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# Ethical and Malpractice Pitfalls of Everyday Law Office Computing

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SMART BUSINESS STRATEGIES FOR THE LEGAL WORLD.

# Three Important Motivators

1. **Model Rule 1.1 (Comment 8) – Competence**
2. **Lawyers are Targets**
3. **Cloud Computing**

# Model Rules of Professional Conduct

[8] To maintain the requisite knowledge and skill, a lawyer must keep abreast of changes in the law and its practice, **including the benefits and risks associated with relevant technology**, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.

Rule 1.1 – Comment 8: Maintaining  
Competence

# Dozens of Big Firms Targeted by Hacker Seeking M&A Info

*Nell Gluckman, The Am Law Daily*

March 29, 2016 | 5 Comments

SHARE

A Russian hacker living in Ukraine reportedly tried to gain access to the computer systems of 48 law



MARKETS

## Hackers Breach Law Firms, Including Cravath and Weil Gotshal

Investigators explore whether cybercriminals wanted information for insider trading

By **NICOLE HONG** and **ROBIN SIDEL**

Updated March 29, 2016 9:14 p.m. ET

Hackers broke into the computer networks at some of the country's most prestigious law firms, and federal investigators are exploring whether they stole confidential information for the purpose of insider trading, according to people familiar with the matter.

The firms include Cravath Swaine & Moore LLP and Weil Gotshal & Manges LLP, which

WSJ City

IF IT'S HAPPENING  
IN THE SQUARE MILE,  
IT'S IN OUR APP.

Section of  
**Litigation** Woman Advocate

Home › The Woman Advocate › Articles

## Hackers Are Targeting Law Firms: Are You Ready?

By Stacy Berliner – August 27, 2013

You have been or will be hacked. It is a matter of "when," not "if." In this fast-paced environment, technology and devices are constantly changing—making it difficult for a busy lawyer to stay apprised of the best methods of protecting her client's information. But recent attacks on law firms, as well as revisions to the Model Rules of Professional Conduct, require attorneys to take notice, understand technology risks, and protect their client information.

### Hackers Target Law Firms

Law firms are increasingly targeted by hackers, who have become more sophisticated in their attacks.

# Why Cybercriminals Are Targeting Law Firms

The legal sector proves to be vulnerable to cybersecurity risks, as more companies are attacked for sensitive data.

BY JOHN G. BROWNING | PUBLISHED IN D CEO JULY 2016

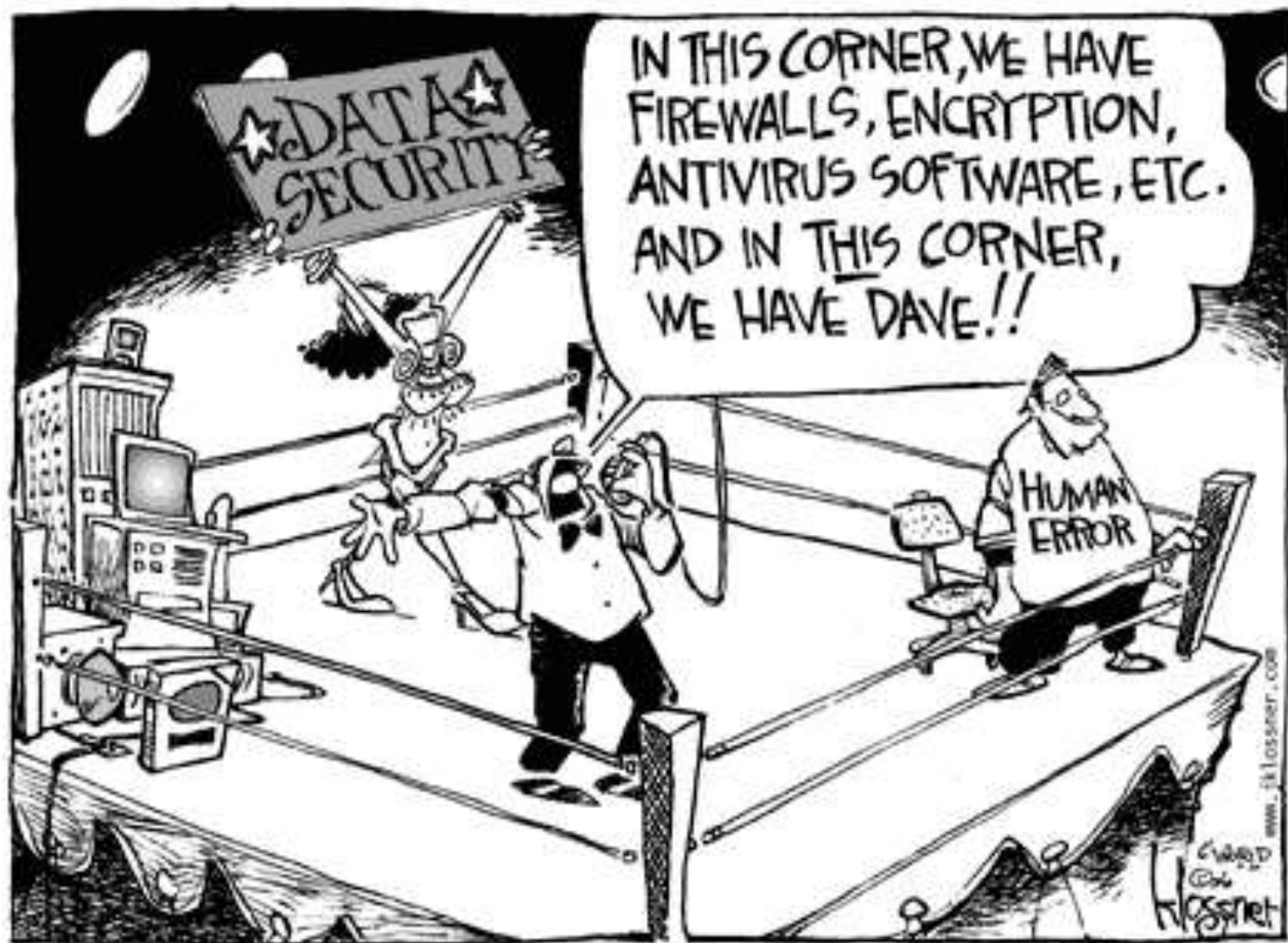


Dallas-based Locke Lord probably thought its computer system was safe—that is, until two days in December 2011. That was when Anastasio Laoutaris, a former IT engineer who worked for the firm for five years, accessed Locke Lord’s computer network without authorization and, according to a press release from the U.S. Attorney’s office for the Northern District of Texas, “caused significant damage to the network.” But the 1,000-lawyer firm was lucky. Laoutaris was caught, convicted of hacking by a Dallas jury

and Oct. 13, 2013, in a trial that sentenced him to more than 10 years in

Today's hackers hold a strategic advantage because of the growing numbers of devices and associated vulnerabilities. Every access point is a potential breach. A knowledgeable, sophisticated team can create security solutions specially crafted to meet the challenges that law firms face.





★ DATA ★  
SECURITY

IN THIS CORNER, WE HAVE  
FIREWALLS, ENCRYPTION,  
ANTIVIRUS SOFTWARE, ETC.  
AND IN THIS CORNER,  
WE HAVE DAVE!!

HUMAN  
ERROR

www.jklossner.com

Created  
by  
Hossner

# Legal Technology Resource Center

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**ABA LAW PRACTICE MANAGEMENT SECTION**  
LEGAL TECHNOLOGY RESOURCE CENTER

**Tech Overviews & Charts**  
American Bar Association > ABA Groups > Departments & Offices > Legal Technology Resource Center > Resources

Cloud Computing/Software as a Service for Lawyers

Cloud Ethics Opinions Around the U.S.

Metadata Ethics Opinions Around the U.S.

Practice and Case Management Software

Time & Billing Software

FYI: Starting a Website

FYI: Feature Comparison - Major Blog Providers

FYI: Playing it Safe With Encryption

FYI: Technology Terms Defined

**Hardware/General Tech**

- Battery Disposal and Recycling
- Computer and Network Security: Selected Resources
- Computer Disposal
- Data Backup
- Going Green
- Hiring a Freelancer or Consultant
- Law Student Technology Resources **NEW!**
- MacIntel
- Photo and Video Sharing
- Solo Lawyer Technology Resources
- Technology Terms Defined
- Tracking CLE Credits
- VoIP (Voice Over Internet Protocol)

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Register Now >>

**Comparison Charts**

The LTRC staff has compiled charts to compare common legal services and...



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# Legal Technology Resource Center

## Cloud Ethics Opinions



### Quick Reference

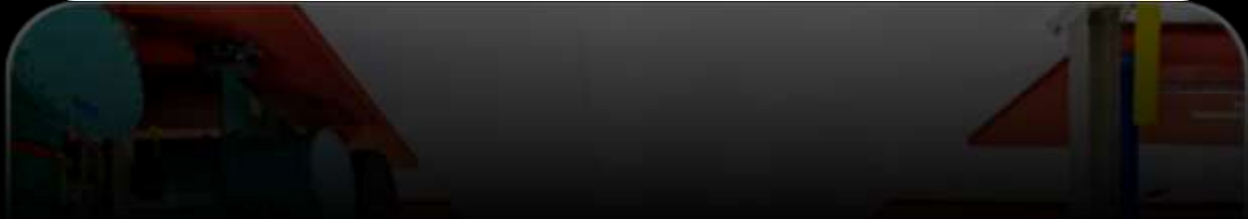
### Opinion Summaries

Jurisdiction	Permitted?	Standard?	Specific Requirements or Recommendations*
<b>OHIO</b> Informal Advisory Opinion 2013-03	Yes	Reasonable Care	<ul style="list-style-type: none"> <li>• Competently select appropriate vendor.</li> <li>• Preserve confidentiality and safeguard client property.</li> <li>• Provide reasonable supervision of cloud vendor.</li> <li>• Communicate with the client as appropriate.</li> </ul>

# Cloud Computing ... What is it, and is it Safe?











# Definitions

## Main Flavors of Cloud

- ▶ **Software as a Service (“SaaS”)**
- ▶ **Infrastructure as a Service (“IaaS”)**

# Definitions

## Datacenters (server farms)

- ▶ Redundant Internet
- ▶ Redundant electric
- ▶ Backup generators
- ▶ Huge cooling systems
- ▶ High security

# Definitions

## Colocation:

- ▶ You own the software and the cloud server
- ▶ Safer than having servers in your office
- ▶ Can include server maintenance

# Is This All Or Nothing?

- ▶ **Absolutely not**
- ▶ **You can use combinations of software/hardware in-house and software/hardware in the cloud**

# SaaS Advantages

- ▶ **Lower cost up front**
- ▶ **No hardware required**
- ▶  or 
- ▶ **Updates included**
- ▶ **Tech support included**
- ▶ **Anywhere access**
- ▶ **Data backup**



# SaaS Drawbacks

"The tech press is full of people who want to tell you how completely awesome life is going to be when everything moves to 'the cloud' – that is, when all your important storage, processing and other needs are handled by vast, professionally managed data-centers.

