

Digital Evidence

Week 6 – E-Discovery Planning & Tools

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Slides contain original content from Davis, S. and
E-discovery: An Introduction to Digital Evidence



Last Week - Review

- Kahoot Review – 20 questions
 - 20 seconds for multiple choice
 - 10 seconds for true and false

Overview

1. Selecting the E-discovery Scope
2. Factors in Planning Discovery
3. Digital Forensics & E-discovery Tools
4. E-discovery and Trial

Objectives

- Describe e-discovery tools and their uses
- Explain how e-discovery and forensic tools are used in the e-discovery process
- Summarize e-discovery planning considerations
- Describe what types of e-discovery data are useful in court

Part I

Selecting the E-discovery Scope

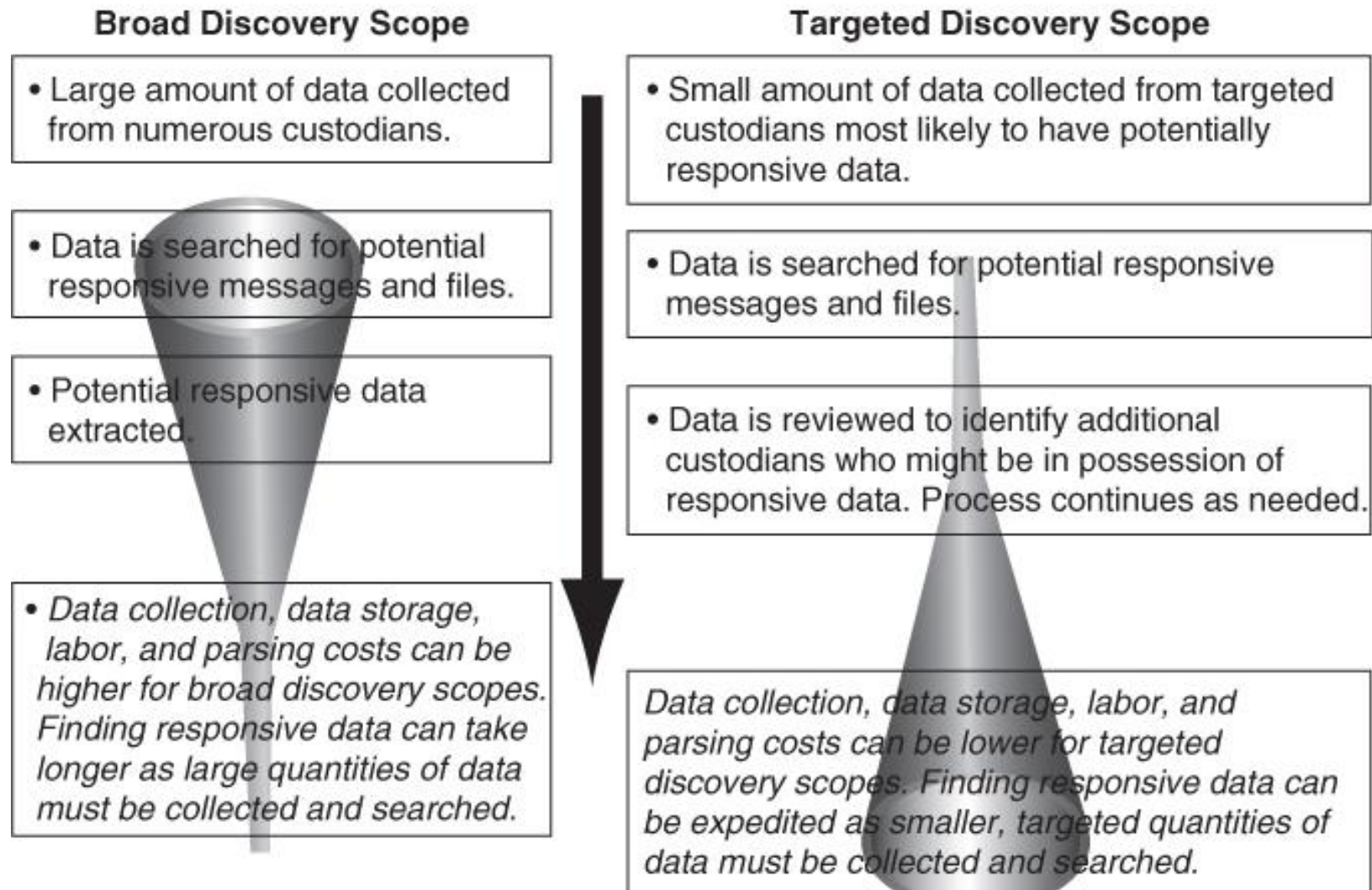
Selecting the E-discovery Scope

- E-discovery scope helps determine the amount of data to be collected or searched
 - Plays a key role in controlling costs

