AVANSIC®

E-Discovery & Digital Forensics

evidence at your fingertips.

Digital Security

Dr. Gavin W. Manes, Chief Executive Officer

About Us

- Avansic
  - E-discovery and digital forensics company founded in 2004 by Dr. Gavin W. Manes, former Computer Science professor
  - Scientific approach to ESI processing
  - Strong background in academics and research
  - Expert Project Managers – Brad Deavers and Meredith Lee
- Gavin W. Manes, Ph.D. – CEO
  - Nationally recognized expert in e-discovery and digital forensics
  - Frequently published in peer-reviewed journals, magazines, and proceedings
  - Presents to attorneys and professional organizations
  - Serves as an expert witness

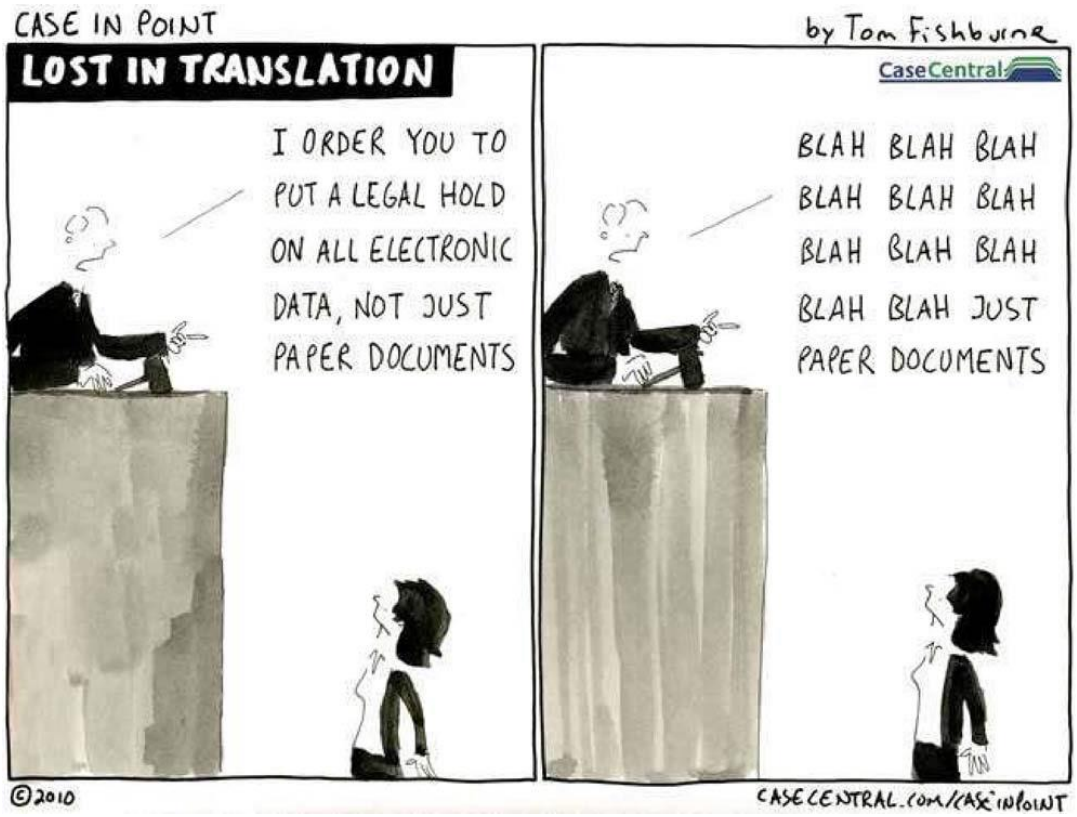
Agenda

- The Problem
- The Challenge
- Solutions

The Problem

- The Unknown
  - Attorneys
    - IT systems
    - Policies and procedures
    - Where's the data?
    - Encryption, passwords
  - Corporations
    - ESI Rules
    - ESI Costs
  - Government
    - Learning to request Natives

Communication and Vocabulary



- Good communication is critical – jargon is dangerous
- Technical terms can be defined MANY different ways

Recent Issues

- Key Decisions
  - Zubulake (the beginning)
  - New decisions every day
- Technology
  - Cloud [Public/Private]
  - Hacking
  - Encryption
  - Data sizes
- New Rules
  - ABA Ethics
  - HIPAA
  - Privileges

Tools in the Industry

- No one tool does everything WELL
- Use a tool for what it's best at – best in class
  - Case management tools
    - Litigation hold
    - Evidence management
    - Trial preparation
  - Collection tools
  - Processing tools
    - De-dupe
    - Clustering
    - Exceptions
  - Review tools
    - Redaction
    - Predictive review
  - Production tools

Who are the Players?

