Ten new file formats

By Ron Ellis

File formats may sound boring, but they are important. More than ever, everything we do in the printing industry is related to files and file formats. While most of us are used to common file formats such as TIFF and EPS files, over the past few years a number of new file formats have been created to usher in the age of automation.

We already use and are familiar with some of these formats, but some file formats may appear as strange acronyms with no meaning to many industry professionals.

One thing is certain, file formats more than ever will change the way we do our work. From eliminating the need for manual imposition, to removing the need for outputting, these file formats carry the valuable information we need to process our jobs and make our plants more efficient. What follows is a primer on a few new file formats and how they can change the way we work. We may not use them immediately, but most of these formats are somewhere in our future and will be used to automate the work that we do.

JT Files

JT files are used in the printing industry, but used even more commonly by engineers and others communicating the geometry of complex products. The JT file contains four compartments. The first and second are geometry and the third is metadata, and the fourth contains metadata used specifically for manufacturing operations. In theory, the JT file can travel through a job and contain as much information as needed about what to do with a job. For example, a JT file can travel though a job providing and recording information about the various processes the job encounters. One common use of JT right now is with imposition software showing how a file should be placed and imposed. *The JT file is important because it can be used in automation to communicate job information and geometry.*

JDF Files

Often confused with JT is the JDF file format. JDF, which stands for Job Definition Format, was initiated by Adobe Systems, Agfa, Heidelberg and MAN Roland in 1999 but handed over to CIP3, an organization that was created to help with the emerging JDF standard. (CIP3 has evolved into CIP4, which stands for the International Cooperation for the Integration of Processes in Prepress, Press and Postpress Organization. CIP4 is a standards development organization brings together vendors, consultants and end-users in printing and graphic communications industries and associated sectors, covering a variety of equipment, software, peripherals, and processes. Members participate in focused working groups to define future versions of Job Definition Format (JDF), to study user requirements.

JDF is based on XML. The JDF file in another container file format. It can contain information that can be used by each module in a workflow if desired. JDF files can communicate with each other, and can change contents dynamically based on the relationship to other JDF files. JDF files are used by a number of workflow systems that use them to track job status, progress, and preferences on a job level. JTF can be used during any part of the printing operation and may contain pricing, layout, color information as well as bindery, shipping and other delivery information. *The JDF file is important because it can be used to communicate and hold job metadata of almost any type as a job travels throughout a plant.*

XMP

XMP stands for Adobe's new Extensible Metadata platform. This format embeds information about the data you are working with into the file itself. For example, on a digital camera, date, time, information about the file and format are embedded directly in the image. Adobe applications such as Photoshop and others can add and maintain the XMP data as it travels throughout applications and workflows. Search engines have access to this information so it can make managing media assets such as image and documents much easier than in the past, and workflows can read the assets and then act on them based on the asset type. *XMP is important because it allows users and automation systems to quickly sort and locate data for inclusion in a workflow or publication.*

XML

XML stand for Extensible Markup Language. It was developed based on SGML and is a language for publishing data both on the web and print. XML is used extensively in web work, and one of the reasons that it is better that older markup languages is that it is open and more easily customizable. An XML document can easily be moved to print or the web, and easily be edited and changed. The markup language itself is simple and reasonably easy to interpret. XML is also often used for job ticketing and tracking, as it is another good data container type for use in workflows and publishing systems. *XML is important because it allows users to markup and share data for a variety of platforms and uses.*

PDFX file

We see PDF files in our business everyday. PDFX files are a PDF file that has been qualified as meeting strict criteria suitable for printing. Because a PDF file can contain many elements such as audio, video, RGB color, low-resolution graphics and other undesirable elements, a PDF itself is not guarantee that a file is printable. A PDFX file has been qualified as meeting printable conditions. *The PDFX file is important because it turns a mystery file into a qualified file suitable for printing.*

Microsoft XPS

Vista, the new operating system from Microsoft scheduled for release sometime in 2007, will feature a new file format called XPS. XPS stands for XML paper specification, and like the PDF file format it is meant to be a universal file format that can be used to share documents between systems, retaining formatting and security features. It sounds very much like the PDF file format, except that it will be freely integrated and built into the new Windows operating system. Users of older versions of the Windows will be able to download a document writer and viewer to generate and view XPS documents.

CIP3 and CIP4 format

The CIP3 and 4 formats provide an information link between prepress, press, and bindery. Most commonly know as a file that contains ink key presets, the CIP files Print Production Format (PPF) can also contain information for the prepress department, bindery, and other press functions. Most press manufacturers support use of CIP3 files. *The CIP file is important because it saves time and money in the pressroom,*

DS Store files

If you have looked around on any drive that is shared by Windows and OSX, then you have probably noticed .DS_Store files. The .DS_Store file is created by the Macintosh. The file is invisible in the Macintosh, but once created on the PC, it can be seen by these other operating systems. The .DS_Store holds the information that controls the way a folder will be opened; i.e., the shape and size of the window, the position of the window on the desktop and whether file, folder or icon view has been selected.

If deleted, .DS_Store will resort to the system preferences for the window. It can be very annoying on network servers and RIPs, causing false errors. Creation of .DS_Store files can be suppressed on network volumes by using a utility such as TweakFreak and telling it to stop creation of .DS_Store files on network volumes. *DS_Store files are perceived as a nuisance and it is important to know what they are and how to remove them from servers when appropriate.*

DFonts

Another new Macintosh file format is the .dfont. Dfonts are found only on the Macintosh and are a proprietary font format created by Apple. The .dfont is a simple TrueType font, although Apple has made the format different than traditional truetype. In a .dfont, data is stored in the data fork instead of in the resource fork. Because of this, while a Mac can use a PC TrueType font, and a dfont, Windows cannot use a dfont unless it is converted with a utility back to a traditional TrueType font. The .dfont format is supposed to be more efficient but most users find no apparent benefit to using the new .dfonts. *Dfonts are a new file format and it is important to understand what they are. They can be converted to the PC using various utilities.*

OpenType

OpenType is a cross platform font format developed by Microsoft and Adobe. One of the main characteristics of the font format is that the same font can work on both Windows and Macintosh platforms. The font format can contain both Postscript and Truetype data, and the format can also contain greatly expanded character sets as well as characters for multiple languages. While OpenType sounds great, one of the downsides of the increased character sets is that fonts can be much larger that they were in the past. *OpenType is important because it can contain large character sets suitable for foreign and international publishing.*

ICC DeviceLink Profile

Many of us are familiar with ICC profiles that are used to characterize a set of color conditions, but less familiar is the Device Link Profile. A device link profile is two ICC profiles, linked together. It differs from two separate profiles because the color transformation is often done directly between the two profiles rather than through the color engine on the RIP. They are commonly used to hold a CMYK>CMYK conversion without going to LAB and splitting the K channel up into colors. These files are often used with RIPs and printing systems such as digital printing where the character of the K needs to be maintained. Often, device link profiles provide slightly better color match than two separate profiles. *ICC Link Profiles are important because they allow us to have more control over certain color conversions we may need to make.*

About the author: *Ron Ellis is a prepress consultant specializing in workflow training and integration. He worked in the commercial printing industry for 18 years and has consulted on numerous CTP installations. He also provides color management, integration, training, workflow development, and troubleshooting solutions to the graphic arts community. He can be contacted at 603-498-4553 or through his Web site at www.ronellisconsulting.com.*