Here's something you won't see mentioned, though: the main attraction of the cloud to investors and entrepreneurs is the idea of making money from you, on a recurring, perpetual basis, for something you currently get for a flat rate or for free without having to give up the money or privacy that cloud companies hope to leverage into fortunes."<sup>11</sup>

His \$850 Million Fortune to  
Ex-Wife in Divorce



# SaaS Drawbacks

- ▶ **No internet = no access**
- ▶ **Updates not always a good thing**
- ▶ **Vendor bankruptcy\***
- ▶ **They can cut you off\***
- ▶ **Bandwidth caps\***



**\*Perceived**

# Relative Risks of the Cloud





# Reality

## Bigger security risks:

- ▶ Office break-in
- ▶ Laptop, tablet or phone stolen
- ▶ Disgruntled employee steals
- ▶ Laptops, tablets & phones unsecured & unencrypted
- ▶ Email



# Reality

- ▶ **Smartphones contain client data which is not encrypted.**
- ▶ **Laptops contain client data which is not encrypted.**
- ▶ **Tablets contain client data which is not encrypted.**
- ▶ **Don't encrypt email even if the content and attachments are extremely confidential.**
- ▶ **No official disaster avoidance or recovery plan.**
- ▶ **Aren't sure if backup system actually works (no one checks it); and/or we don't back up our data every single day.**

# Reality

- ▶ **Backup media not encrypted.**
- ▶ **Server sitting on the floor of file room/wiring closet and anyone who walks by would have full access.**
- ▶ **People write their logon passwords on sticky notes which are attached to their monitors. Further, no policy.**
- ▶ **IT people have full access to all client data but had no discussion with them about the Rules of Professional Conduct, nor do we know anything about the backgrounds of their employees.**

# Ethical Issues of the Cloud



# Rules in Play

- ▶ **Rule 1.1 (“Competence”)**
- ▶ **Rule 1.15 (“Safekeeping”)**
- ▶ **Rule 1.6 (“Confidentiality”)**

# Model Rule 1.6 on Confidentiality of Information

- (a) A lawyer shall not reveal information relating to the representation of a client, including information protected by the attorney-client privilege under applicable law, unless the client gives informed consent, the disclosure is impliedly authorized in order to carry out the representation, or the disclosure is permitted by division (b) or required by division (d) of this rule.

# Model - Comment 17 & 18

## Acting Competently to Preserve Confidentiality

[17] Paragraph (c) requires a lawyer to act competently to safeguard information relating to the representation of a client against unauthorized access by third parties and against inadvertent or unauthorized disclosure by the lawyer or other persons who are participating in the representation of the client or who are subject to the lawyer's supervision. The unauthorized access to, or the inadvertent or unauthorized disclosure of, information relating to the representation of a client does not constitute a violation of paragraph (c) if the lawyer has made reasonable efforts to prevent the access or disclosure. Factors to be considered in determining the reasonableness of the lawyer's efforts include, but are not limited to, the sensitivity of the information, the likelihood of disclosure if additional safeguards are not employed, the cost of employing additional safeguards, the difficulty of implementing the safeguards, and the extent to which the safeguards adversely affect the lawyer's ability to represent clients (e.g., by making a device or important piece of software excessively difficult to use). A client may require the lawyer to implement special security measures not required by this Rule or may give informed consent to forgo security measures that would otherwise be required by this Rule.

# Model – Comment 17 & 18

## Acting Competently to Preserve Confidentiality

[18] When transmitting a communication that includes information relating to the representation of a client, the lawyer must take reasonable precautions to prevent the information from coming into the hands of unintended recipients. This duty, however, does not require that the lawyer use special security measures if the method of communication affords a reasonable expectation of privacy. Special circumstances, however, may warrant special precautions. Factors to be considered in determining the reasonableness of the lawyer's expectation of confidentiality include the sensitivity of the information and the extent to which the privacy of the communication is protected by law or by a confidentiality agreement. A client may require the lawyer to implement special security measures not required by this Rule or may give informed consent to the use of a means of communication that would otherwise be prohibited by this Rule. Whether a lawyer may be required to take additional steps in order to comply with other law, such as state and federal laws that govern data privacy, is beyond the scope of these Rules.



# Example - Cloud Computing



**REASONABLY  
PRUDENT  
PERSON**



# Cloud Computing

**An attorney may ethically allow client confidential material to be stored in “the cloud” provided the attorney takes reasonable care to assure that:**

- (1) all such materials remain confidential, and**
- (2) reasonable safeguards are employed to ensure that the data is protected from breaches, data loss and other risks.**

# Is it Segregated?



# Is it Encrypted?



**In Transit and at Rest?**

# Reputable Company in the Business of Data Storage?

LITTLE JOE'S  
COMPUTERS



# Data Backup / Redundancy



# Disclose Confidential Data?

DISTRICT COURT

DISTRICT OF

SUBPOENA IN A CIVIL CASE

facebook



# Provider has no Ownership of Data

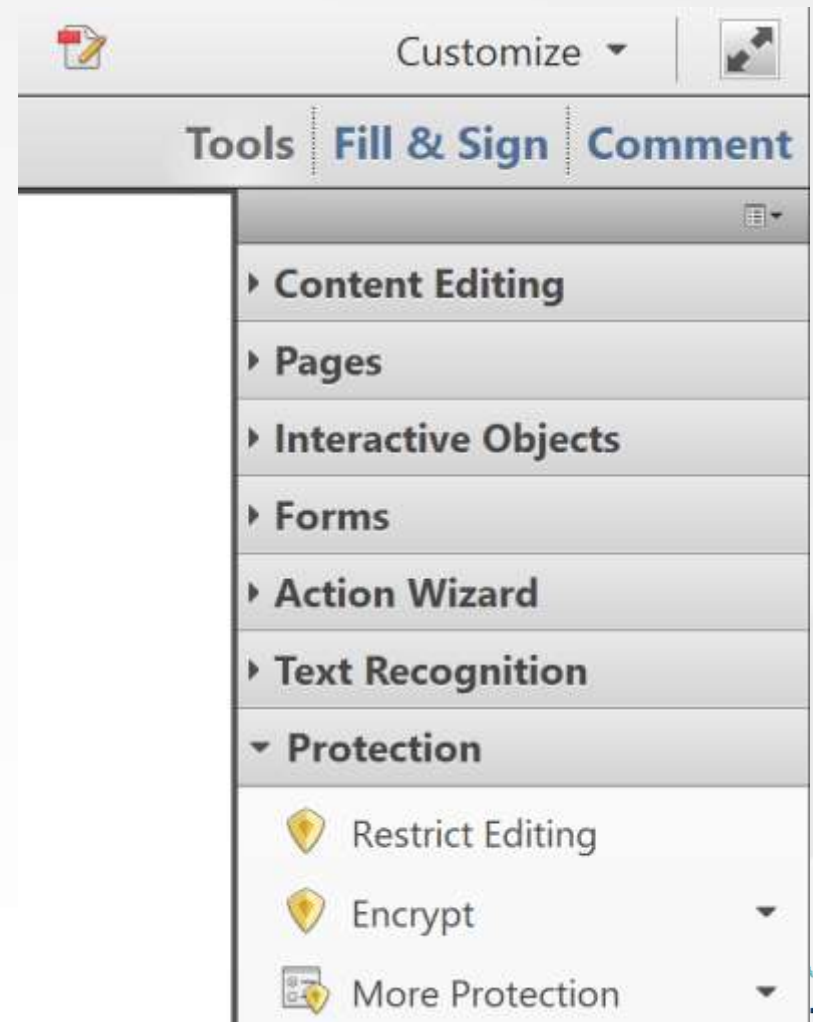


# Dropbox/Cloud Encryption



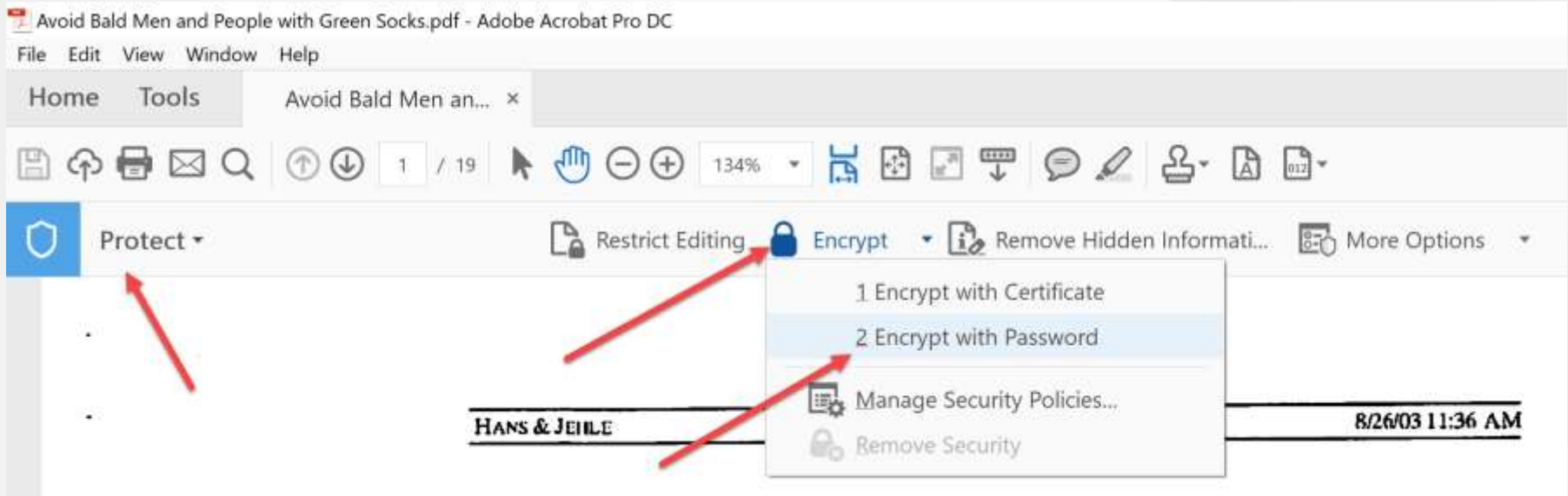
# Native Program Encryption

- ▶ **Acrobat 11: Tools > Protection > Encrypt > with Password**



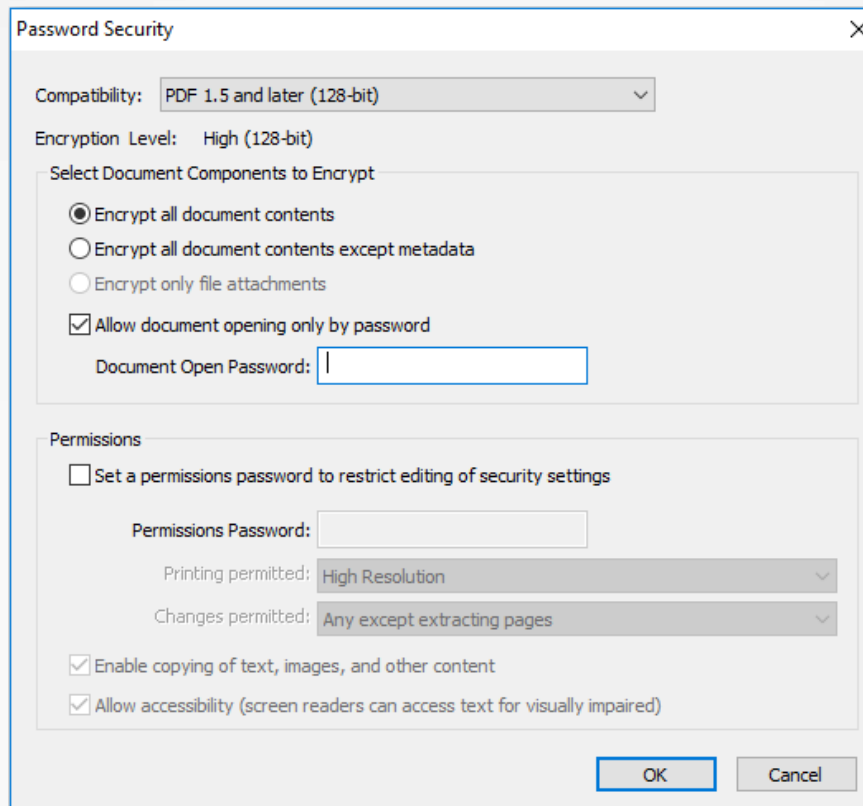
# Native Program Encryption

- ▶ **Acrobat DC: Protect > Encrypt > Encrypt with Password**



# Native Program Encryption

- ▶ Nuance: Manage Security > Modify > Security Method > Password Security



Password Security

Compatibility: PDF 1.5 and later (128-bit)

