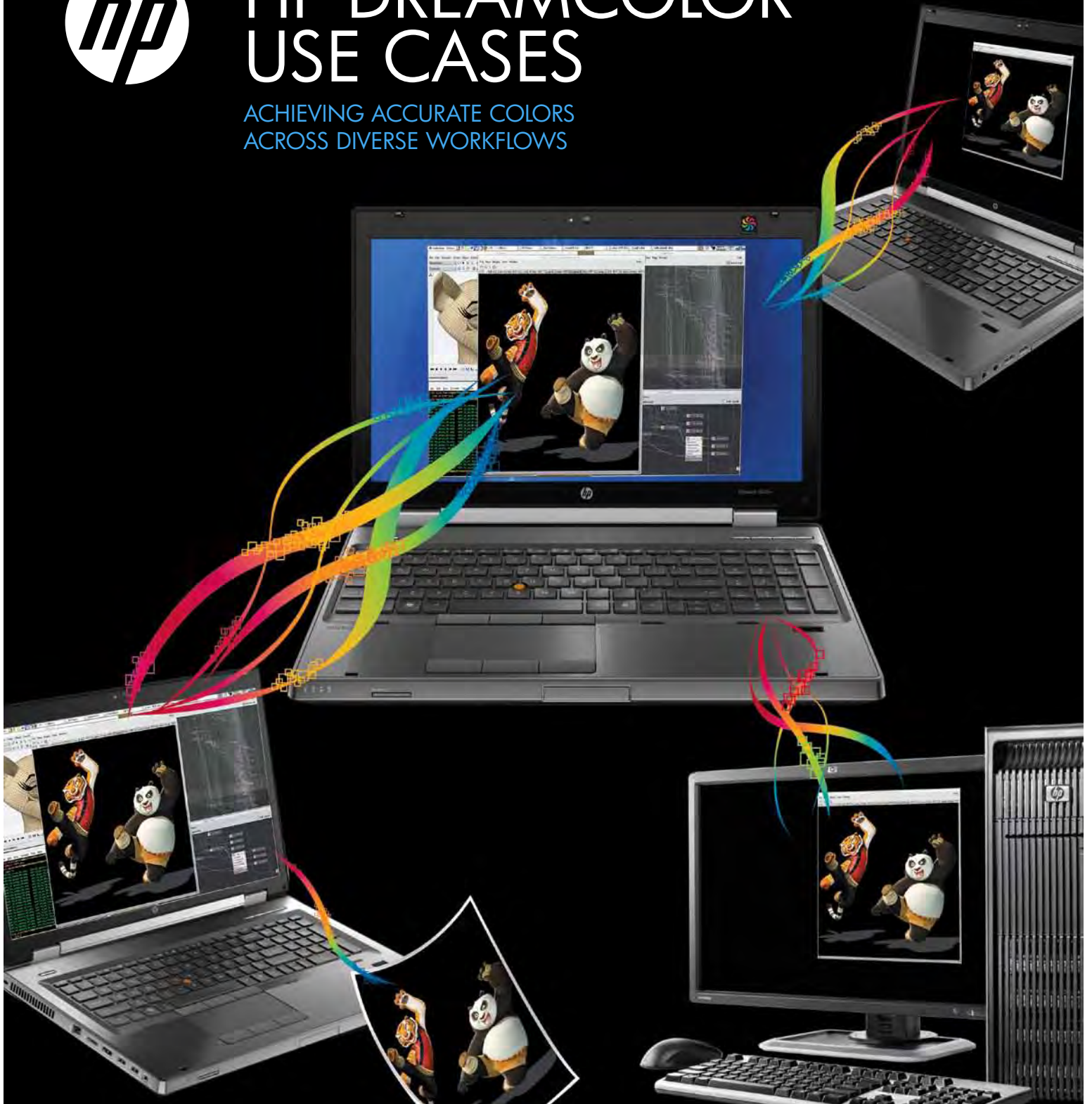# HP DREAMCOLOR USE CASES
USE CASES

ACHIEVING ACCURATE COLORS
ACROSS DIVERSE WORKFLOWS

TECHNOLOGY SPOTLIGHT
HP PROFESSIONAL INNOVATIONS FOR BUSINESS NOTEBOOKS

WHEN COLOR IS EVERYTHING

For creative professionals, consistent color is everything. From game development and animation for video to graphic arts and professional photography, accurate colors are one of the keys to a high-quality final product.