- Clients/Corporations
  - Organize and know where data is
  - Continue doing business – carefully
- Law Firm
  - Direct discovery
  - Plan and strategize EARLY
  - Choose technology partners [vendor, in-house, client]
  - Review and redact
- ESI vendor
  - Communicate well with parties
  - Recommend best course of action based on experience
  - Manage expectations
  - Execute project plan as efficiently as possible

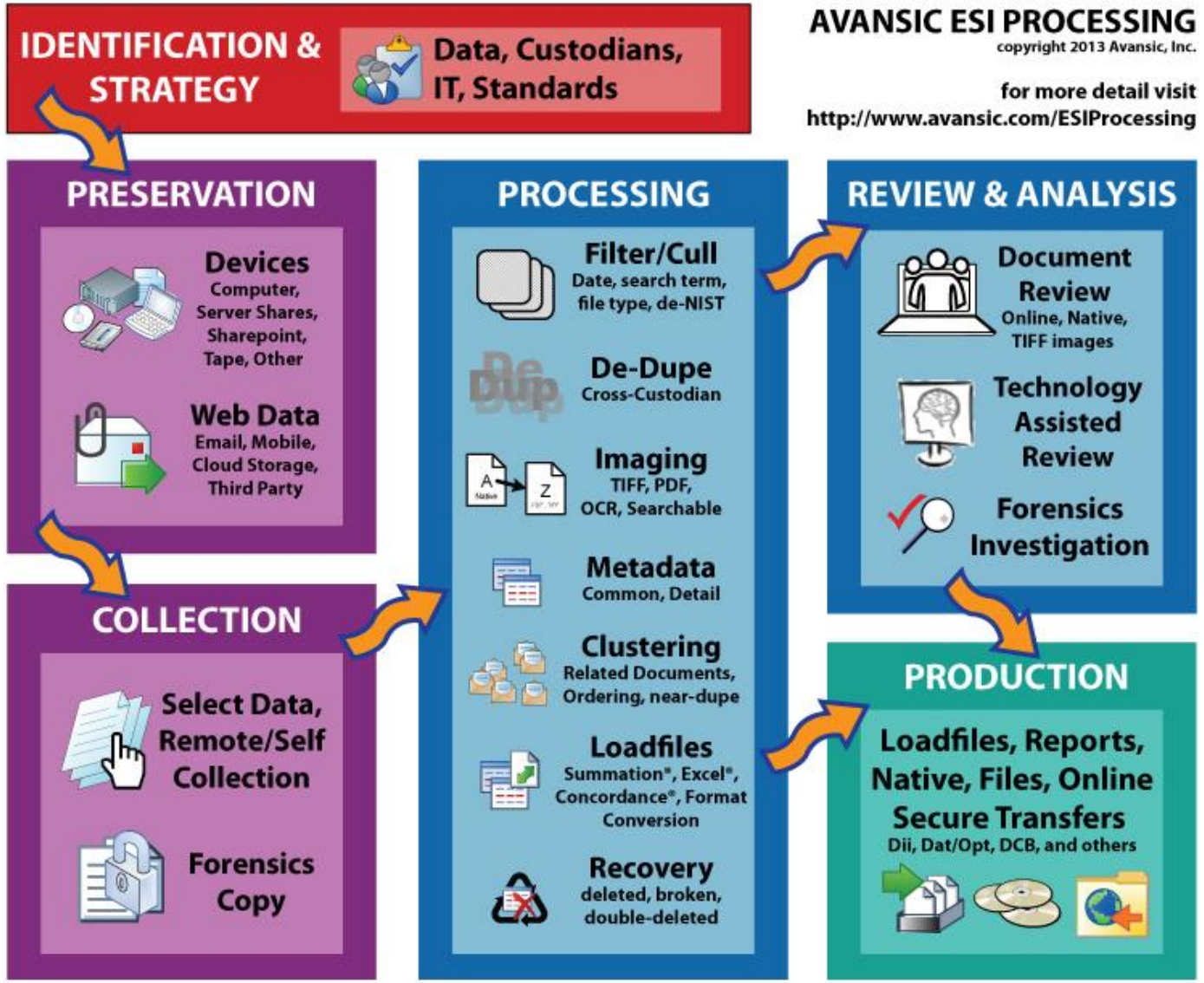
E-Discovery Goals

- Reduce risk and save money
  - Thorough preservation and collection (correct personnel)
  - Thoughtful processing and filtering
  - Review using modern and cost effective review tools (online)
- Why?
  - Human review time is the most expensive and error-prone part of the process
  - Let the computers filter out unresponsive documents using defensible methods
- How?
  - Planning ahead, crafting a strategy
  - Carefully selecting exactly the right vendor for the project
  - Using the appropriate team (including vendor)

E-Discovery and Security

- "Deepest Darkest Secrets"
- Challenges at every phase of e-discovery
  - Preservation: custody and control
  - Processing: no comingling, secure laboratory at vendor, encryption