Encryption Level: High (128-bit)

Select Document Components to Encrypt

- Encrypt all document contents
- Encrypt all document contents except metadata
- Encrypt only file attachments
- Allow document opening only by password

Document Open Password:

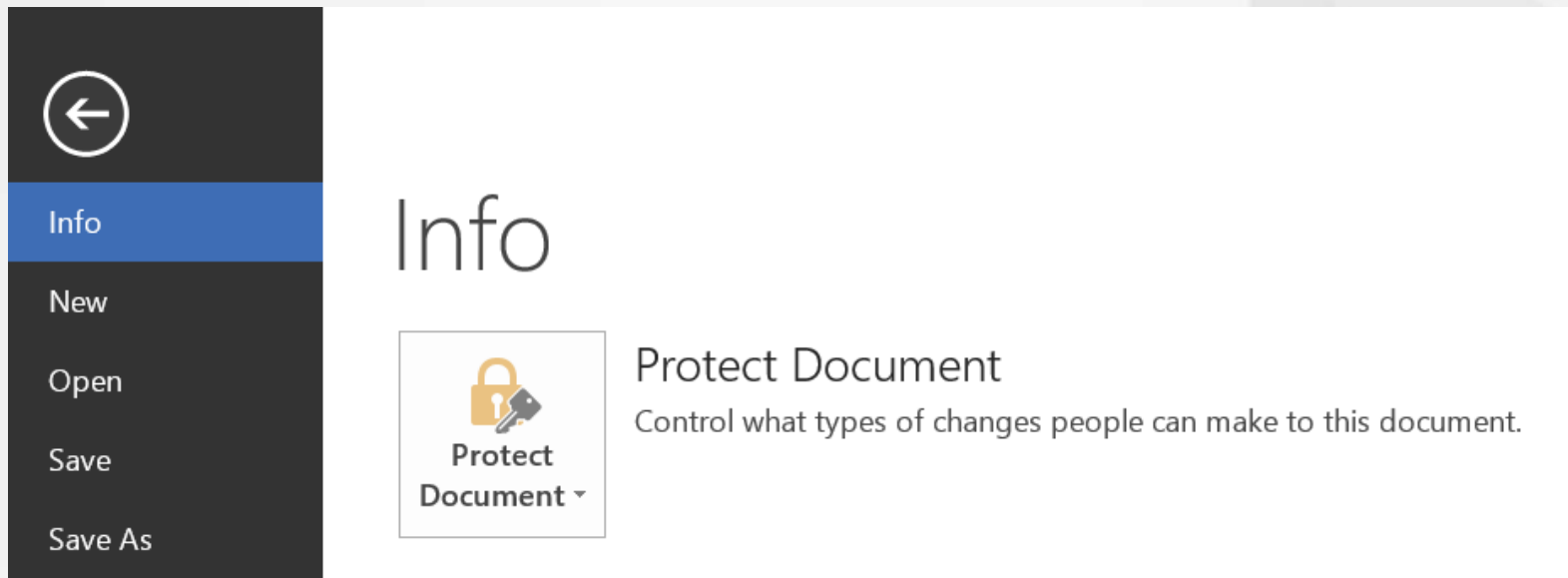
Permissions

- Set a permissions password to restrict editing of security settings
- Permissions Password:
- Printing permitted: High Resolution
- Changes permitted: Any except extracting pages
- Enable copying of text, images, and other content
- Allow accessibility (screen readers can access text for visually impaired)

OK Cancel

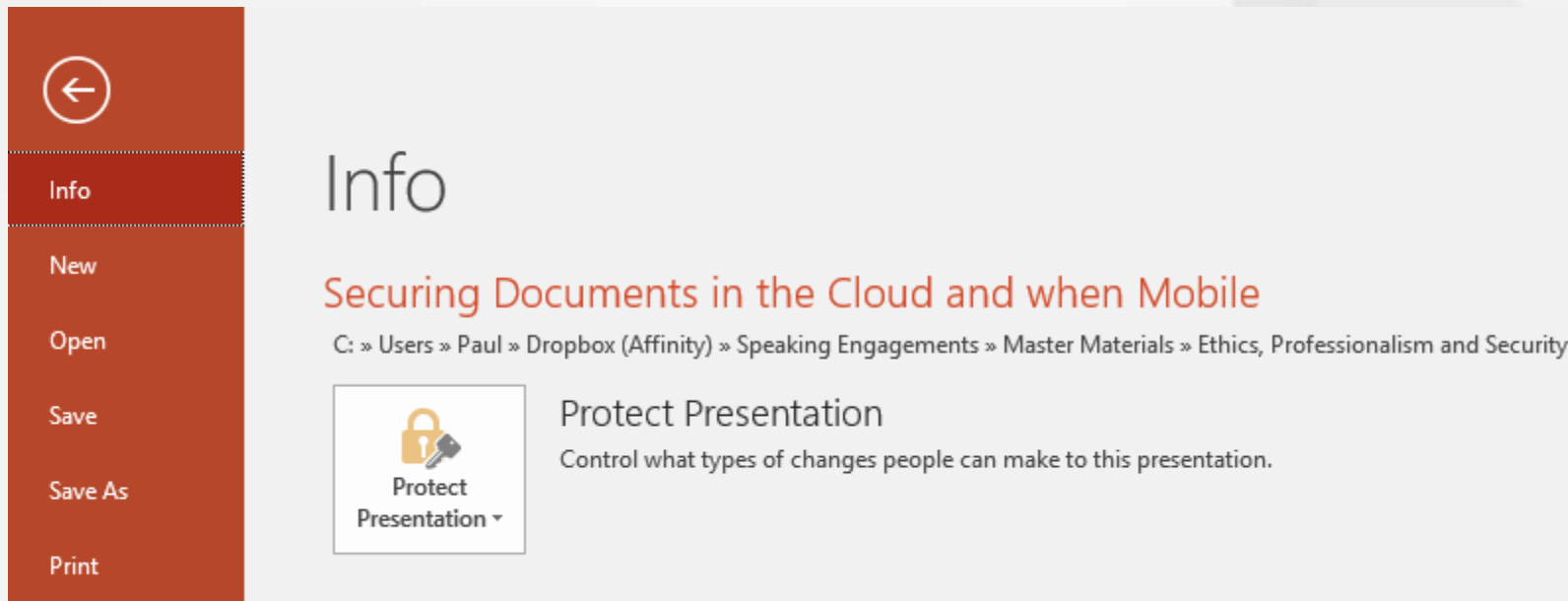
# Native Program Encryption

► **Word: File > Info > Protect**



# Native Program Encryption

## ► PowerPoint: File > Info > Protect



The screenshot shows the PowerPoint interface with the 'Info' pane open. The left sidebar contains a back arrow icon and menu items: Info, New, Open, Save, Save As, and Print. The 'Info' pane displays the title 'Info' and the subtitle 'Securing Documents in the Cloud and when Mobile'. Below this is the file path: 'C: » Users » Paul » Dropbox (Affinity) » Speaking Engagements » Master Materials » Ethics, Professionalism and Security'. The 'Protect Presentation' option is highlighted, featuring a lock icon and the text 'Protect Presentation' with a dropdown arrow. A description below reads: 'Control what types of changes people can make to this presentation.'

# Need Encryption?



## Device Security and Compliance

Your files are always protected, even if one of your devices is lost or stolen. You can prevent access to any device with a click of a button.



## Share Encrypted Files

Share encrypted folders and files natively with Dropbox or using Sookasa secure links. Sookasa restricts access only to people you authorize. Control access to your data in real-time even after the files have been shared.





# Need Encryption?

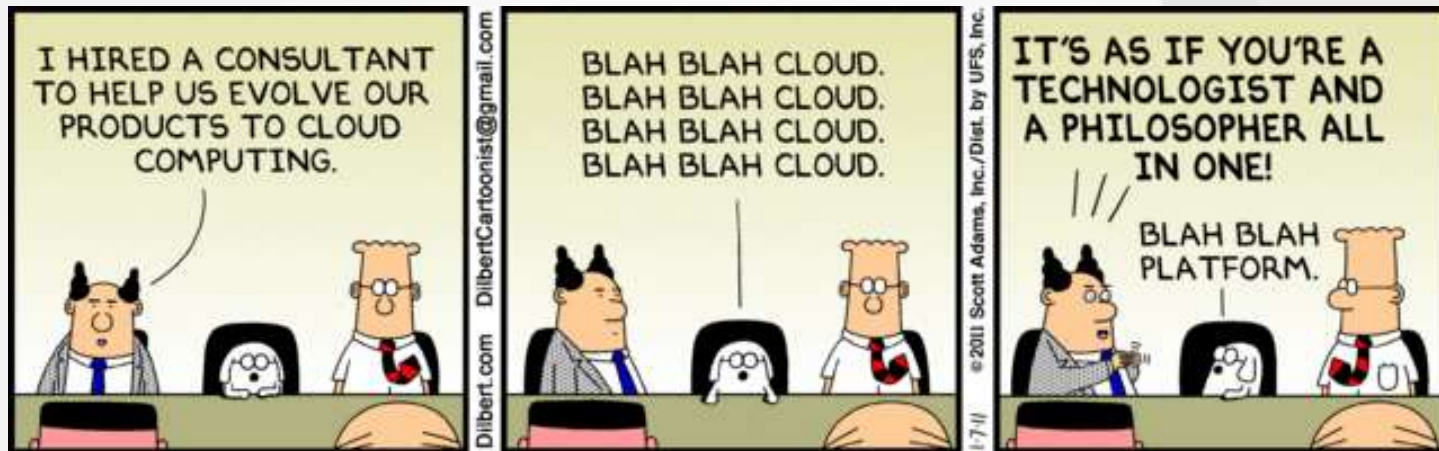


## Supported Providers

Boxcryptor supports more than 20 cloud storage providers



# Cloud Applications for Lawyers



# Hosted Servers

- ▶ **Procirrus.com**
- ▶ **MindShift.com**
- ▶ **Rackspace.com**



# Case Management Options

- ▶ **ActionStep**
- ▶ **Advologix**
- ▶ **Centerbase**
- ▶ **Clio**
- ▶ **Cosmolex**
- ▶ **MyCase**
- ▶ **RocketMatter**
- ▶ **SmokeBall**

# Time, Billing & Accounting Options

- ▶ **QuickBooks Online**
- ▶ **Bill4Time**
- ▶ **Legal Billing**
- ▶ **Toggl**
- ▶ **FreshBooks**
- ▶ **Timesolv Legal**
- ▶ **Case management options above**
  - ▶ **Often need link with QuickBooks online**

# Time Tracking

Chrometa ([www.chrometa.com](http://www.chrometa.com))

## Automatically Track Billable & Project Time












Create Accurate Timesheets & Invoices Effortlessly - Without Notes or Timers

### Capture Your Computer Time Automatically

Chrometa captures every minute of your time as you work on your PC and/or Mac.

