing process, and many visual effects artists are finding that they can use professional color tools to complement their standard finishing toolset.

In parallel, a range of low-cost color grading solutions and software plug-ins have flooded the market, each with varying degrees of functionality. While none match the performance of high-end professional grading tools, these solutions have driven awareness and demand for color work at all levels of post-production, including commercial post. These lower-cost tools have played a substantial role in eroding the value of traditional color grading services—so much so that facilities may find they can no longer charge premium rates for specialized color services.

These economic, technological, and creative trends have had a net effect on per-project revenue potential, contributing to an industry-wide shift from per-hour to per-project billing models. Smart facilities have always recognized that to stay competitive, they must offer a different model: end-to-end services that satisfy their clients' demand for high-quality finished results on lower budgets.

“...budgets are shrinking and everyone is trying to get more for their buck. There are efficiencies to doing everything here — editing, design, color correction, online, and now production — all the while keeping projects at a level everyone expects. Although budgets are leaner, it's still about delivering quality and service.”²

Progressive post-production facilities turn challenges into opportunities. Adopting a converged workflow that combines color grading and visual effects in the same suite is a

¹ Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

² Gretchen Praeger, <http://www.postmagazine.com/Publications/Post-Magazine/2010/May-1-2010/THE-CHANGING-BUSINESS-OF-POST.aspx>

new business model for high-end finishing that can produce significant benefits. Facilities can:

- Broadly market end-to-end services to attract projects that include color grading
- Add dedicated tools for color manipulation that help artists better integrate complex composites
- Maintain control of all creative aspects throughout the finishing process
- Optimize the use of suites, increasing their flexibility to offer more services
- Deepen their relationship with existing visual effects and finishing clients, and establish their reputation with services that include color

The Traditional Workflow

The traditional high-end commercial workflow is a fundamentally linear process where teams work independently. Any last-minute changes introduce complexity, challenge consistency, and put on-time project completion at risk.

Colorists play a vital role in traditional commercial workflows, managing the transfer of film to tape or digital format as well as performing the actual color grading to balance, correct, or improve the shots. During this phase, the mood, tone, and atmosphere—the look and feel of the commercial—is carefully developed with the client in independent sessions in a costly color suite. Once the look is developed, it is applied across the shots or scene for consistency and continuity. While this highly creative process carries benefits, changes made after the look is developed can be expensive and time-intensive.

For the client, separate, independent color and finishing sessions with different artists in different facilities equate to additional time and expense. Transferring results from a color facility to a commercial post house takes time, and creative changes downstream can trigger another layer of cost and complexity if additional grading is required. The traditional approach of separating color from visual effects creation does not lend itself to optimal efficiency or creativity in a market that demands increasingly complex visual effects, tighter deadlines and smaller budgets.

For example, a finishing artist is working on a commercial that combines practical production footage and CG content. The visual effects artist and colorist work independently, transferring files, often between physical locations, before conform for finishing. Much of the VFX artist's time can be spent integrating multiple color passes or using color tools to match or blend elements due to the demands of the composite. If significant changes to color are required once visual effects work has begun—or composites that include CG content require color correction—work must halt while the project is sent back to the grading suite. When the visual effects artist and colorist also work on disparate systems with differing metadata and project structures, the process becomes inherently inefficient as file systems, metadata, and project structures cannot be shared or are incompatible. Visual effects work already completed may have to be thrown out or redone once newly graded material is available.

The Converged Workflow

In a converged commercial workflow, color grading and visual effects occur in a single suite, on one system, and often by the same finishing artist. In high-end commercial post, access to professional color tools is essential. The use of color and light is as important as traditional compositing (keying, camera tracking, stabilizing, and paint) in the creation of a seamless composite. CG content and practical footage (often shot in various locations) often require these tools to match the background and foreground elements and blend content into a realistic final result. In the converged workflow, finishing artists will work with both real-time color grading and 3D visual effects tools using a uniform set of data, thus reducing inconsistencies and data management. Changes can be absorbed in one coherent environment, allowing more time and flexibility for creative experimentation.

Working with raw image data up until final output poses a breakthrough for high-end creative finishing. In the converged workflow, color grading is not just pixel manipulation or color management, but the ability to craft, shape and form the tone, attitude, or personality of a commercial. Artists have deep access to color data throughout post production for effects such as lighting, 3D compositing and look development. The result is a more empowered artist, total control in finishing, and the ability to offer more services.

“By adopting a converged color and visual effects workflow, we can keep the entire project in our shop, and have complete creative control from ingest to finishing.”

Chris Hengeveld | Smoke artist | northern lights

The converged workflow brings many advantages over a traditional workflow:

- Finishing artists can now access the original source material directly and perform real-time color adjustments with the client in an interactive session to achieve the desired effect and overall look of the spot simultaneously.
- Time and effort spent managing complex render paths or re-conforming to graded media in visual effects is greatly reduced due to a more cohesive and precise environment.
- Changes to color or using color tools to create more effective composites no longer risks breaking the creative flow in the finishing suite.
- Changes can be introduced with less fear because all the tools—and the talent—can be applied to the task at hand in hybrid finishing suites.
- Projects can be completed more quickly and efficiently because consistency, quality, and continuity are preserved throughout the workflow, from digital acquisition and transfer to delivery of master files.

Finishing—Redefined

The convergence of color grading and 3D visual effects can help facilities reestablish a premium value with high-end finishing services. Facilities quick to converge visual effects and color services will find themselves in high demand because they cover more end-to-end services, satisfying color and finishing requests from existing and new clients. Commercial post-production facilities bringing color services in-house can control more of the project, secure more of the client's budget, and work more directly with clients.

While economic and technological forces are triggering this industry change, next-gen finishing artists are also pushing creative boundaries and redefining high-end finishing. Already well versed in 3D compositing, 3D visual effects, 3D tracking and color warping, color correction and color management, these visual effects and finishing artists will embrace real-time color grading tools and become even more of a valued resource.

Clients also directly benefit from this new form of high-end finishing. More creative experimentation deeper into finishing, faster completion times, fewer points of contact, and direct artistic involvement in look development are the immediate gains achieved when color grading and visual effects converge to form a modern post-production workflow.

Summary

By embracing a converged workflow, owners and artists can reap several benefits:

- Small to mid-size facilities can expand their in-suite offerings with end-to-end finishing services, from look creation to 3D visual effects
- Finishing artists can use powerful real-time color tools in concert with 3D visual effects for breakthroughs in creative expression and control in complex composites
- Facilities can take on new work and manage more of each project for greater budget share
- Facilities become more efficient through reduced file transfers, less duplication of media, and better interoperability without impacting creative output

Commercial post-production facilities strive for differentiation by offering high-value services and creative results. Facilities who embrace the concept of a converged color grading and 3D visual effects workflow will maintain and grow their client base, keep their artists creatively stimulated, lower overall costs, and increase production efficiency.

The convergence of color grading and visual effects represents a pivotal moment in the commercial post-production industry where the innovators can once again take a significant leap.

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