While the goal is clear, maintaining consistent colors can be a challenge. Without the right system in place, colors are likely to appear differently on different displays and be rendered differently on different output devices. What you see on your monitor might be quite different from the colors you see in the final product.

HP DreamColor solves this problem. It's a technology designed to deliver groundbreaking color accuracy and predictability across a wide range of devices. Developed initially for the movie industry, HP DreamColor is now embedded in many HP products. You can find this technology in select displays and mobile workstations (such as the HP EliteBook 8560w and 8760w Mobile Workstations), as well as in professional-grade photo printers and digital presses, including HP Designjet printers, HP Indigo presses and HP Photosmart printers.

While driving accurate, predictable color across the entire digital workflow, HP DreamColor enriches your color palette with more than a billion color possibilities. In addition, it saves you the time of calibrating colors on your screen and the trouble of redoing a color match. And—most of all—it gives you the confidence that the colors you see on your display will be accurately reflected in your end product.

HP Mobile Workstations with HP DreamColor technology offer in plane switching (IPS) panel technology. IPS supports a wide viewing angle that allows users to see colors more accurately from different angles without the color distortion that is common on conventional mobile workstation displays based on Twisted Nematic (TN) technology. This is a big advantage when multiple people are looking at the same display, each from a different angle. Everybody sees the same colors.

WHAT COULD HP DREAMCOLOR DO FOR YOU? CONSIDER THESE USE CASES.

Game development

Game developers working on mobile workstations need to see what their output will look like on a high definition television (HDTV). This can be a challenge because the system tone response, or gamma, on a standard mobile workstation is different from that of an HDTV system. Poorly adjusted tone response can result in "blown out" whites, a loss of detail in dark regions and visible banding artifacts in gently shaded areas.

HP DreamColor solves these challenges. It allows developers to choose industry standard color spaces with the touch of a button such as Rec. 709 for HDTV systems, sRGB for computer graphics and consumer digital photography, and Adobe® RGB for professional photography and document creation and editing. By simply selecting Rec. 709, a developer can work confidently in the color space of the end product, knowing the colors that appear on the display are the colors a gamer will see on an HDTV system.

"The key for me now is my powerful Mobile Workstation notebook with DreamColor technology in the screen. This allows me to edit on location. It's the first laptop I have seen that has a screen capable of accurate calibration."

Chris McLennan, Lowepro Professional Photographer Partner and Regional Canon EOS Master

Graphic arts

In graphic arts, designers have to manage the differences in white points, or color temperatures, that occur between the design environment and the printing environment. Printers typically use a warmer color temperature than that used on a computer display. If designers don't adjust for this difference, they could get prints that are way too warm—with problems such as washed out faces instead of natural skin tones.

HP DreamColor makes it easy to manage these differences. Designers can set the color temperature on their mobile workstation displays to a commercial printing standard. This changes the color of the light that is projected onto the display. They then have an accurate view of what the printer will see.

Commercial printing

Before the presses start, commercial printers need to be sure they have all their colors calibrated correctly. HP DreamColor provides this assurance. Printers can view colors on a display in the sRGB color space used in commercial printing. This way they know that what they see on the display is what they will see in the printed product.

Professional photography

For professional photographers, a wide gamut of colors and extreme color accuracy are critical success factors. Photographers get both with HP Mobile Workstation displays with HP DreamColor technology. With its 30-bit panel color depth, HP DreamColor supports more than a billion color possibilities, giving photographers a huge pallet of rich colors. Most mobile workstations offer just 18-bit panel color depth, so they can't be trusted to display the true colors and gradations of tone that photographers capture with their cameras.

In addition, HP DreamColor technology allows photographers to set their mobile workstation displays to the Adobe RGB specification, the color space used by many professionals. This standard has the same primaries as that of the sRGB color space used in typical mobile workstation displays with one exception: it uses a much more saturated green primary. HP DreamColor gets this just right. This means that photographers working in the field can see the same colors on their mobile workstations that they would see on systems in their home studios.
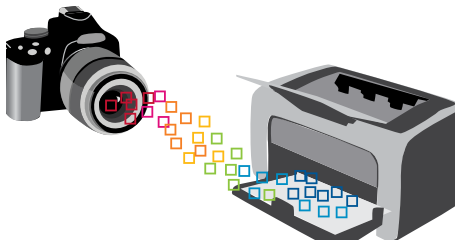
"It's got to be easy to use, totally stable and cost effective   but a lot of technology is these days. What really makes the difference is the ability to edit on the DreamColor laptop on the road, so I have the color consistency through my complete system."