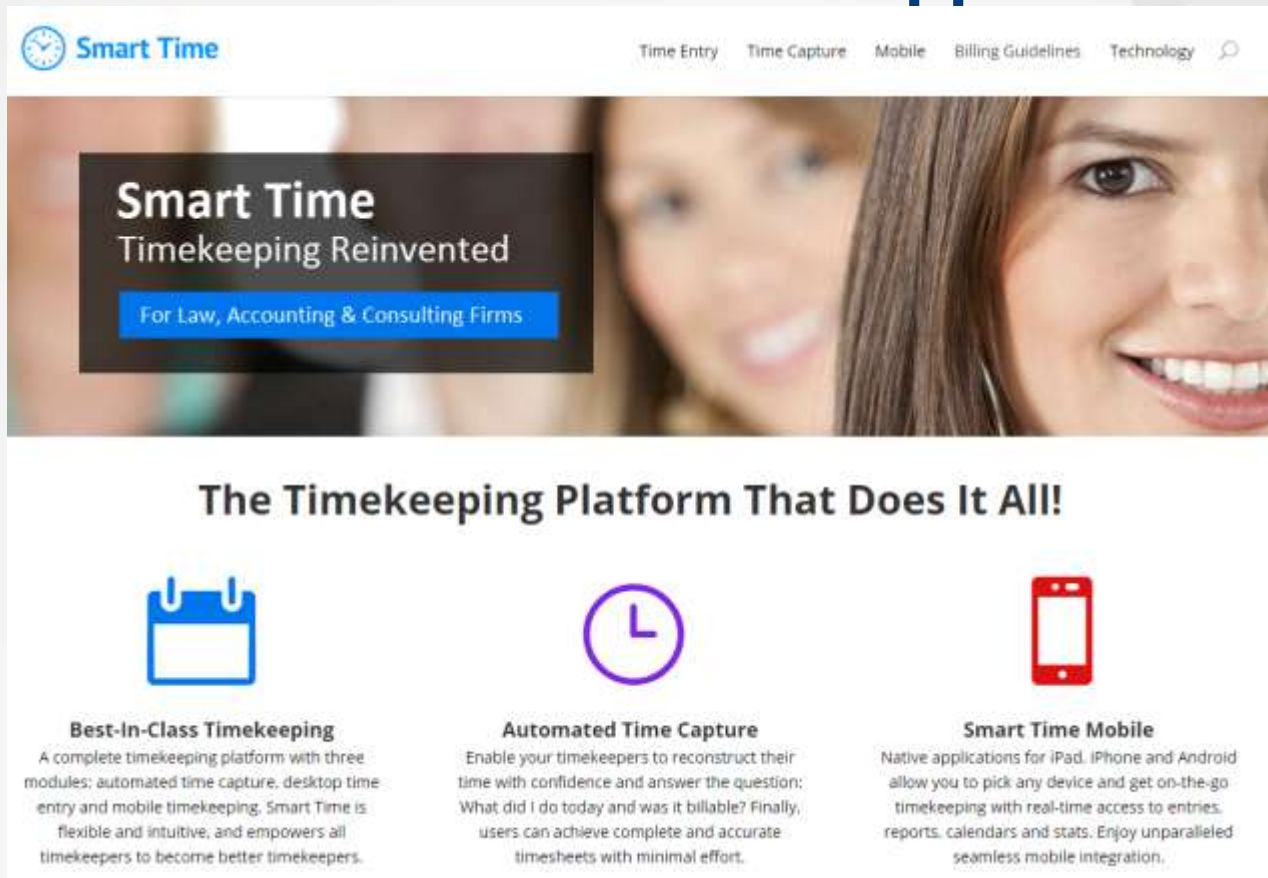
It acts as your personal timekeeper by recording how long you are working in an application, specifically noting what file or email you are working on, creating a time entry for you.

#### Computer Time

	Description	% of Time	Time Spent
	Google Chrome (5 Entries)		11m 9s
	Microsoft Office Outlook (4 Entries)		9m 17s
	Re: Equity comp for early employees FOLDER: Lawyers FROM: josh@morgandorado.com TO: brett@chrometa.com		9m 17s
	Microsoft Office Word (1 Entries)		8m 34s
	Vandelay Operating Agreement.docx - Microsoft Word		8m 34s
	Adobe Reader (1 Entries)		8m 18s
	The Economist - Billable Hour Not Dead.pdf - Adobe Reader		8m 18s

# Time Tracking

## Smart Time - [www.smarttimeapps.com](http://www.smarttimeapps.com)



The screenshot shows the homepage of the Smart Time website. At the top left is the Smart Time logo, and at the top right are navigation links for Time Entry, Time Capture, Mobile, Billing Guidelines, and Technology. The main banner features a photo of smiling women and a dark box with the text 'Smart Time Timekeeping Reinvented' and a blue button that says 'For Law, Accounting & Consulting Firms'. Below the banner is the headline 'The Timekeeping Platform That Does It All!' followed by three feature columns: 'Best-In-Class Timekeeping' with a calendar icon, 'Automated Time Capture' with a clock icon, and 'Smart Time Mobile' with a smartphone icon. Each column contains a brief description of the feature.

**Smart Time**  
Timekeeping Reinvented

For Law, Accounting & Consulting Firms


**The Timekeeping Platform That Does It All!**

**Best-In-Class Timekeeping**  
A complete timekeeping platform with three modules: automated time capture, desktop time entry and mobile timekeeping. Smart Time is flexible and intuitive, and empowers all timekeepers to become better timekeepers.

**Automated Time Capture**  
Enable your timekeepers to reconstruct their time with confidence and answer the question: What did I do today and was it billable? Finally, users can achieve complete and accurate timesheets with minimal effort.

**Smart Time Mobile**  
Native applications for iPad, iPhone and Android allow you to pick any device and get on-the-go timekeeping with real-time access to entries, reports, calendars and stats. Enjoy unparalleled seamless mobile integration.

# Transcription Services

- ▶ **SpeakWrite - [www.speakwrite.com](http://www.speakwrite.com)**
  - ▶ Telephone
  - ▶ Smartphone Apps (iPhone, BlackBerry and Android)
  - ▶ SpeakEasy Dictation Software (for your computer)
  - ▶ Digital Dictation Device
  - ▶ Recorded Tapes (play the tape  r mail)
  - ▶ FAX in your work
  - ▶ FTP Upload and Delivery

Type of Work	Rate
General	1.25 cents per word
Legal	1.5 cents per word
Group Conversations	2.0 cents per word

Example: 28 page document  
– 10,511 words  
Therefore, \$164.27



# Transcription Services

- ▶ **LawDocsXpress - [www.lawdocsxpress.com](http://www.lawdocsxpress.com)**
- ▶ **Document preparation**
- ▶ **Document review & coding (Summation, CaseMap, Concordance)**
- ▶ **Email management**
- ▶ **Time & billing**
- ▶ **E-filing**
- ▶ **IP services**



# Credit Card Processing

- ▶ **LawPay** (legal)
- ▶ **LawCharge** (legal)
- ▶ **Beacon Processing Solutions** (legal)
- ▶ **Virtual Payment Systems** (legal)
- ▶ **Square**
- ▶ **PayPal**

# Word Processors

- ▶ **Google Docs**



- ▶ **Microsoft Office 365/Web Apps**



- ▶ **Zoho Writer**



- ▶ **ThinkFree Office**



- ▶ **HyperOffice**



# Word Processors

M

See also

- [Compare all plans](#)
- [Office 365 ProPlus](#)
- [Education plans](#)
- [Government plans](#)
- [Nonprofit plans](#)
- [Office for home](#)
- [FAQ](#)

## Office 365 Small Business

## Office 365 Small Business Premium

## Office 365 Midsize Business

Please note: You cannot combine the small business plans with Office 365 Midsize Business.<sup>1</sup>

**\$5.00** user/month

annual payment of \$60.00

Buy now

Or \$6.00 user/billed monthly

**\$12.50** user/month

annual payment of \$150.00

Buy now

Free trial

Or \$15.00 user/billed monthly

**\$15.00** user/month

annual commitment

Buy now

Free trial

**User maximum:**

25 users

25 users

300

**Office applications:**

Subscription to Office for up to 5 PCs/Macs per user.

Desktop versions of:



Desktop versions of:



**Hosted email:**

Get business-class email,<sup>3</sup> shared calendars, 50 GB of storage space per user, and the ability to use your own domain name.



