COLORS YOU CAN BANK ON
How the new HP DreamColor LP2480zx Display Masters the Power of Color
Accurately and Cost-effectively throughout the DCC Workflow
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While DreamWorks animators were busy turning out one animated feature after another—including blockbusters like "Bee Movie," "Shark Tale," "Madagascar," and the "Shrek" series—their IT team was busy trying to head-off a looming crisis that threatened to slow down production.

They were preoccupied with buying all the old, used CRT monitors they could find, and warehousing them for future use because—even though this 100 year old technology was disappearing—CRTs were still the only cost-effective way to display colors accurately and consistently throughout their CG animation pipeline.

Unless they wanted to shell out $25,000 or more for a color-critical LCD flat panel display, DreamWorks had no viable alternatives to CRTs because lower-cost desktop LCD flat-panels simply couldn't represent colors predictably or consistently from one screen or proof to another.

Since accurate color representation is critical to the digital storytelling process, DreamWorks was facing the prospect of time-consuming production bottlenecks as CRT supplies dwindled; or skyrocketing capital costs if they bought $25,000 color-critical LCD flat panels—neither of which was an acceptable outcome.

Seeking Accurate, Affordable Color
"Being able to use color to accentuate and impact viewers' emotions and drive story points is an important part of making animated films," said Ed Leonard, chief technology officer for DreamWorks Animation, in Glendale, CA. "With the industry's shift from CRT monitors to LCD flat panel displays, a new level of quality and consistency needed to be achieved."

So 18 months ago, Ed Leonard and DreamWorks Animation CEO Jeffrey Katzenberg sat down with executives at HP and described their dilemma in the hopes that a breakthrough solution could be found before time and options ran out. HP was a natural place to turn since DreamWorks Animation—which uses over 400 HP workstations in its moviemaking—was already in a collaborative technology partnership with HP and serving as a test bed for many HP solutions.

This collaboration was broadened into an arrangement called the HP DreamColor Technology initiative. The first result of this initiative was the release in March 2007 of printers that incorporate the DreamColor technology.

Then in June 2008, the DreamColor product family expanded with the new HP DreamColor LP2480zx Display—the world's first affordable 24-inch diagonal LCD flat-panel display for accurate 30-bit, billion-color display at a 1000:1 contrast ratio. The display features a 30-bit LCD panel, tri-color (red-green-blue) LED backlight, and DreamColor Engine technologies for repeatable color performance on both the Mac and PC.

New Price Performance Benchmark
"At $3499 per LCD flat panel display, we're going to democratize this technology and make it accessible to a wide range of media creation organizations," said Jim Zafarana, vice president of product development for HP.

"The HP DreamColor display shakes up the economics of digital content creation by putting the cost of accurate, consistent color display within reach of large facilities, such as DreamWorks Animation, as well as small to mid-sized companies of graphics designers, game developers, editors, effects artists, and other digital content creation professionals," Zafarana added.

The HP DreamColor display is also unique in that it adheres to industry standard color spaces, such as Adobe RGB, sRGB, Rec. 709, Rec. 601, and DCI-P3 emulation, all of which are regularly used in the graphics arts, prepress, and printing applications. This means that customers can control color nuances such as gamut, gamma, white-point, black levels, and luminance.

"For penny pinchers, this display will give you significant savings of both time and money.   If you're working on digital imagery that's very color sensitive, like a soda can or product packaging, you'll be able to get the correct color faster than you would by guessing on an old style monitor, or by constantly stopping to do color checks, " said Mark Lewis, president of Studio 121 in Loveland, CO. Studio 121 provides digital photography and prepress services for commercial photographers, graphics designers, and artists.

"With the DreamColor monitor, I'm now able to see the full range of colors in the Adobe RGB color space as never before, and producing much faster," said Lewis. "And what I see on my monitor, I know I'm going to see on my prints."

Boosting Productivity across Workflows
The accurate yet affordable color-critical DreamColor LCD display can also have a profound impact on today's DCC workflows by saving considerable time that used to be spent calibrating CRTs, compulsively checking and double-checking colors, redoing prototypes, and repeating proof cycles.

An optional HP DreamColor Advanced Profiling Solution (APS) kit is available for calibrating and profiling the HP DreamColor LP2480zx display from one device to

another, as well as for validating and optimizing International Color Consortium (ICC) profiles. In this way, geographically dispersed facilities and their clients can be assured of seeing the same exact colors regardless of which HP DreamColor display they are using.

Since DreamColor Technologies support workflows from concept to production, HP Designjet Z printers include a spectrophotometer for printer calibration that ensures color predictability and precision between HP Designjet Z printers and their prints. Used in tandem, HP DreamColor technologies streamline workflows, reduce design times, and increase quality while lowering development and production costs.

Today, DreamWorks Animation is no longer stockpiling CRT monitors or following a rigorous recalibration schedule to correct for CRT color drift. With HP DreamColor displays now dotting its entire workflow, DreamWorks is now able to maintain color fidelity throughout the production of its full-length animated features. The first DreamWorks feature to benefit from the arrival of the HP DreamColor display is "Kung Fu Panda."

"This new HP DreamColor flat-panel display is going to allow us to expand the range of color we can view at the desktop to encompass the full gamut of what we see everyday in theatres. In evaluating or modifying our movies at any stage of production, we can be confident that everyone is dealing with images displayed in the exact same color space, for better results," said DreamWorks Animator Doug Cooper. "This technology is giving us greater latitude to stay faithful to the artistic vision, and to use color in creative ways to emotionally influence the audience for our films."

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