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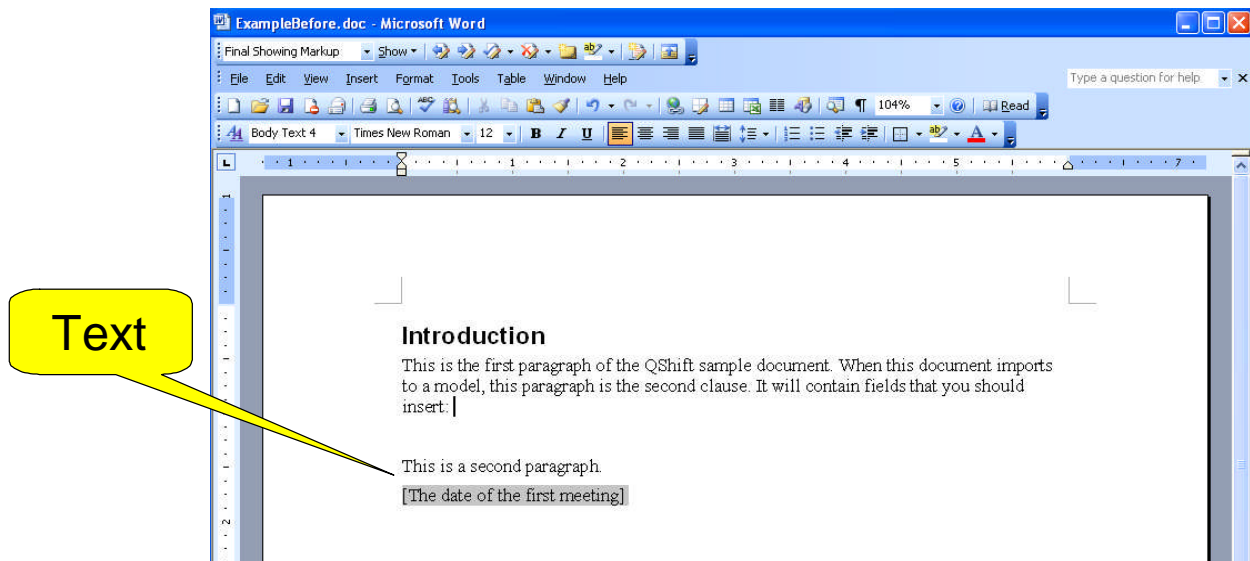
META DATA: HIDDEN LIABILITY IN YOUR DOCUMENTS

© Craig Kobayashi and Laura Williams
Ixio Corporation
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Introduction

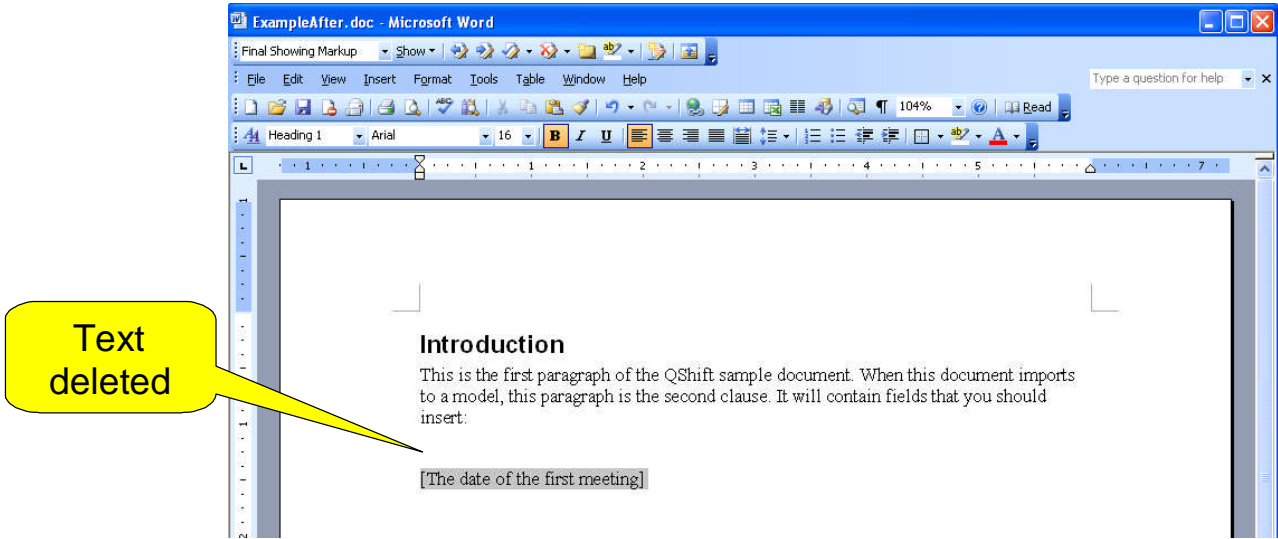
For a subject that has been discussed frequently, it is surprising that legal professionals are largely misinformed or uninformed about meta data in documents. This gap in understanding might be the result of a simple axiom: “If I don’t see it, I don’t believe it.” After all, legal professionals are not technical experts.