**Web conferencing, presence, and IM:**

# Document Management

## NetDocuments



# Remote Access

- ▶ **LogMeIn:**  
**[www.logmein.com](http://www.logmein.com)**
- ▶ **Gotomypc.com -**  
**[www.gotomypc.com](http://www.gotomypc.com)**
- ▶ **TeamViewer.com**

# Backup Services

- ▶ **Mozy Pro**
- ▶ **Mozy Home**
- ▶ **Carbonite**
- ▶ **iBackup**
- ▶ **CrashPlan**
- ▶ **SOS Online Backup**

# AUTOCORRECT



# Handling It

- ▶ **Training**
- ▶ **Management of others**
- ▶ **Simple steps**

# Autocorrect nightmare: Typo in Bill C-45 legalizes cannibalism instead of cannabis

5 DAYS AGO by **MARY GILLIS**

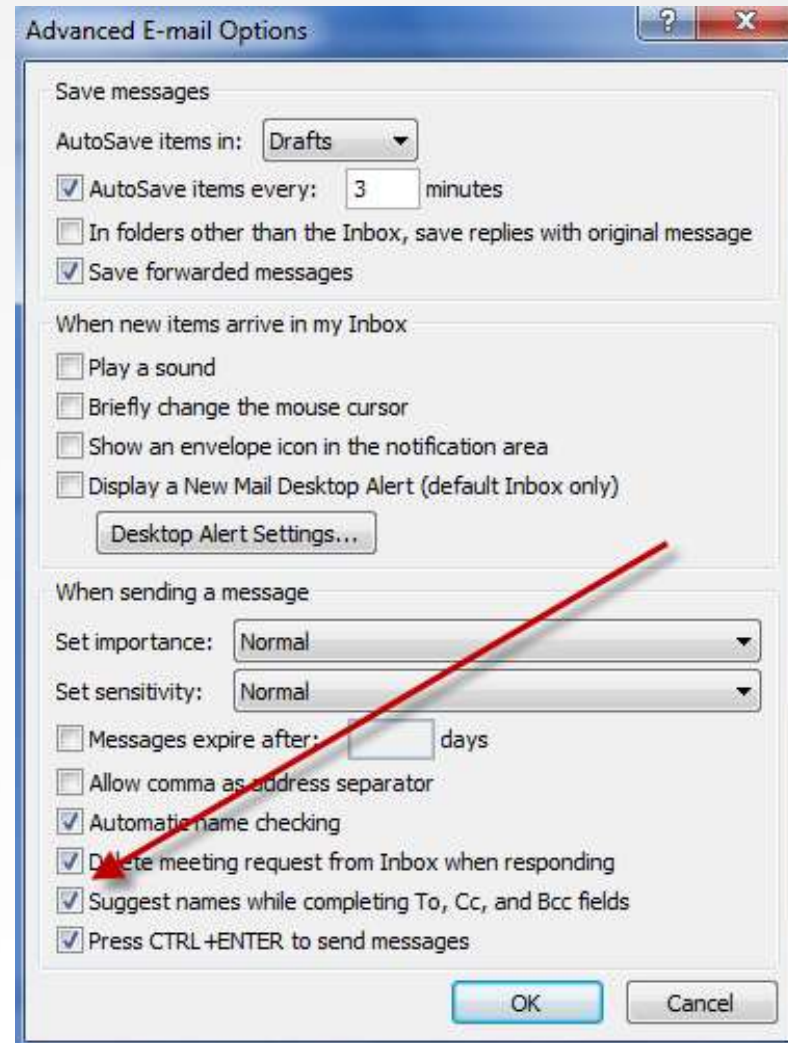


*Photo Credit*

OTTAWA – Canada is one step closer to the

# Turn Off Auto Complete?

- Tools
  - >Options
  - >Preferences
  - >E-mail Options
  - >Advanced E-mail Options.





**SLOW  
DOWN**

YOUR PC  
can be  
HIJACKED

# Security



# Protecting your data has never been more important

A laptop is  
**stolen** every  
**53**  
seconds



**46%**  
of lost laptops  
contain  
**confidential**  
data



**57%**  
are **not**  
**protected**  
with mobile  
security  
features



**\$49,246**

average value of a  
lost laptop

**>80%**  
cost is due to  
data breaches

**66%**

People are using a  
public cloud provider

**57 Stolen Computers**  
(BlueCross BlueShield  
Tennessee)

- 1 million personal health records unencrypted
- \$1.5M fine

**1 Stolen laptop** (NASA)

- 10K personnel records breached
- \$1M taxpayer funded remedy

**1 Stolen USB Key** (Alaska  
Medicaid)

- 501 user's patient data exposed
- \$1.7M fine



# Power Protection

▶ Surge Suppressors = minimum



▶ Uninterruptible Power Supply (UPS) = much better

▶ Check your VA rating

▶ Amps x 120 watts = VA

▶ Easy to overload!

▶ <http://tinyurl.com/2ejd6q>



# Router/Firewall/Switch

- ▶ **Should use hardware & software**
- ▶ **Hardware**
  - ▶ **Protects against hackers**
  - ▶ **Share internet connection**
  - ▶ **Network**





# Antivirus & Anti Spyware

## Antivirus

- ▶ Consider Microsoft Security (Vista or 7)
- ▶ Windows 8 – baked in

### More bad news for Apple after another Mac trojan is detected

Samantha Murphy  
April 17, 2012 - 8:47AM

Fresh off the news that more than 650,000 **Mac computers have been infected** with a nasty Trojan horse virus called "Flashback", another Apple threat is on the prowl.

### Flashback Ends Mac's No-Virus Reputation, Experts Say

Apr 10, 2012 11:40 AM EST | [28 Comments](#)

By [Neil J. Rubenking](#)

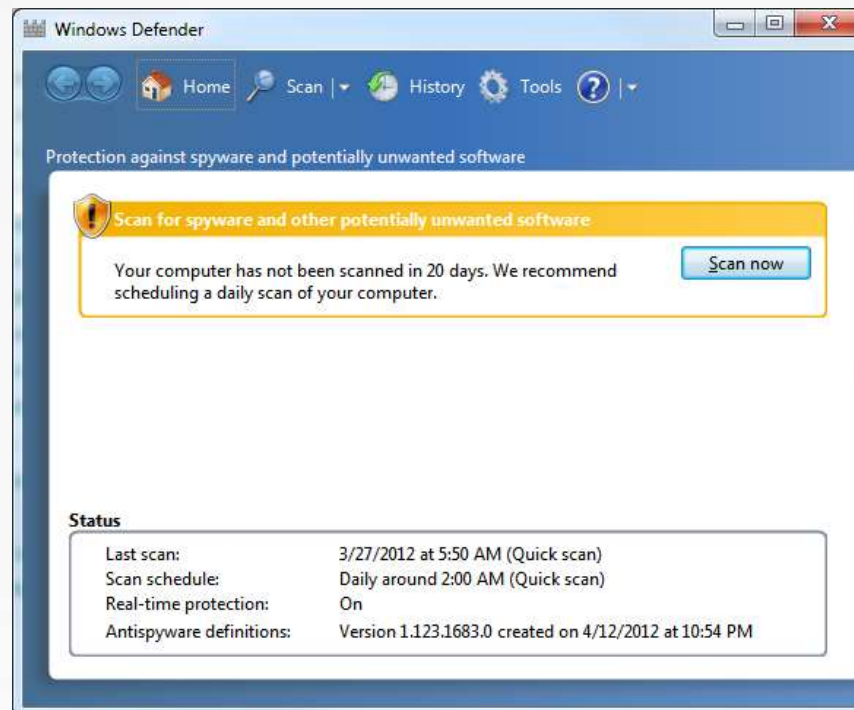


A year ago, in the wake of the [MacDefender outbreak](#), I warned Mac users that [it's time to install antivirus protection](#). Who knows, some users may even have listened. But well over a half-million didn't, as evidenced by the recent [Flashback fiasco](#). Is this the final nail in the coffin for the Mac's reputation as a virus-free environment? I asked experts from around the world.

# Antivirus & Anti Spyware

## Anti Spyware

- ▶ Keeps malware from being installed
- ▶ Never click on a link in an email

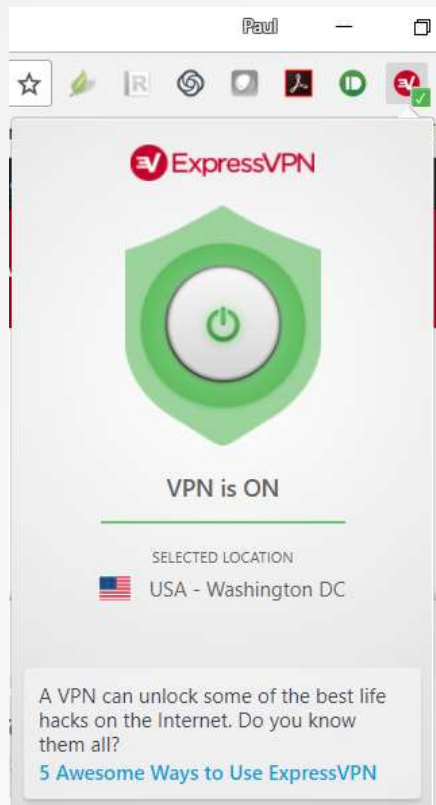


# Hard Drive Encryption

- ▶ **Symantec Drive Encryption**
- ▶ **SecuriKey Pro**
- ▶ **AlertBoot**
- ▶ **SecureDoc Full Disk Encryption**
- ▶ **Windows BitLocker**
- ▶ **Mac FileVault**

# Protect Your Connection

[www.expressvpn.com](http://www.expressvpn.com)



## Benefits

Browse anonymously

Hide your IP

Protect your privacy

Encrypt traffic

# Protect Your Connection

[www.expressvpn.com](http://www.expressvpn.com)

MOST POPULAR

1 Month

\$ **12.95**

per month

Billed every month.  
30-day money-back guarantee.



12 Months

\$ **8.32**

per month

Billed every 12 months.  
30-day money-back guarantee.

6 Months

\$ **9.99**

per month

Billed every 6 months.  
30-day money-back guarantee.

All amounts shown are in USD.

# Disaster Planning & Backup



# **Top Five Tips For Preventing Unthinkable Disasters From Crippling Your Small Law Firm**

- ▶ **Go paperless (or less paper)**
- ▶ **Sever Your Servers With Hosted Communications**
- ▶ **Centralized Document and Practice Management**
- ▶ **Laptops Over Desktops Plus Smartphones and iPads**
- ▶ **Home Office Essentials (laptop, VoIP phones, headset with a microphone, a printer, and a scanner)**

# Backup Devices

- ▶ **Tape drives**
- ▶ **External hard drives**
- ▶ **Network attached storage**





# Backup Recommendations

- ▶ **No Excuses – every day**
- ▶ **Should be Unattended**
- ▶ **Backup Everything, not just data**
- ▶ **Check the Log**
- ▶ **Secure Offsite Copy**
- ▶ **Run Test Restores**
- ▶ **Have a Secondary Method (cloud)**

# Personal Backup Recommendation

## ▶ Carbonite Personal Plus

▶ Unlimited storage

▶ File backup to cloud

▶ Mirror to external drive

▶ Versions

▶ \$99/year

▶ WD My Book 3 TB USB 3.0  
\$110

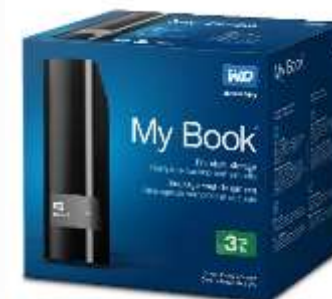
**TOP SELLER**

Plus  
**\$99<sup>99</sup>**  
per year/per computer

**UNLIMITED CLOUD STORAGE SPACE**  
for a home office or family computer\*  
WINDOWS

**INCLUDES:**

- ✓ Automatic cloud backup
- ✓ Sync, share and access files remotely with free apps
- ✓ U.S.-based **Phone**, Email & Chat support, 7 days a week
- ✓ External hard-drive backup
- ✓ Mirror Image backup ?



# Server Backup Options

- ▶ **Hosted server – covered**
- ▶ **SaaS – covered**
- ▶ **On premises server – talk to IT pro**

# Mobile Devices

- **Data Protection (encryption)**
- **Remote Wipe**



iCloud   
Affinity  
CONSULTING

# Mobile Device Safety

- Enable Passcode
- Track Device Feature!