  - Review: strong user authentication, auditing and tracking
  - Data storage: insecure file-sharing (Dropbox, etc.)
  - Communication: careful with non-encrypted email
- Each additional layer of security means a reduction in convenience
  - Time
  - Ease of technology use
  - Encryption

ESI Processing



What is the Cloud?

- Using a “shared pool of configurable computing resources” (NIST)
  - Gmail (or any other webmail)
  - DropBox or Google Documents
  - Offsite application hosting
  - Your office network
- Types
  - Software
    - Common
    - Use someone else’s software to perform an operation
    - “Software as a Service”
  - Hardware
    - Using someone else’s processing power
    - IE, animation company rendering graphics

Benefits & Challenges

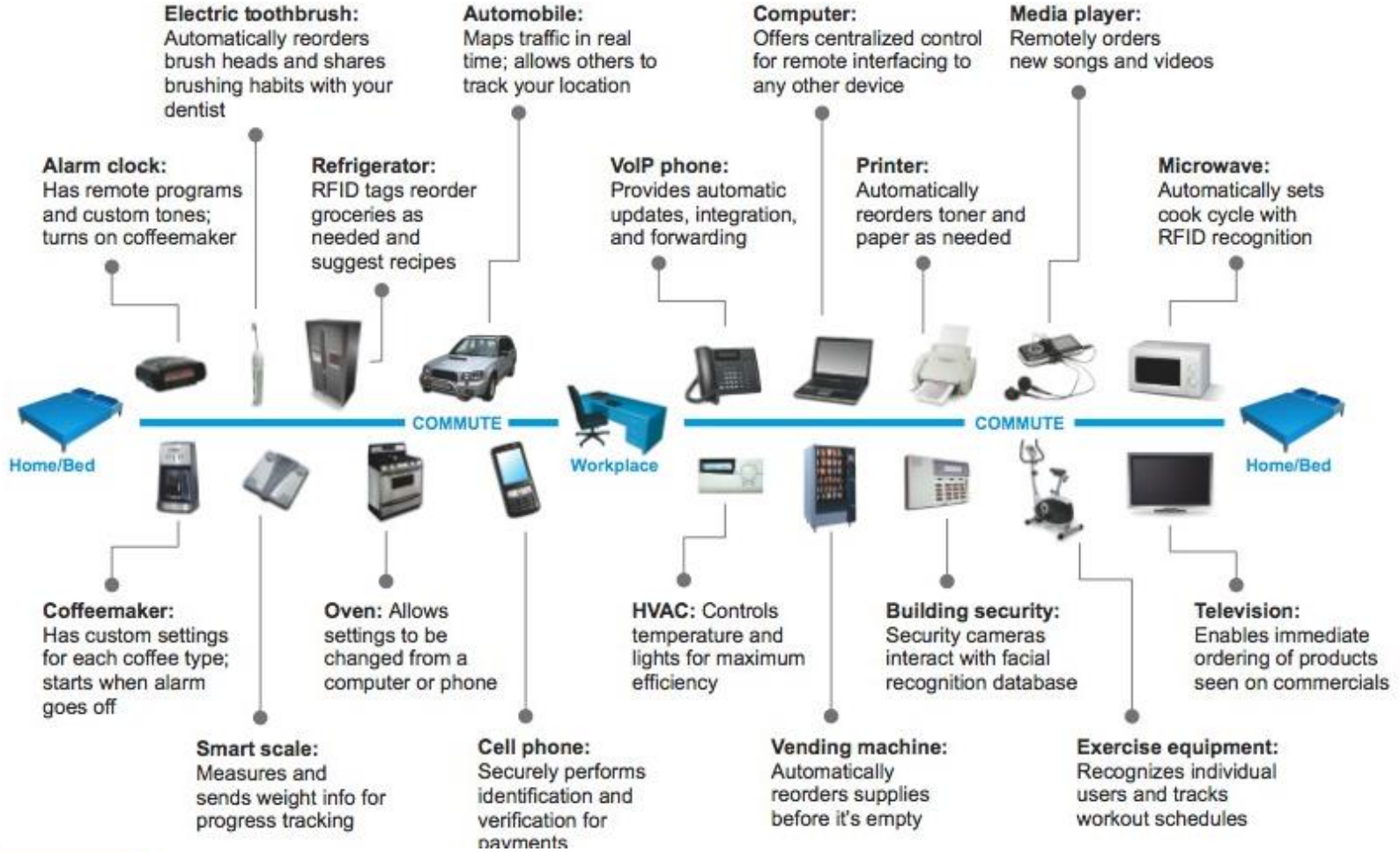
- Benefits
  - Outsourcing IT
    - Install, update, maintain software
    - Can be cost-effective
- Challenges
  - Privacy & security
    - Confidentiality issues
    - IT may not know the specific needs of legal professionals
    - Physical and remote access considerations
  - Disposal of data
    - Protective orders may require certified destruction
  - Jurisdiction
    - Cloud facilities may be outside the US