Chris McLennan, Lowepro Professional Photographer Partner and Regional Canon EOS Master

Animation

When producing animated content for feature films, studios will often make use of dozens of animators. These animators could be working in different localities and using different models of workstations. To maintain the accuracy of colors and the integrity of the final product, it is essential that all the animators see the very same colors on their displays.

HP DreamColor technology and compatible HP Mobile Workstations make this possible. This combination allows a team of animators to work in the industry's DCI P3 color space using displays that represent colors in the same way. This gives producers and directors the confidence that their animators can meet three critical color requirements for animated features: accuracy, accuracy, accuracy.

Medical imaging

Medical images are best and most accurately viewed on visual displays when they are presented with very specific tone-response curves (i.e. the way the images are scaled from black to white). Display systems that meet Part 3.14 of the Digital Imaging and Communications in Medicine (DICOM) standard provide viewers additional assurance that important gray-scale values are accurately and consistently displayed.

That's the case with the DICOM 3.14 calibrated solutions from Canvys, a company specializing in visual technology solutions. The solution enables the display on select HP Mobile Workstations HP Dream Color displays[1] to be calibrated to the DICOM 3.14 gray-scale display standard. These displays incorporate HP DreamColor display technology and, when integrated with Canvys' proprietary Image Systems CFS calibration software, give providers and users of PACS and other medical viewing software access to DICOM 3.14 images as outlined by the DICOM standards on a powerful mobile workstation platform.

Product design

In product design, color accuracy is extremely important. Manufacturers invest heavily in research that helps them identify the ideal colors for the products they are bringing to market. From cars to computers, from packing to logos, maintaining accurate colors is one of the keys to market success.

HP DreamColor technology helps product designers get colors right. Mobile workstation displays that incorporate this technology are engineered to accurately represent the specific color space gamut that a designer is working in. With more than a billion color possibilities, designers can see more discrete colors within the space.

What's more, HP Mobile Workstations that incorporate IPS panel technology provide a wide viewing angle that allows designers to see colors more accurately from different angles. When multiple designers are looking at the same display, each from a different angle, they all see the same colors.
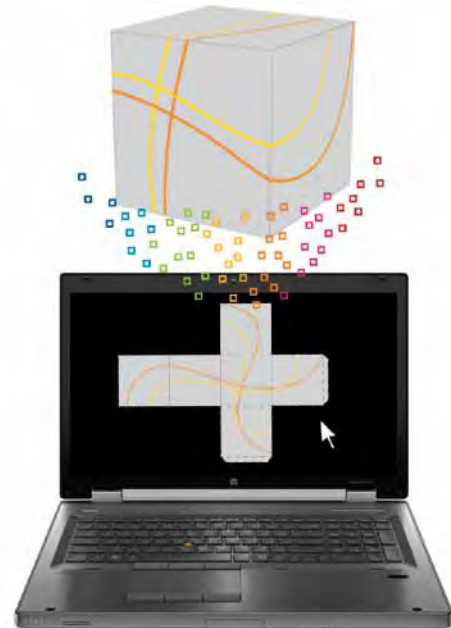
Computer-aided design and beyond

Accurate colors are important in various fields that use computer-aided design (CAD) applications and tools that display the visual results of scientific explorations. Architects, for example, need to show accurate artistic renderings of the exteriors and interiors of buildings, all the way down to the texture of surfaces. Geologists require images that accurately portray underground formations. Fields such as these can benefit from the accurate colors—and accurate gray scales—delivered by HP DreamColor technology.

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LEVERAGE THE POWER OF HP PROFESSIONAL INNOVATIONS.

HP DreamColor technology is among the many innovations that allow HP Mobile Workstations to deliver an enhanced mobile computing experience. Collectively, these innovative hardware features and software solutions enhance security, improve ease of use and help provide reliability, all while keeping the environment in mind.
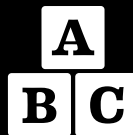
In short, HP DreamColor and other HP Professional Innovations help keep you going in more places than ever.

To learn more, visit **www.hp.com/go/ professionalinnovations**.

LOOK FOR THESE INNOVATIONS ON HP BUSINESS NOTEBOOKS.

PROTECT

SIMPLE

RELIABLE

HP DREAMCOLOR