So let us see what meta data looks like:



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Figure 1: Starting Document. This document, titled “ExampleBefore.doc.” was a previously existing Microsoft® Word document.



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Figure 2: Edited Document. This document was created using the popular “Open File – Save As” method. This “new” Word document, “ExampleAfter.doc,” deleted the words “This is a second paragraph” from the original document entitled “ExampleBefore.doc.”

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E070: F80A0000 F90A0000 FB0A0000 FC0A0000 00 00 00 00
E080: FE0A0000 FF0A0000 130B0000 140B0000 00 00 00 00
E090: 1C0B0000 1D0B0000 1E0B0000 1F0B0000 00 00 00 00
E0A0: 250B0000 260B0000 270B0000 280B0000 00 00 00 00
E0B0: 2A0B0000 2B0B0000 2C0B0000 2D0B0000 00 00 00 00
E0C0: 68180000 70180000 80180000 FCF0FCF4 00 00 00 00
E0D0: FCF0E8F0 E8F0E8F0 E8F0E8F0 FCE4FCE4 00 00 00 00
E0E0: FCE4DDC6 CECACECA CECACECA C2BEC2B5 00 00 00 00
E0F0: C2BEA8A5 AB9A8BE CAD6F096 92890000 00 00 00 00
E100: 00000000 00000000 00000000 00000000 00 00 00 00
E110: 00001116 68B24AF9 006D4800 046E4800 00 00 00 00
E120: 04750801 061668C0 54110000 061668B2 00 00 00 00
E130: 4AF90000 151668FB 39650030 4A11006D 00 00 00 00
E140: 4900046E 49000475 08010A16 6839286F 00 00 00 00
E150: 00304A11 00001303 6A000000 00166839 00 00 00 00
E160: 286F0030 4A110055 08011116 68FB3965 00 00 00 00
E170: 006D4800 046E4800 04750801 06166839 00 00 00 00
E180: 286F0000 0F036A00 00000016 6839286F 00 00 00 00
E190: 00550801 06166864 3B0E0000 0F036A00 00 00 00 00
E1A0: 00000016 68643B0E 00550801 0C1568E1 00 00 00 00
E1B0: 2C450016 68E95121 00000C15 68ED4C01 00 00 00 00
E1C0: 001668ED 4C010000 061668ED 4C010000 00 00 00 00
E1D0: 0F036A00 00000016 689551CE 00550801 00 00 00 00
E1E0: 06166895 51CE0000 061668E9 41300000 00 00 00 00
E1F0: 061668BA 699F0000 0616688C 73680032 00 00 00 00
E200: 2C001190 68011FB0 D02F20B0 E03D21B0 00 00 00 00
E210: 000722B0 08072390 A0052490 A00525B0 00 00 00 00
E220: 000017B0 D00218B0 D0020C90 D0020D00 00 00 00 00
E230: 00005400 68006900 73002000 69007300 00 00 00 00
E240: 20006100 20007300 65006300 6F006E00 00 00 00 00
E250: 64002000 70006100 72006100 67007200 00 00 00 00
E260: 61007000 68002E00 0D000D00 0D000D00 00 00 00 00
E270: 32002F00 36002F00 32003000 30003600 00 00 00 00
E280: 31000D00 0D000000 00000000 00000000 00 00 00 00
E290: 00000000 00000000 00000000 00000000 00 00 00 00
E2A0: 00000000 00000000 00000000 00000000 00 00 00 00
E2B0: 00000000 00000000 00000000 00000000 00 00 00 00