Selecting the E-discovery Scope

- Reverse funnel method: a way to reduce costs and save time; an analogy used to understand a **targeted e-discovery scope** vs. a **broad e-discovery scope**
 - Targeted: Starts small
 - Less expensive
 - Better for large enterprises
 - Broad: Starts large
 - More expensive
 - Better for smaller companies

Example: Reverse Funnel Method



Broad E-discovery Scopes

- Why would you potentially want to use a broad cost that costs more??
 - Failing to collect all available data might result in relevant data being overlooked
 - Being uncertain what data on a system actually *is* evidence

Broad E-discovery Scopes

- What are some potential logistical issues from using a broad scope??
 - If a company's networks span a global enterprise, the amount of data could be very large
 - Communication issues between many counsel and many custodians

Broad E-discovery Scopes

- What all can be gained by both sides using communication early on in the process?
 - Help narrow the focus to identify relevant information
 - Reveal information about the opposing client's network retention policies and system operations
 - Reducing the need to generate e-discovery requests that most likely won't produce relevant data

Broad E-discovery Scopes

- What are some possible questions for IT pros?
 - Do retention policies exist and apply for the data or information you need?
 - What are the account deletion and data retention policies for former employees of the company?

Broad E-discovery Scopes

- Questions for IT pros (Cont.)
 - Does the backup policy indicate whether the data you're seeking is or isn't available for the time period interested in?
 - How long do e-mail servers retain deleted messages?
 - Does an existing policy specify the retention period or dictate server settings?

Broad E-discovery Scopes

- Questions for IT pros (Cont.)
 - Do IT personnel have the training, skills, and tools for acquiring data in a manner that preserves integrity?
 - If a third-party vendor is used to collect data, what steps must be taken to grant access to the company's systems?

Broad E-discovery Scopes

- Questions for IT pros (Cont.)
 - Will the vendor have access to the data and system tools needed to carry out the data collection?
 - Is the vendor likely to be an asset or an impediment?

Targeted E-discovery Scopes

- Targeted E-discovery scope usually:
 - Specifies the types of information, data, people, and components to use when searching for and collecting data
 - Keywords and date ranges help narrow the focus to relevant data

Targeted E-discovery Scopes

- A request with a targeted scope is more likely to generate additional discovery requests
 - As data is reviewed, additional information of interest could be identified
- What is the potential ramification of using a targeted approach?
 - You might miss potentially relevant evidence

Part II

Factors in Planning Discovery

Factors in Planning Discovery

- Before using a broad e-discovery focus, take the following into consideration:
 - Look at the size or projected size of the opponent's network
 - Using a broad discovery scope on a large network can generate large amounts of irrelevant data
 - Using a targeted discovery on a large network can reduce the amount of data to review but could require additional searches

Factors in Planning Discovery

- Determine relevant time period of the case
- Agree on search terms
- Use Search Term Reports (STR) to gauge effectiveness of search terms

Legal Considerations

- What are some legal considerations regarding E-discovery?
 - Company's network and/or cloud storage usage may span globe and privacy laws in effect differ by country
 - Case law is in its infancy when determining whether data's owner or location of server has precedence
 - EU countries often favor individual privacy over rights of data's owner

What is the CCPA?

- California Consumer Privacy Act
 - Goes into effect Jan 1st, 2020
 - Gives CA residents the right to:
 - Request and know what personal data is collected about them
 - Request list of third parties that data is sold or shared with
 - Request deletion of their collected personal info
 - Forbid sharing of their data
 - Affects all companies that serve CA residents and have at least 25mil in annual revenue

How Could the CCPA Affect E-discovery??

- Data that could have been relevant evidence may be routinely deleted
- Companies may receive requests to delete data from consumers that is also part of a litigation hold
 - Litigation hold appears to trump right to delete

Data Authentication

- Data must be collected in an unaltered form
 - Forensics examiner or data collection specialist must be able to verify data has not changed and is authentic
- What two things do we use to verify data hasn't been modified and is authentic?
 - A hash and MD5 and SHA-1 are the most popular used in forensics and discovery software
 - Chain of custody form (Criminal cases)

What Are the 5 Hashing Algorithm Rules??