**iCloud**

# iCloud Backup



Content Everywhere



iCloud Photo Sharing



Find My iPhone



iWork and iCloud



Apps and iCloud



Safari



iCloud Keychain



Mail, Calendar,  
and Contacts



Backup and Storage



iCloud.com





# Find My iPhone/iPad

- **Cost: FREE**
- **[www.icloud.com](http://www.icloud.com)**

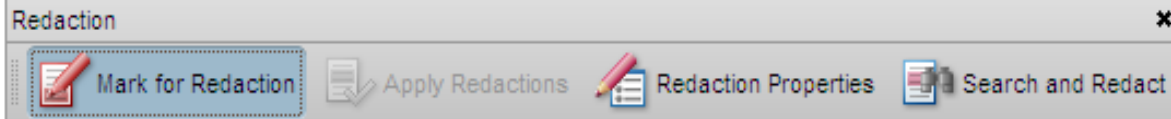


# Proper Redaction

# NSA Document on Word to PDF

**The National Security Agency released guidelines in December 2005, entitled, "Redacting with Confidence: How to Safely Publish Sanitized Reports Converted From Word to PDF." The document is intended to be a guide for government agencies on how to sanitize Word documents before they are published. The paper is available at <http://www.fas.org/sgp/othergov/dod/nsa-redact.pdf>**

# PDF Redaction Tool in Adobe Acrobat Pro



# E-Mail Communications

**General Rule: No Duty to Encrypt**

**Best Practices: Encrypt Sensitive  
Email**

# E-Mail Communications

A lawyer may transmit information relating to the representation of a client by unencrypted email sent over the internet without violating the Model Rules of Professional Conduct because the mode of transmission affords a reasonable expectation of privacy ... . A lawyer should consult with the client and follow her instructions as to the mode of transmitting highly sensitive information. *Opinion 99-413, American Bar Association (March 10, 1999).*

# **Model Rule 1.6 on Confidentiality of Information**

- (a) A lawyer shall not reveal information relating to the representation of a client, including information protected by the attorney-client privilege under applicable law, unless the client gives informed consent, the disclosure is impliedly authorized in order to carry out the representation, or the disclosure is permitted by division (b) or required by division (c) of this rule.

# E-Mail Communications

- 1. Advise clients in engagement letter or fee agreement that you use email and warn of the risks (get their consent)(*Penn requires it*).**
- 2. If highly sensitive, just do it to be safe. Save it as a PDF with a password and send as an attachment (without the password in the email!)(*New Jersey requires it*).**



# Protected Trust Email Encryption



# Symantec Desktop Email Encryption



The screenshot displays the Symantec Enterprise website interface. At the top left is the Symantec logo and the word "Enterprise". On the top right, there is a globe icon for "United States" and a shopping cart icon for "Shopping". A navigation bar below the header contains four main categories: "Products & Solutions", "Support & Communities", "Security Response", and "Try & Buy". Below this is a breadcrumb trail: "Products & Solutions / Products / Encryption Family / Desktop Email Encryption".

## Symantec Desktop Email Encryption

### End-to-End email encryption for laptops and desktops

Symantec Desktop Email Encryption provides an end-to-end email encryption solution that automatically encrypts and decrypts email directly between clients without the need to log into a third-party website. Email remains encrypted on internal mail servers or when email is outsourced to the cloud.

 **WHITE PAPER : Choosing an Email Encryption Solution**

**BUY NOW**

**Mobile Encryption.** Extend the ease and comfort of email encryption to your users' mobile devices.

# AppRiver

## EMAIL ENCRYPTION

Avoid compliance issues and send confidential data with confidence. Get CipherPost Pro™ from AppRiver and experience true user-to-user encryption with just one click.

[FREE 30-day Trial >](#)



- [www.appriver.com](http://www.appriver.com)

# TrendMicro

## Email Encryption

### The easiest email encryption for achieving compliance

Keep your email confidential, simplify compliance, and reduce management costs by removing the complexity from encryption.



#### Identity-based encryption and hosted key service

- Requires only a recipient's email address
- Lowers IT costs with our Hosted Key Service
- Ensures access to email with 24x7 Key Recovery

Combine solutions to fit your needs:

**Email Encryption Client** empowers end-users to encrypt email

**Email Encryption Gateway** automates policy-based encryption

**Hosted Email Encryption** offers a maintenance-free service

[See Flash Demo](#)

#### GET ONLINE SUPPORT

Speak with a Sales Specialist:  
1-877-218-7363

- > Find a reseller
- > Have sales contact me

#### SIMPLIFY COMPLIANCE

[Learn what's needed](#)

ENCRYPT PRIVATE EMAIL

[View Demo](#)

#### FREE TRIALS

[Email Encryption Client](#) >

[Email Encryption Gateway](#) >

[Hosted Email Encryption](#) >

• [www.trendmicro.com](http://www.trendmicro.com)

# Encrypted Email

- ▶ **Protected Trust –**  
[www.protectedtrust.com](http://www.protectedtrust.com)
- ▶ **Rpost -** [www.rpost.com](http://www.rpost.com) -  
registered email service +  
encrypted email
- ▶ **ZixCorp -**  
[www.zixencryption.com](http://www.zixencryption.com)
- ▶ **SendItCertified.com**

Protected  **Trust**<sup>®</sup> | Protecting the Privacy of  
Digital Information Assets



**zix**mail.

 **SendItCertified**<sup>™</sup>  
SIMPLE. SECURE. ALWAYS AVAILABLE.

# Encrypted Email

- ▶ **EchoWorx –**  
**<http://tinyurl.com/lephmrq>**
- ▶ **Hushmail – [www.hushmail.com](http://www.hushmail.com)**
- ▶ **Hightail - <https://www.hightail.com/>**



# Proper Disposal of Computer Equipment



You Must Take Reasonable  
Steps to Safeguard Client  
Information and Confidences

# Copy Machines



Video: <https://www.youtube.com/watch?v=6pIFUOav2xE>

You Must Take Reasonable  
Steps to Safeguard Client  
Information and Confidences

# Old Computer Equipment

- ▶ **Use a Service (PCdisposal.com)**
- ▶ **Do-It-Yourself (Dban, Cybercide, Killdisk, or OnTrack DataEraser, etc.)(free-\$30)**
- ▶ **DOD Sanitizing Standard 5220.22-M**



DOWNLOAD

[ABOUT](#) | [HELP](#)

For 100% secure data erasure with audit-ready reporting, try [Blancco 4](#) for free.

## Data Wiping Software

DBAN is free erasure software designed for the home user. It automatically deletes the contents of any hard disk that it can detect. This method can help prevent identity theft before recycling a computer. DBAN is also a commonly used solution to remove viruses and spyware from Microsoft Windows installations.

However, DBAN users should be aware of some product limitations, including:

- No guarantee of data removal (e.g. DBAN does not detect or securely erase SSDs)
- No audit-ready reporting for regulatory compliance
- Limited hardware support (e.g. no RAID dismantling)
- No customer support or regular software updates

Professional data erasure tools are recommended for company and organizational users. For secure data erasure with audit-ready reporting, [contact Blancco](#) or [download a free evaluation license](#).





**Scrap Solutions**

Computer & Electronics Recycling / IT Asset Recovery

[Home](#) [About Us](#)

## Complete Hard Drive Destruction Services

To prevent data theft only hard drive shredding can provide complete peace of mind that your data is 100% completely destroyed.

<http://www.e-scrap.com/cycling.com>

1-800-457-8333

Nationwide Pickup

## What are the Steps to Work with Us?



### First Step

We prepare a customized quote based on your project needs.



### Second Step

We schedule the pick-up or on-site shredding of your hard drives.



### Third Step

We arrive per our schedule and complete the shredding procedure.



### Fourth Step

We can provide video and certification of your device destruction.



PCdisposal.com

[Customer Support Area](#)

HOME

SERVICES ▾

WHY PCD

FAQ

PRESS

NEWS

ABOUT US

REQUEST INFO



## THE NEXT LEVEL IN SECURE IT DISPOSAL

Welcome to the most secure computer disposal system in the industry, backed by a \$1,000,000 service guarantee!

[CLICK HERE TO LEARN MORE](#)

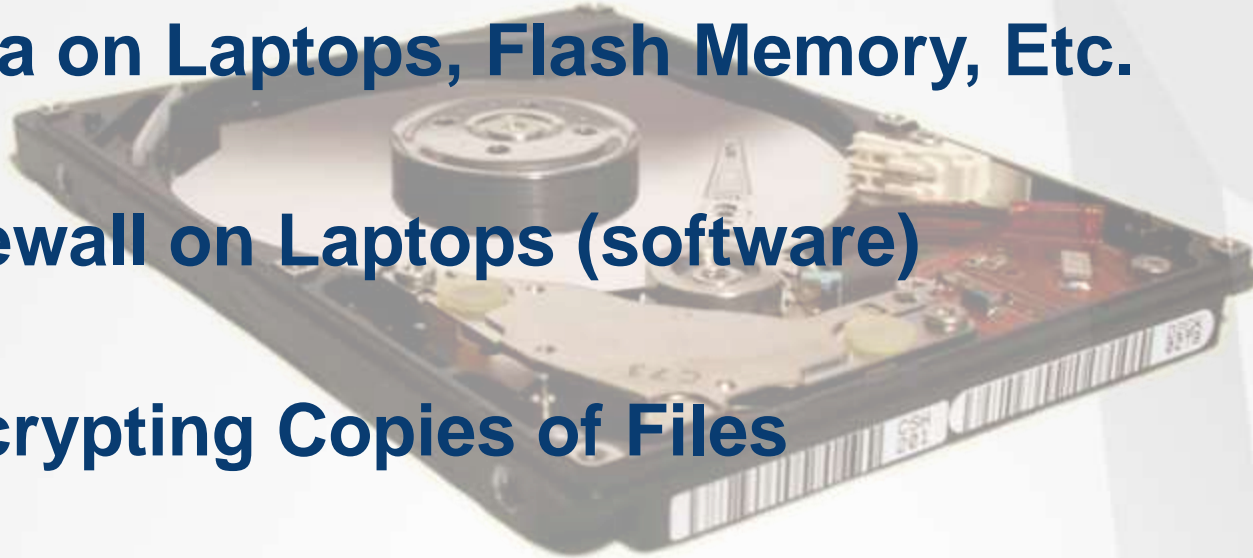
Corporate

Small Business

Consumer

# Remote Staff

- ▶ **Data on Laptops, Flash Memory, Etc.**
- ▶ **Firewall on Laptops (software)**
- ▶ **Encrypting Copies of Files**





# Lost or Stolen Equipment

- ▶ **Same duty to protect confidential and privileged client information.**
- ▶ **Criminal conduct excluded?**



