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The Advantages of PDF over TIFF

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Summary

In order to conduct a successful document review, lawyers need to be able to quickly and effectively view documents in electronic format. Document database aside, review efficiency relies heavily on whether reviewers choose to use PDF files or TIFF files. PDF documents are more secure, smaller, more accessible, and more cost efficient than TIFF files. For good reason, the standard is trending towards use of PDF over TIFF.

TIFF, The Back Story

TIFF, essentially a picture of a document, was created to standardize the file type for scanned paper documents. Prior to its creation, each scanning vendor had its own proprietary file format and compatibility issues were common. In an effort to solve this problem, TIFF was released in 1987 by Aldus and Microsoft, Inc. Since merging with Aldus, Adobe Systems, Inc. owns the trademark to TIFF. However, Adobe has not updated the specifications for TIFF since 1992 and instead, has chosen to invest in the PDF file type. According to Diana Helander, Group Manager for Worldwide Standards for Acrobat, PDF use is becoming the de facto standard with many agencies including the FDA and the U.S. Federal Courts.¹

PDF, The Future

Released in 1992, the PDF file type was originally used as the standard for the U.S. federal government's legacy files. Beginning under the Clinton administration and continuing through to present-day, there is a push in the U.S. government to limit paper documents in favor of more efficient electronic forms.² Their form of choice? The PDF. PDF, or Portable Document Format, lives up to its name due to its accessibility and portability. Today, more and more paper documents are being archived as PDF files. Additionally, files such as Excel, PowerPoint and Word are being converted to PDF to preserve the format for easier collaboration and review.

Use of PDFs is becoming increasingly widespread in the legal industry due in large part to the number of advantages it provides over TIFF files during review.

Size and Speed

A key component of a successful review is the speed in which review is conducted. Review speed relies heavily upon how quickly reviewers are able to load and view files.

- PDFs are compressed, making them much smaller than TIFF files. Smaller files take less time to load, cutting wait times significantly and allowing the reviewer to read their documents more quickly. Additionally, smaller files take up less space on a hard drive, meaning that storage costs for hosting will be less when using a hosted solution.
- TIFF documents are stored as multiple files, with each page of a document as a separate file. This takes up a lot of computer space and adds time to review as reviewers will have to open a

¹ Foss, Kurt. "Adobe Interview: Diana Helander." *Adobe Acrobat User Community*. Adobe Systems Incorporated, 01 Jul 2006. Web. 31 Mar 2010. <http://www.acrobatusers.com/articles/2006/07/diana_helander_qa>.

² Johnson, Duff. "PDF in Government." *Adobe Acrobat User Community*. Adobe Systems Incorporated, 02 Feb 2007. Web. 31 Mar 2010. <http://www.acrobatusers.com/articles/2007/02/pdf_in_government>.

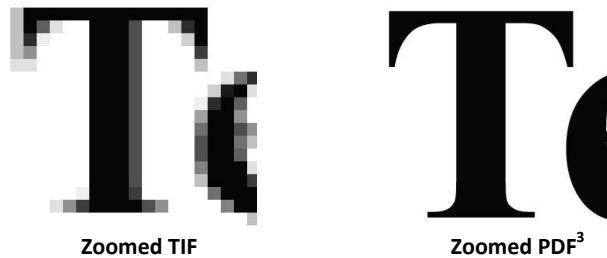
separate file for each page of a document. PDFs take up much less space and are more convenient because all of the pages of a multipage document are saved in one file. When reviewing multipage PDF documents, reviewers move from one page to the next by a simple scrolling motion, rather than opening up multiple files as with TIFFs. This cuts down review time significantly.

- Smaller file size not only has a speed advantage, but a cost advantage. As software companies often charge a per gigabyte fee for storage, it is cost efficient to reduce gigabyte size wherever possible. PDFs are generally smaller than TIFF files, resulting in fewer costs for the firm. When PDFs are created directly from native files, the size difference between PDFs and TIFFs is further increased.
- PDF files stream as they load. This allows the reviewer to begin to read the document while it finishes loading in the background. File streaming is similar to viewing videos online. For example, the video starts to play before it is entirely loaded. Load times vary with document size. However, file streaming allows the reviewer to be able to begin to review a document as quickly as they can read, without even noticing the load time. TIFF files do not have this ability.

Clarity

Once the documents are opened and loaded, quality and clarity are crucial to their readability. TIFF images are bitmap images, making them appear pixilated. Bitmap images have low visual clarity because they are created from pixels in a grid. Bitmap images and thus, TIFF files, are resolution dependent, meaning that as they are zoomed or printed, their quality deteriorates because pixels are lost. If a file is not clear on screen or in print, it is more tedious to review.

PDFs display text and images with the utmost clarity due to Adobe's PostScript technology. PostScript is a language between document and printer or document and monitor that essentially describes the exact appearance of images and text to a printer or monitor. Therefore, when printed or zoomed, PDFs maintain the exact visual standards they have on screen. With increased document clarity, review time is decreased because less time is spent deciphering words. Professionalism is also maintained when printing PDFs for experts or trial because the images will be exceptionally clear.