Cloud Considerations

- Evaluate your risks for:
  - Your firm's data
  - Your client's data
  - Opposing party's data
- Then, balance those risks
  - Continuous litigation hold – may be very difficult to use the cloud
  - Dispersed firm and litigation teams – may be worth the risk for the added convenience

Personal Security

Number of connected devices be more numerous than computers at least 5 to 1, growing geometrically.



Legal Considerations

- Dropbox, GoogleDocs and WebDAV (Cloud Storage)
  - Used by most apps to move data from an outside source to the iPad
  - Using cloud storage may create risks to your client's confidentiality
    - ABA Commission on Ethics 20/20 Working Group on the Implications of New Technology "Issues Paper Concerning Client Confidentiality and Lawyers' Use of Technology"
  - Limited other solutions

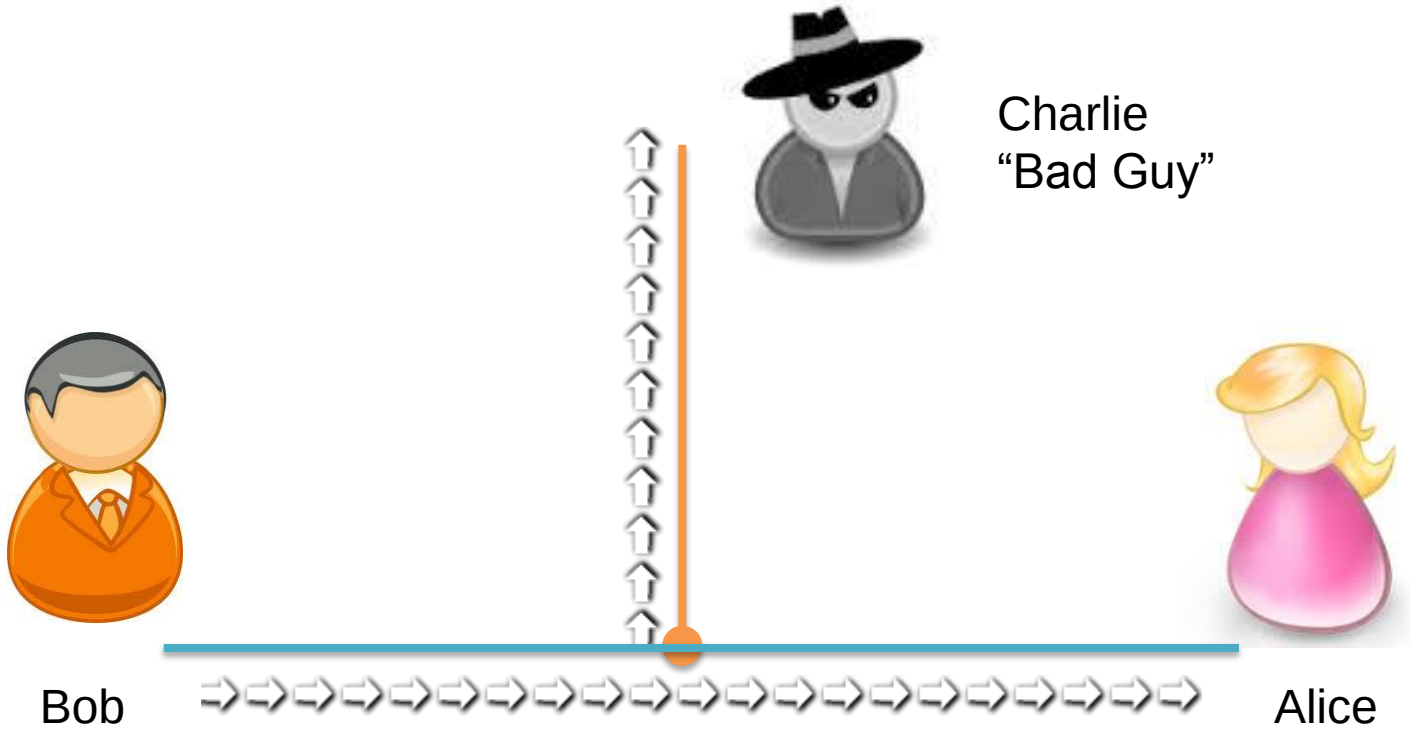
Encryption Basics

- Encoding messages so only authorized parties can read them
- Does NOT prevent interception
- Not just password protection
  - Boot from thumb drive/CD
- Every extra security measure introduces a loss of convenience
  - Additional software, key management, personnel training, IT burden

Plain Text Communication

No.	Time	Source	Destination	Protocol	Info
1096	48.512009	129.244.37.171	129.244.73.33	TCP	1037 > 110 [SYN] Seq=151274019