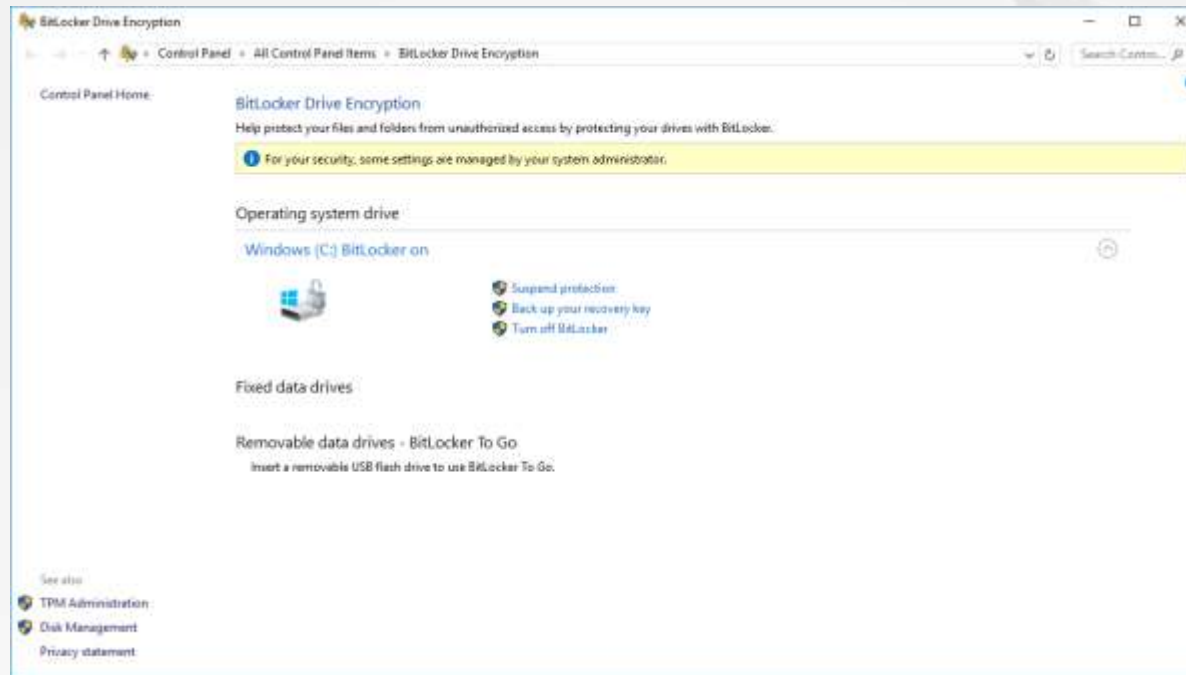
# Lost or Stolen Computer Equipment



Integrated fingerprint reader for security at your fingertips (select models)

**Mobile Devices with Biometrics  
and/or Full Disk Encryption**

# Lost or Stolen Computer Equipment



**BitLocker – Windows 10 (free)**

# Lost or Stolen Computer Equipment



## Symantec Full Disk Encryption

# Removable Storage

Encrypted Flash Drives!

\$7.00 on Amazon  
16 GB



# **Ransomware, Viruses, Malware, etc.**

# Failure to Backup Client Data

- ▶ **No Backup**
- ▶ **Backup not working (nobody checking)**
- ▶ **Tapes need replaced every year**
- ▶ **Files saved on local computers**

# Educate Users!

- ▶ **Don't Click on Unknown Links!**
- ▶ **Call Before you Click!**
- ▶ **Imposters are Tricky**
- ▶ **Be Slightly Paranoid**

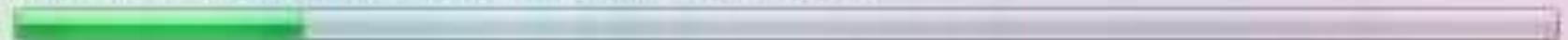


# Backup Portable Devices - Flash

- ▶ <http://lifehacker.com/5640801/usbflashcopy-automatically-identifies-and-backs-up-your-flash-drives>

Copying drive M: (4696-0364), profile: PrimaryFlash 3.82 GB (4696-0364)

File: M:\Personal\cards\Card PDFs\DSC\_1774.pdf



Files copied: 224

Time elapsed: 06:51

Hide

Cancel



10:15 AM  
9/17/2010

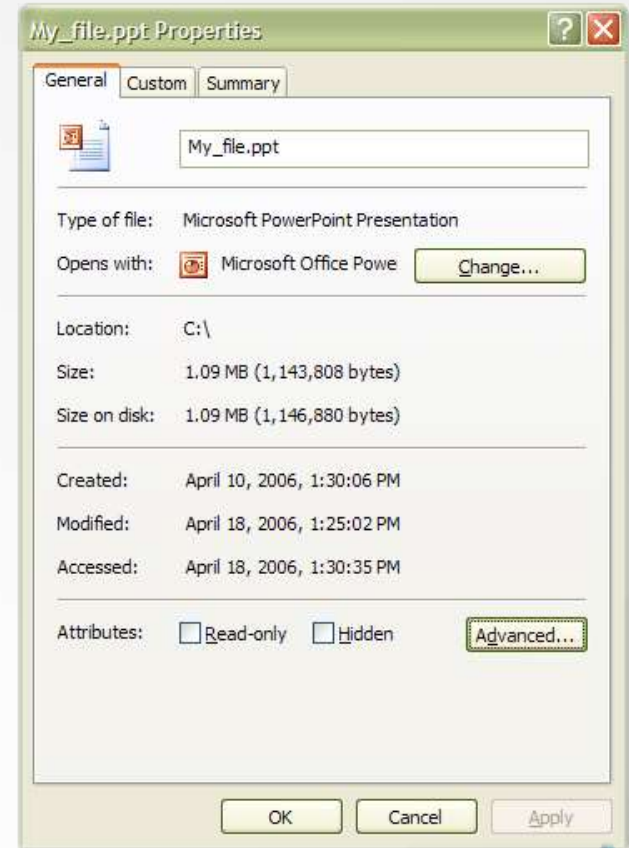
# Metadata

- ▶ **Data about data**
- ▶ **“Hidden” information**
- ▶ **Examples:**
  - ▶ **Word processing documents**
  - ▶ **Excel & PowerPoint files**



# Metadata

- ▶ **Authors**
- ▶ **Tracked Changes**
- ▶ **Hidden Text**
- ▶ **Document Properties**
- ▶ **Routing Slip Information**
- ▶ **Document Versions**
- ▶ **Revision Time**



# Metadata

- ▶ **Contrary to what some believe, it is also found in ...**
  - ▶ **WordPerfect files**
  - ▶ **Adobe Acrobat files**
  - ▶ **Photographs**



# Metadata – Why Does it Exist?

- ▶ **Microsoft's internal document management before DMS programs were created**
- ▶ **Find misplaced documents (MS Search)**
- ▶ **Search engines utilize metadata all the time (Copernic Desktop, Google Desktop)**

# The Metadata “Nightmare”?

- ▶ If you don’t know about it ... yes, it can be
  - ▶ Embarrassment
  - ▶ Ethical Violation
  - ▶ Malpractice



# Metadata Stories

## Hidden text shows SCO prepped lawsuit against BofA

By [Stephen Shankland](#) and [Scott Ard](#)

Staff Writer, CNET News.com

Published: March 4, 2004, 12:25 PM PST



**exclusive** The SCO Group filed lawsuits this week against DaimlerChrysler and AutoZone, but the Unix seller's attorneys also had prepared a complaint against Bank of America, according to a document.

A Microsoft Word document of SCO's suit against DaimlerChrysler, seen by CNET News.com, originally identified Bank of America as the defendant instead of the automaker. This revision and others in the document can be seen through powerful but often forgotten features in Microsoft Word known as invisible electronic ink.

# Metadata Stories

## Microsoft Word bytes Tony Blair in the butt

[Home](#) > [Privacy](#) > Blair's Iraq Dossier

Richard M. Smith ([rms@computerbytesman.com](mailto:rms@computerbytesman.com))

June 30, 2003

Microsoft Word documents are notorious for containing private information in file headers which people would sometimes rather not share. The British government of Tony Blair just learned this lesson the hard way.

Back in February 2003, 10 Downing Street published a dossier on Iraq's security and intelligence organizations. This dossier was cited by Colin Powell in his address to the United Nations the same month. Dr. Glen Rangwala, a lecturer in politics at Cambridge University, quickly discovered that much of the material in the dossier was actually plagiarized from a U.S. researcher on Iraq.

**British government was embarrassed by metadata that showed key Downing Street Dossier was plagiarized.**



## **IRAQ – ITS INFRASTRUCTURE OF CONCEALMENT, DECEPTION AND INTIMIDATION**

*This report draws upon a number of sources, including intelligence material, and shows how the Iraqi regime is constructed to have, and to keep, WMD, and is now engaged in a campaign of obstruction of the United Nations Weapons Inspectors.*

**Part One** focusses on how Iraq's security organisations operate to conceal Weapons of Mass Destruction from UN Inspectors. It reveals that the inspectors are outnumbered by Iraqi intelligence by a ratio of 200 to 1.

**Part Two** gives up to date details of Iraq's network of intelligence and security organisations whose job it is to keep Saddam and his regime in power, and to prevent the international community from disarming Iraq.

**Part Three** goes on to show the effects of the security apparatus on the ordinary people of Iraq.

While the reach of this network outside Iraq may be less apparent since the Gulf War of 1990/1991, inside Iraq, its grip is formidable over all levels of society. Saddam and his inner circle control the State infrastructure of fear.

*January 2003*

# Metadata – Action Plan

- ▶ Learn security settings in Word
- ▶ Learn about tracked changes
- ▶ Invest in metadata removal tool?



# Microsoft Word 2016

## File > Inspect Document

The screenshot shows the Microsoft Word 2016 interface. On the left is a dark blue ribbon with the 'File' tab selected. The 'File' ribbon contains the following options: Info, New, Open, Save, Save As, Save as Adobe PDF, Print, Share, Export, Close, Account, Feedback, and Options. The main area of the window displays the 'Info' pane for a document titled 'West Virginia and Ohio Summary - NEW - May 2107'. The path shown is 'C:\Users\Paul\Dropbox (Affinity)\Speaking Engagements\Master Materials\Ethics, Professionalism'. The 'Info' pane contains several sections: 'ndOffice Echo Backup' (with an 'nd' icon and 'Open Backup Folder' button), 'Protect Document' (with a padlock icon and 'Protect Document -' button), 'Inspect Document' (with a document icon and a red checkmark, highlighted by a red box, and a 'Check for Issues -' button), and 'Manage Document' (with a document icon and a magnifying glass, and a 'Manage Document -' button). The 'Inspect Document' section includes the text: 'Before publishing this file, be aware that it contains:' followed by a list item: '■ Document properties and author's name'. The top right corner of the window shows the text 'West Virginia and Ohic'.

West Virginia and Ohic

### Info

#### West Virginia and Ohio Summary - NEW - May 2107

C:\Users\Paul\Dropbox (Affinity)\Speaking Engagements\Master Materials\Ethics, Professionalism

**ndOffice Echo Backup**  
You can explore the backup folder with unsaved documents.

**Protect Document**  
Control what types of changes people can make to this document.

**Inspect Document**  
Before publishing this file, be aware that it contains:





- Document properties and author's name


**Manage Document**  
Check out document or recover unsaved changes.


There are no unsaved changes.



# Adobe Acrobat DC

## Protect > Remove Hidden Information

 Restrict Editing  Encrypt  Remove Hidden Information  More Options

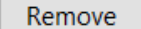
 Protect



 Remove Hidden Informati... X


 

**Status:**

Finding Hidden Information...Done X

 Remove

**Results:**  

▼  Cleveland OSBA December ^

- >  Metadata (2 items)
- Deleted or cropped cont
- Overlapping objects (1 p



DocsCorp cleanDocs: [www.docscorp.com/cleanDocs](http://www.docscorp.com/cleanDocs)  
\$45 per license/per year



# METADATA ASSISTANT

PCG METADATA ASSISTANT FOR OUTLOOK

The attachment in the E-mail you are sending contains a file with a .XLS extension.  
Would you like to check it with the Metadata Assistant now?