³ "PDF Conversion." *PDF Solutions* (2006): n. pag. Web. 31 Mar 2010.
<<http://www.investintech.com/resources/articles/whattiff/>>.

Color

In addition to clarity, color is another important visual standard in both review and production. The vast majority of compressed TIFF formats use black and white only, whereas PDFs transparently and efficiently include color. Color not only plays an important role in review, but in production as well. TIFF files cannot typically be produced in color. JPEGs are often produced with TIFFs to supply the color, meaning extra work is needed to create productions. PDFs can be produced in color, saving time and, if the review is conducted in color, there is a seamless transition to a colored production.

Search Capabilities

In addition to convenient file size and visual clarity, reviewers also need to effectively search through large volumes of documents. TIFF images are only pictures of documents and, therefore, do not have embedded text and are not text-searchable on their own. A separate text file must be provided for each page of a TIFF document to make it text-searchable. PDFs, on the other hand, retain all of their text information, making them fully text-searchable without any extra steps. This allows PDFs to be available for review more quickly than TIFFs. It is beneficial for reviewers to have the ability to both search and look at the image of a document simultaneously so that they can read a document in context. Additionally, it is easier to share documents that have both the image and the text together. A reviewer would need to share many more files with another reviewer because TIFFs need their matching text files, whereas PDFs combine text and image in one file.

Flexibility

As review progresses and documents are moved from computer to computer, flexibility becomes increasingly important. At the root of flexibility is platform independence. Both TIFF and PDF are platform independent, meaning that they can be opened on any operating system. However, only PDFs are able to be stored and printed on any hardware without loss of quality.

Other Features/Software Updates

In the changing legal industry, perhaps one of the most important advantages of PDFs over TIFF is their ability to be updated. TIFF specifications are stagnant and will not be upgraded or changed. However, Adobe invests in updating PDF specifications often. One of Adobe's newer features⁴ is The TouchUp Text Tool, which allows the text in PDFs to be edited if the files are not locked. As a reviewer, this is advantageous as notes can be made directly on a document. Adobe also constantly releases updates to its Acrobat Reader software, ensuring PDFs are secure from malware and viruses.

Electronic Court Filing

PDFs have several advantages over TIFFs and provide the speed, functionality and technological advances that lawyers need as they review documents. PDF files also record each document's electronic history and metadata. Each time a document is opened or changed, digital data, or metadata, is stored with the PDF, allowing reviewers and the U.S. courts to verify their accuracy. The legal industry has noticed these benefits and has widely adopted PDF as the file type of choice. The Administrative Office

⁴ "News." *Adobe Acrobat User Community*. Adobe, 27 Mar. 2010. Web. 31 Mar 2010. <<http://www.acrobatusers.com/news>>.

of the U.S. Courts adopted use of PDF in the ECF system in 1996, furthering its use in the legal industry. The ECF system permits the retention of electronic case files over the Internet. The U.S. Court lists the several benefits of the ECF system⁵:

- Courts can allow registered attorneys to file documents 24 hours a day, 7 days a week.
- Reduction of paper, photocopy, postage and courier costs.
- Full case information is available immediately to attorneys, parties, and the general public through the Internet. This includes the ability to view the full text of most filed documents.
- Attorneys on the system will receive email notices electronically in CM/ECF cases. This greatly speeds delivery and eliminates the costs to both the court and attorneys of handling and mailing paper notices.
- Multiple parties can view the same case files simultaneously.
- Since CM/ECF uses Internet standard software, the out-of-pocket cost of participation for attorneys is typically very low.

Due to its several benefits most, if not all, U.S. Courts have adopted the ECF system.⁶ More information about the ECF system can be found here: <http://pacer.psc.uscourts.gov/faq.html>.

As PDFs become the accepted standard in the U.S. Courts, it makes sense for firms to work with systems that utilize PDFs to create pleading exhibits. This would streamline the entire review and ECF process, tying the two together seamlessly.

PDF over TIFF

Choosing PDF over TIFF is the only option for an efficient document review. PDFs are cost efficient, small, secure, quick to load, visually clear and easily accessible. Reviewers need a technology that can keep up with the legal industry and, with its constant updates; PDF is up to the challenge. With all of these benefits, it is no wonder the U.S. Courts have adopted the PDF as the file type of choice.

⁵ "CM/ECF." *CM/ECF Frequently Asked Questions*. The PACER Service Center, 12 Jan. 2010. Web. 31 Mar 2010. <<http://pacer.psc.uscourts.gov/cmecf/ecfaq.html#GE>>.

⁶ "Local CM/ECF Court Information." *CM/ECF*. The PACER Service Center, 12 Dec. 2009. Web. 31 Mar 2010. <<http://pacer.psc.uscourts.gov/announcements/general/ecfnews>>