1097	48.512682	129.244.73.33	129.244.37.171	TCP	110 > 1037 [SYN, ACK] Seq=1811
1098	48.512737	129.244.37.171	129.244.73.33	TCP	1037 > 110 [ACK] Seq=151274019
1099	48.545471	129.244.73.33	129.244.37.171	POP	Response: +OK QPOP (version 3.
1100	48.545704	129.244.37.171	129.244.73.33	POP	Request: USER Forensics
1101	48.546267	129.244.73.33	129.244.37.171	TCP	110 > 1037 [ACK] Seq=181152723
1102	48.546798	129.244.73.33	129.244.37.171	POP	Response: +OK Password require
1103	48.546901	129.244.37.171	129.244.73.33	POP	Request: PASS thisishepassword
1104	48.641098	129.244.73.33	129.244.37.171	TCP	110 > 1037 [ACK] Seq=181152727
1322	58.543602	129.244.73.33	129.244.37.171	POP	Response: -ERR [AUTH] Password

Encryption Example



We should settle for $500K but only offer $200K now

4t;93qhg5;l8q3'u9gy7q13941yh4'gq3whrb9'3qh5ge

Case Study

- Malpractice suit against a hospital, so HIPAA applies
- Lead attorney…
  - Contacted the firm's IT to discuss requirements: NIST 800-111 for data at rest, NIST 800-52 or 800-77 for data in motion
  - Requested that any productions from opposing be encrypted
  - Interviewed e-discovery vendors, specifically about encryption
- Firm IT…
  - made changes in hardware, software and procedure to meet these
  - Created secure FTP and ability to encrypt email
  - Implemented two factor authentication