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Note that deleted text remains in meta data, including date of deletion

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Figure 3: Edited Document With Hexadecimal Data Viewer Application Applied. This is the “ExampleAfter.doc” document, with a hexadecimal data viewer application that displays “stuff” (i.e., meta data) that cannot be seen using the Word application. You can see in the highlighted text the deleted words “This is a second paragraph,” together with the date it was deleted. Meta data also includes other information, such as the author of the revised document (not shown above).

Virtually all legal professionals to whom we have shown these slides are aghast. This is true even for lawyers who have heard about meta data. The simple fact is that until a person can see it for himself or herself, “bad” meta data is an abstract issue.

What is Meta Data?

Here is one example of a definition of meta data:

Metadata is structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment, and management of the described entities.

http://en.wikipedia.org/wiki/Meta_data

That definition is not going to help lawyers, paralegals and legal assistants in understanding meta data, and the problems associated with it.

But meta data is an issue, and the amount of meta data is growing. Ever since the legal industry started using word processors, meta data has been around. In fact, “more than 90 percent of documents are created electronically, with little thought to what might be in them other than what is visible to the naked eye.”

<http://www.lawtechnews.com/r5/survey.asp> So, just because you can't see it doesn't mean it doesn't exist, or is not there.

Dennis Kennedy, a leading authority on legal technology, describes meta data in terms that legal professionals can better relate to:

Metadata refers to certain data that are associated with a document, but are not generally visible in the ordinary display or printing of the document. **Common examples include comments, markup and revisions, author, owner and other information, and even records of versions.** (emphasis added)

http://www.denniskennedy.com/archives/2005_10.html#000891

With the realization that a document's meta data contains comments, revisions and even records of versions, legal professionals can no longer ignore meta data. Those who ignore meta data do so at their peril.

Problems. or “Bad” Meta Data

Meta data inherently is neither good nor bad. It simply exists as a part of an electronic digital document. But when lawyers discovered that meta data in documents could be used against them and their clients, the first reaction was to declare meta data “off limits”:

In 2004, the New York State Bar Association issued opinions forbidding attorneys receiving electronic documents from using special tools to recover metadata, while also requiring the sending attorneys to remove metadata from its sent documents.

<http://www.law.com/jsp/legaltechnology/pubArticleLTN.jsp?id=1145538533635>

But the time to forbid the use of meta data is well past:

In the course of depositions in litigation against Vioxx manufacturer Merck, the drug company was discovered to have altered data submitted to the *New England Journal of Medicine*. The excised data was recovered through metadata mining and helped bolster the plaintiffs' arguments that Merck had been deceptive about the safety of the drug.

<http://www.law.com/jsp/legaltechnology/pubArticleLTN.jsp?id=1145538533635>

The Florida Bar Association's approach is more realistic:

In order to maintain confidentiality under Rule 4-1.6(a), Florida lawyers must take reasonable steps to protect client confidences in all types of documents and information that leave the lawyers' offices, including electronic documents and electronic communications with other lawyers and third parties.

<http://www.floridabar.org/tfb/TFBETOpin.nsf/basic+view/0A1B5E3A86DF495A8525714E005DD6FD?OpenDocument>

Here is one example of how meta data can earn a "bad" reputation:

The partner at Coxe's [Florida Bar President] firm had sent a brief to a lawyer at another firm who was working on a similar case. Based on the brief, which was sent electronically, the other firm was able to reconstruct every change that had been made to the document, including e-mails between Coxe's partner and his client -- a potential violation of attorney client privilege.

<http://www.law.com/jsp/legaltechnology/pubArticleLTN.jsp?id=1145538533635>

It is difficult to see how well respected and experienced attorneys can commit such egregious errors. One explanation for this difficulty is the simple axiom we started with: "If I don't see it, I don't believe it."

