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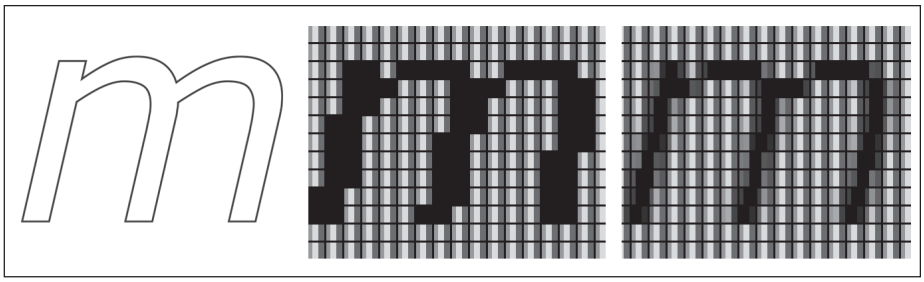
XPS Update: Monotype Imaging's Font and Color Strategy

As the release date of Microsoft's newest Windows operating system approaches, software vendors are stepping up their efforts to provide the end-all Vista solution for printing and imaging OEMs. The progress of printer-driver development for Microsoft's XML Paper Specification (XPS) has been well documented in this publication *(see the table below)*, but other aspects of Vista have been less visible. Two key components of Vista that will affect printing and imaging vendors are fonts and color management, and both of these elements have been updated in the new operating system.

According to Bob Silva, director of sales and marketing for Monotype Imaging, Microsoft's Vista font strategy includes two new default fonts, Cambria and Calibri. These two fonts will replace Arial and Times New Roman as the default sans serif and serif fonts in Office 2007 applications. Microsoft will continue to include Arial and Times New Roman in its standard set of fonts.

Silva says that Monotype Imaging designed Cambria specifically for Microsoft, and his firm is the sole provider of printer fonts for Vista and Office 2007. The Cambria and Calibri font families each include four styles: normal, italic, bold, and bold italic. As a result, embedded font blocks that include the new fonts will provide 88 PCL fonts and 144 PostScript fonts.

According to Silva, the new fonts are available as a drop-in solution to Universal Font Scaling Technology (UFST). Because UFST uses highly compressed fonts, the font block will increase by only 200 KB. Other benefits to printer OEMs include compatibility across all Microsoft operating systems, less RAM to process jobs, and fewer support calls. Monotype Imaging delivered the new font block to early adopters in September and will ship the final release to OEMs in November. For customers, an embedded font solution ensures backward compatibility, faster printing, less network traffic, and lower file-storage requirements.



ClearType (far right) renders fonts more smoothly and accurately compared with the original typeface outline (far left). Without ClearType, the font appears more jagged (middle).

For many office workers, Arial and Times New Roman are old friends—reliable, consistent, and always available. So why the change? Silva explains that Microsoft's goal is to improve screen legibility *(see photo above)*. He says that ClearType hinted fonts such as Cambria and Calibri increase readability by 5 percent, saving users three minutes for every hour of reading. To learn more about ClearType visit *www.microsoft.com/typography/WhatIsClearType.mspx.*

Vista Color Workflows

Anyone who has spent time developing a color workflow for the current Windows color-management system knows the headaches involved with this process. The use of ICC profiles dictates an inflexible workflow, a loss of precision, a fixed illuminant condition, and difficulty producing some colors, such as a pure, uncontaminated yellow. Vista's Windows Color System (WCS) is intended to address these problems, and one core design goal is a more flexible workflow.

WCS profiles are created in XML format. Under the new system, one ICC profile becomes three WCS profiles that provide an enhanced level of customization. The device profile takes the device's measurements and determines which device module to use, and the gamut-mapping profile uses a set of parameters to select a specific gamut-mapping module. The third WCS profile includes parameters for color appearance, indicating lighting and background conditions such as cinema, office, or presentation viewing.

The WCS workflow clearly requires more powerful processing to handle complex profiles, and the printer's color-management module (CMM) must provide the ability to create profiles. Monotype Imaging provides a number of OEM color tool kits to help developers create WCS-compatible solutions. A screening tool kit uses a Windows user interface to help OEMs develop binary and multilevel screens for PCL, PostScript, and GDI printers. Silva says that Monotype Imaging's screens are based on patented Agfa Balanced Screening (ABS) and eliminate moirés, maximize color gamut, and improve repeatability.

Monotype Imaging's color-management tool kit uses API calls to access functions and includes source code and test tools. Key features include the abilities to preserve pure black and pure colors and to pass black generation through the profile. The firm's CMM supports ICC rendering intents, PostScript Color Rendering Dictionaries (CRD), color descriptions, color spaces, and press simulations. The profile tool kit allows developers to generate, edit, optimize, and view profiles.

The firm is planning to release new tool kits in the fourth quarter. Monotype's CMM version 3.0.1 will include WCS profile read and write support, WCS modules, and full WCS profile support. Profile Studio version

Observer Coverage of XPS Developments

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* XPS was originally code-named "Metro"

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NEWTONVILLE MA 02460-9143
TEL. 617-454-2600 FAX. 617-454-2601

3.0.1 will feature a WCS preview and a fully customizable WCS modules tuner.

Finally, Monotype Imaging is paying equal attention to its XPS driver development, which is the third key component to its Vista strategy. According to Silva, developers can easily integrate his firm's driver solutions with Monotype Imaging's color and font technologies to provide printing and imaging vendors with a complete Vista solution. Monotype Imaging will offer a number of XPS driver implementations, including XPS to XPS optimizing, XPS to PS/PDF/PCL conversion, and XPS host RIP solutions, each with support for 32- and 64-bit systems.✍