Case Study Con't

- Vendor
  - Had experience with data containing PHI
  - Quickly and articulately outlined their procedures
  - Offered an online review tool that met the requirements
- Project Progression
  - Vendor received the encrypted drive, processed and loaded to review
  - Physically & logically separated this case's data from all others
  - Attorneys reviewed and coded documents
  - Vendor created production, encrypted it, sent to the firm
  - When case was complete, the firm and the vendor destroyed data per NIST 800-88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Might Be Infected
With Viruses
And/or Adware!
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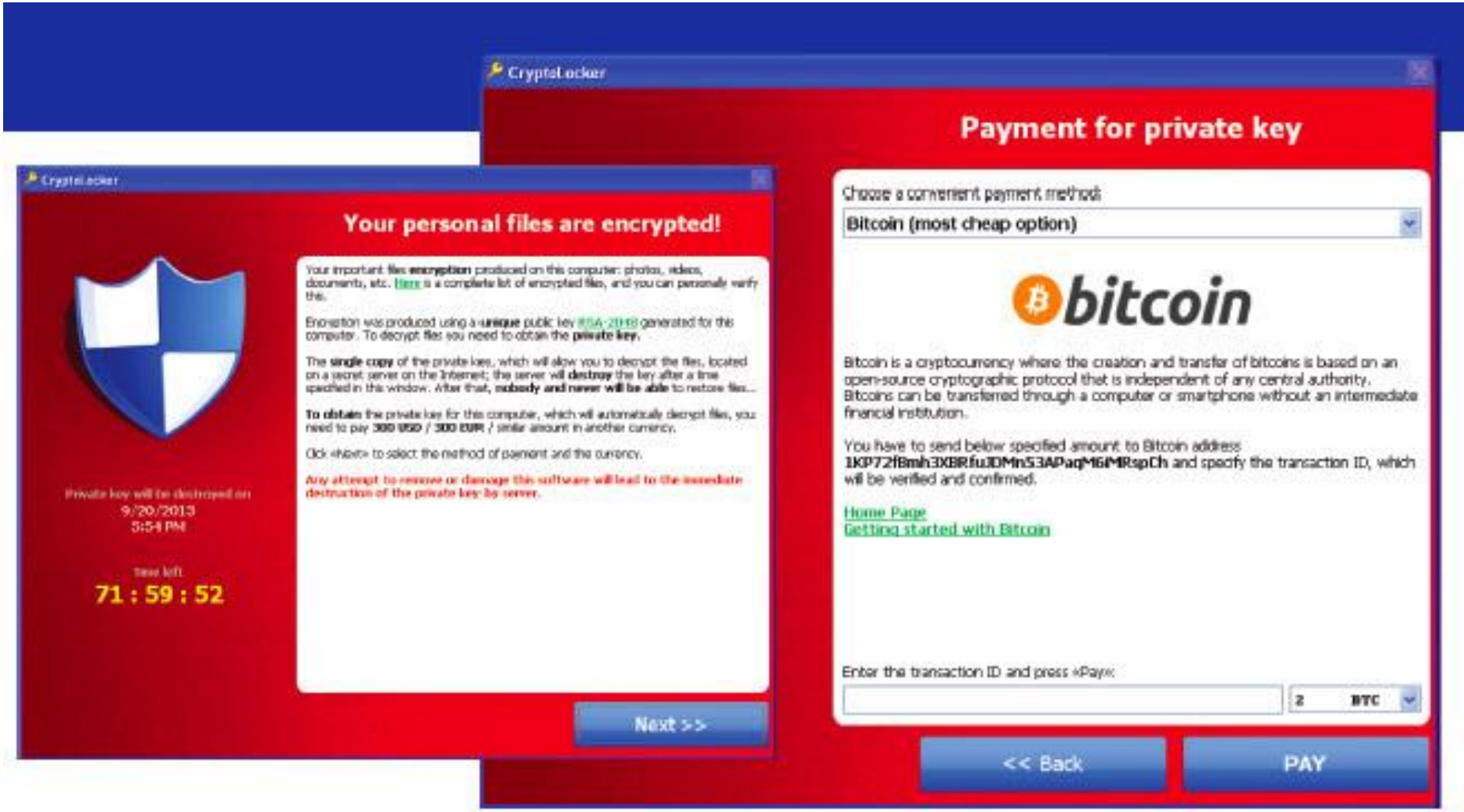
Ransomeware Hack



Cloud and Social Media Data

- Adds a new dimension to BYOD
  - Mobile devices make access easy
  - Purpose is to freely share information
  - “Everybody’s doing it”
  - Publicly dispersed rather than specifically targeted (i.e., e-mail)
- Huge amount of personal and corporate information
- BYOD leads to BYO-CLOUD
  - Most cloud backup services are automatic and use personal accounts
    - iCloud
    - Gdrive
    - SkyDrive

Conclusion

- Carefully balance risks and benefits
  - Cloud
  - Social Media
  - Portable Devices
  - Computer Use
- Consider yourself, your firm and your client
- Security and privacy are paramount with electronic data
- Increasing security usually means decreasing convenience

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