Simple Ways To Find Meta Data

If you've never seen meta data before, here are a couple of simple ways to find meta data in your Word documents:

- Open a Word document
- Go to "File" and click on "Properties"
- Review the tabs in the Properties window that appears such as the "Custom" and "Contents" tabs
- Turn on the "Track Changes" or show hidden data features

How To View Meta Data

There are *hundreds* of hexadecimal data viewer applications that display meta data in documents, and software developers have been using these tools for years. For the more adventurous legal professionals, here are a few free ones:

- <http://www.gbresearch.com/software.html#binviewer>
- <http://www.hhdsoftware.com/Family/hex-editor.html>
- <http://www.softcircuits.com/cygnus/fe/>
- <http://www.chmaas.handshake.de/delphi/freeware/xvi32/xvi32.htm>
- <http://www.pspad.com/>

How To Remove Meta Data

Several companies offer meta data removers, such as:

- Microsoft
(<http://www.microsoft.com/downloads/details.aspx?FamilyId=144E54ED-D43E-42CA-BC7B-5446D34E5360&displaylang=en>)
- Esquire Innovations – iScrub (<http://www.esqinc.com/?p=products&id=2>)
- Workshare – Protect (<http://www.workshare.com/products/wsprotect/>)
- Payne Group – Metadata Assistant
(<http://www.payneconsulting.com/products/metadataretail/>)
- Kraft Kennedy & Lesser – ezClean (<http://www.kklsoftware.com/index.asp>)

Caution: The Professionals Use Sophisticated Tools

But those who believe that the tools listed above, particularly the meta data removers, have solved the meta data problem are only outsmarting themselves. Software forensics professionals are using sophisticated applications to search and filter meta data in documents, including documents that have had meta data removers applied to them. One such application is EnCase, by Guidance Software, Inc. (<http://www.guidancesoftware.com>). Available since 1997, EnCase was first marketed to law enforcement agencies; in fact, over 94% of police departments and law enforcement agencies worldwide use EnCase. Some of the high profile criminal cases in which EnCase played a significant role are:

- Martha Stewart
- Michael Jackson
- Scott Peterson
- BTK Killer (Dennis Rader, Wichita, KS)

Princeton Software has its Meta Data Reviewer 2.0 (<http://www.princetonsoftwarecompany.com/>), which also provides users the ability to review meta data. Forensic Tool Kit by AccessData (<http://www.accessdata.com>) is another application that filters meta data associated with images (e.g., .jpeg files).

Simple Steps to Implement Now

If your organization:

- Uses the popular “Open File – Save As” method of creating new documents;
- Sends Word documents as attachments to third party emails; and
- Has no meta data removers, cleaners or scrubbers

You should make changes immediately, such as sending all third party email attachments as Adobe .pdf files

(<http://www.adobe.com/products/acrobat/readstep2.html>).

As a second step, you should use a document drafting or document assembly application:

Avoiding “copy and paste” creation of new documents can help keep sensitive information out of documents. If you use a document assembly program to create your documents, you’re even better off, as each document is created “cleanly” from a template that has no personal information in it.

http://www.massbar.org/publications/lawyersjournal/article.php?c_id=1037515398&vt=2

Some of the better known document drafting and document assembly applications are as follows:

- Ixio Corporation – Ixio Legal Suite (QShift) (<http://www.ixio.com>)
- Esquire Innovations – iCreate DA (<http://www.esqinc.com/esqfiles/PressReleases/iCreateDA%20Release.PDF>)
- Lexis-Nexis – HotDocs (<http://www.hotdocs.com/>)
- Business Integrity – DealBuilder (<http://www.business-integrity.com/document-assembly.html>)
- Microsystems – D3 (<http://www.microsystems.com/d3/>)

Conclusion

We thank you for this opportunity to share with you our research and experiences on meta data. We would very much appreciate hearing from you about your meta data experiences, especially if you have “war stories” or if you use other products or services. Let us know at ckobayashi@ixio.com or lwilliams@ixio.com.