Analyze / Clean

Send Uncleaned

Clean, Send as PDF

Cancel Sending

Bypass this prompt from now on and go straight to the analysis.

Metadata Assistant: [www.payneconsulting.com](http://www.payneconsulting.com)  
\$89 per license

# Workshare Protect Metadata Removal Software

Metadata Removal: [www.workshare.com](http://www.workshare.com)  
\$29 per license

**LEGAL SOFTWARE  
CONSULTING, LLC**

Metadata Shootout Award Winner



Workshare Named  
Top 10 Legal Technology



SC Magazine Rates  
Workshare: 5 of 5 Stars



PC Magazine Rates  
Workshare: 4.5 of 5 Stars

# Metadata – Action Plan

- ▶ **Save as RTF is not an option (formatting)**
- ▶ **Same issues in WordPerfect – less prevalent because not widely used**
- ▶ **Exchange PDFs - good option (but still can contain metadata)**





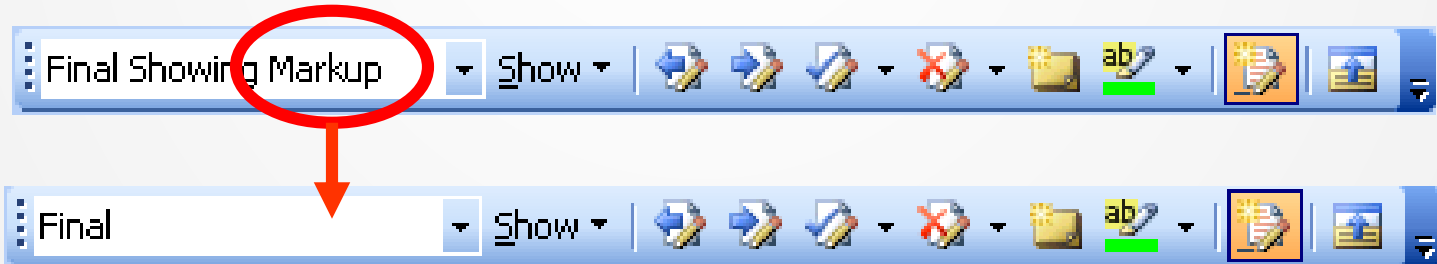
# Metadata – PDF Options

- ▶ **PDFs contain metadata**
- ▶ **Some PDFs can be edited**



# Remove Metadata when Creating PDF from Word

- Security Settings in Word (Privacy Settings)
- Do not display “Markup” when saving as a PDF!



# PDF Security Settings

- ▶ **Password to Open**
- ▶ **Assign Password to Edit**
- ▶ **Restrict Copying of Text and Images**
- ▶ **Allow Printing**



# Passwords

- ▶ **Always use something!**
- ▶ **6-8 not enough. 12 is now the standard.**
- ▶ **Combine**
  - ▶ **Letters — A a J j R r**
  - ▶ **Numbers— 1 2 3 4 5**
  - ▶ **Characters — @ # \$ % &**

# Passwords

- ▶ **Hard to remember all? YES!**
- ▶ **Phrase**
  - ▶ **mydogremeoisawesome**
  - ▶ **myd0gr0me0is@ws0me**

# Passwords



<https://www.youtube.com/watch?v=opRMrEfAlil>

**Time to crack an 8  
character password?**

**Less than 2 hours!**



**How about a 12  
character password?**

**17,134 years**

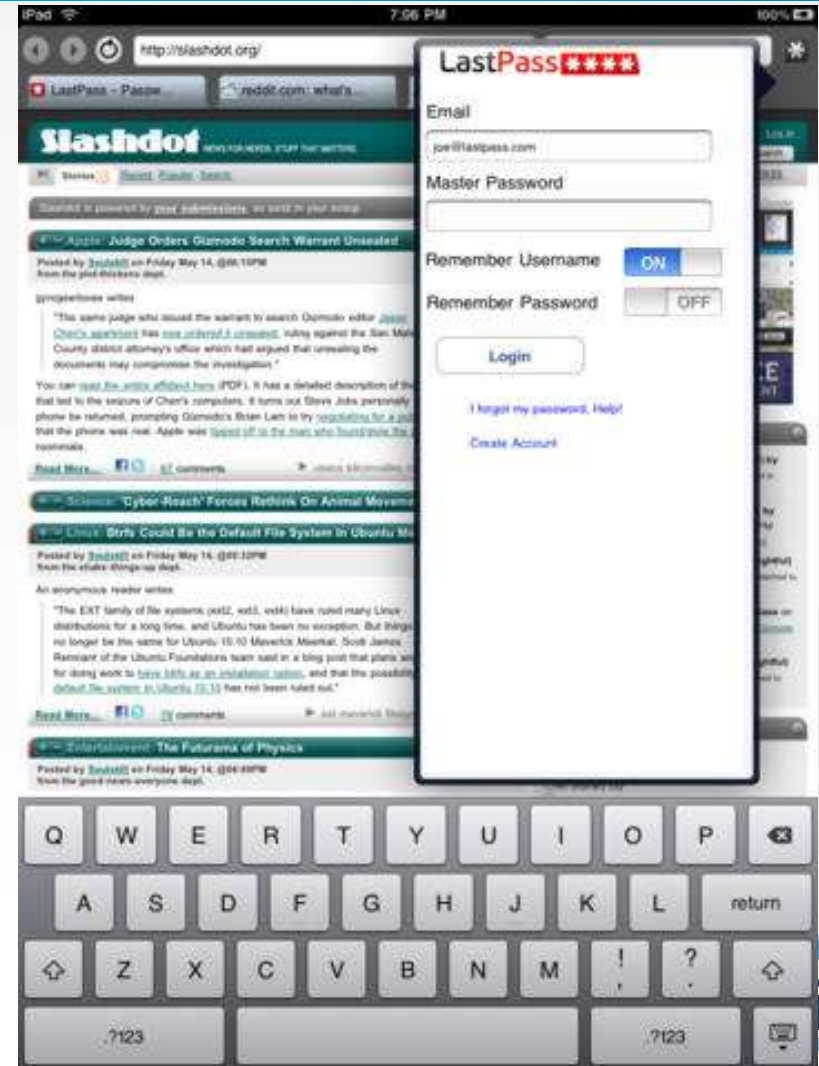
# How Secure is Your Password?

<http://howsecureismypassword.net/>



# LastPass (FREE)

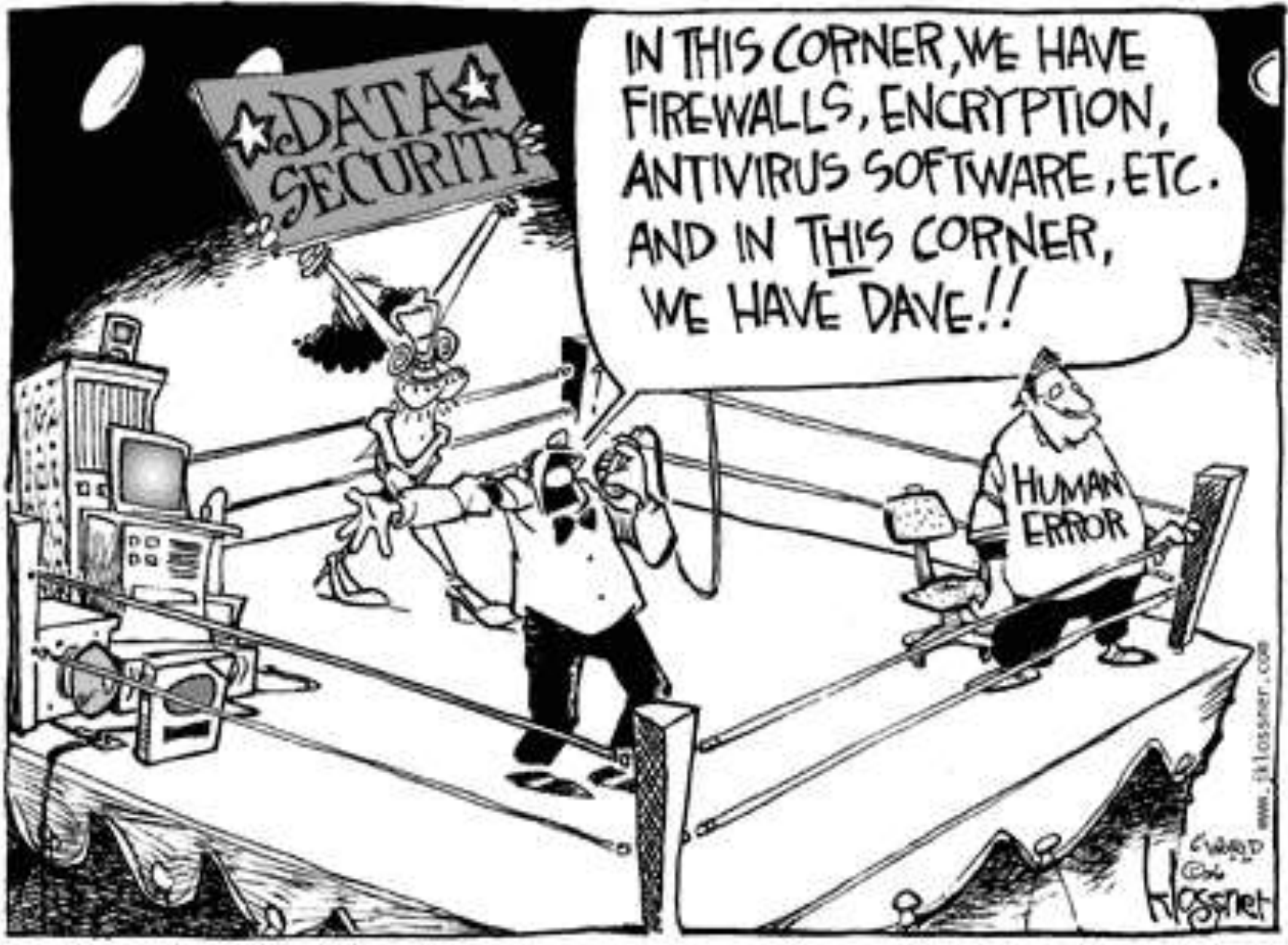
- Password Manager
- FREE
- All Platforms
- [www.lastpass.com](http://www.lastpass.com)



# OnePassword (FREE)

- **Password Manager**
- **FREE**
- **All Platforms**
- **<https://agilebits.com/onepassword/ipad>**





IN THIS CORNER, WE HAVE  
FIREWALLS, ENCRYPTION,  
ANTIVIRUS SOFTWARE, ETC.  
AND IN THIS CORNER,  
WE HAVE DAVE!!

★ DATA ★  
SECURITY

HUMAN  
ERROR

Hossnet

www.ihlossner.com

# QUESTIONS?

Name: Jennifer M. Ramovs, Esq. | Email: [jramovs@affinityconsulting.com](mailto:jramovs@affinityconsulting.com)