1. Input can be any length
2. Output hash has to be a fixed length
3. Hash function simple to compute for any input
4. Hash is a one-way function and is extremely difficult to determine the input when provided with the output
5. Hash function is collision free
 - Two messages should not produce the same hash

Chain of Custody Form

- Open Week 6 module in Canvas
- Open and read NIST Sample Chain of Custody Form
- Also, download the following files which we will use later:
 - secretdoc.zip
 - Example DAT File in EXCEL Format

Chain of Custody Form

- What does the form ask?
 - Description of evidence
 - Chain – item, date/time, released/received signatures, comments
 - Final disposal authority and witness
 - Release to lawful owner when case is over

Data Authentication

- When dealing with paper documents and converting them to electronic format:
 - There must be a record of the origin of the paper document used to produced the scanned version
 - Often done by noting which custodian provided the paper document in metadata field
 - Custodian can verify that the scanned PDF or TIF file represents the original data

Data Collections

- When choosing a scope, organizations should consider the impact data collection will have on normal business activities and cost
- Data collections should:
 - Target repositories used by key people
 - Follow reasonable selection criteria
- Litigation personnel must consider several factors when drafting e-discovery requests
 - The following sections discuss these factors

Large Data Collections Factors

- What are some other technical factors that might cause a problem when retrieving data?
 - Passwords
 - Permissions

Password/Encrypted Files

- If you come across a password protected or encrypted file:
 - Let counsel know
 - They may contact custodian and ask for the password
- What do you do if know one knows the password??
 - Have counsel get permission from opposing counsel to crack the password

Passware – Corporate Password Cracker

Business & Corporate Solutions

Passware Kit Business

Complete password recovery solution for business customers

Passware SMS Subscription

Software Maintenance and Support (SMS) subscription

Passware Kit Agent

Network distributed password recovery worker for Passware Kit

Windows Key Business

Instant reset of Windows account passwords and security settings

Passware Kit Standard Plus

Password recovery for 190+ popular office applications

Passware Kit Standard

Password recovery for 110+ most popular office applications

Passware Rainbow Tables for Office

Instant decryption of Word and Excel files up to v.2003

Passware Rainbow Tables for Windows

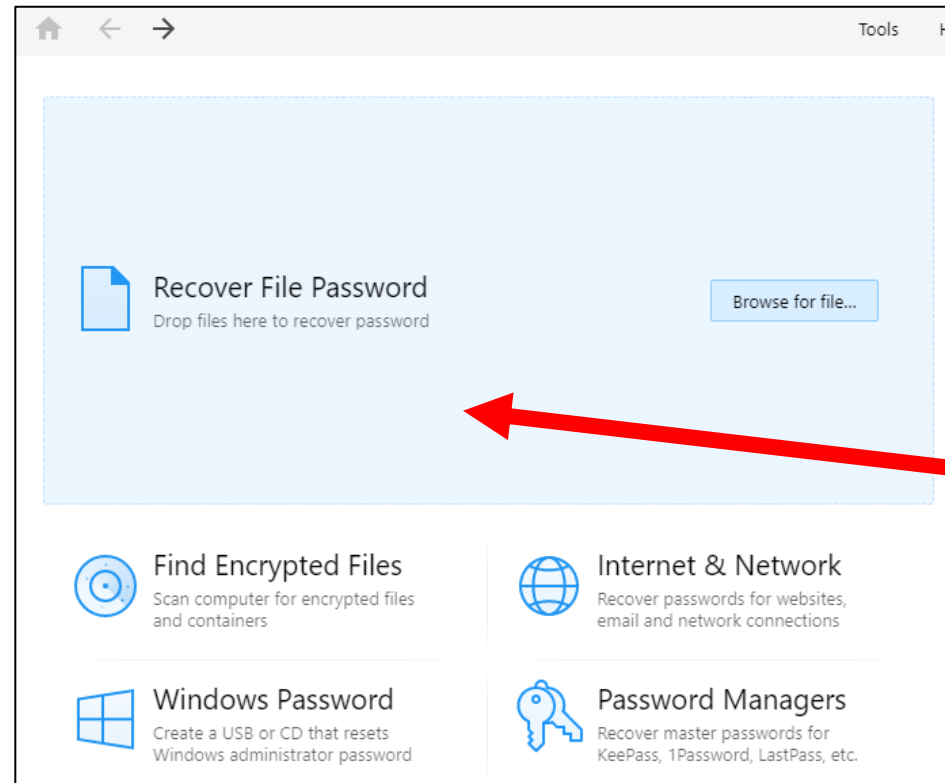
Instant recovery of Windows user passwords from NTLM hashes

Passwordare Demo

- Download the demo installer and install it with default settings for Win or Mac
 - <https://www.passwordare.com/kit-standard/freedemo/>
 - “Try Free”
 - Make sure “Run Passwordare Kit Demo” is selected
 - “Finish”
- If you didn’t earlier, download the secretdoc.zip file from the Week 6 module on Canvas

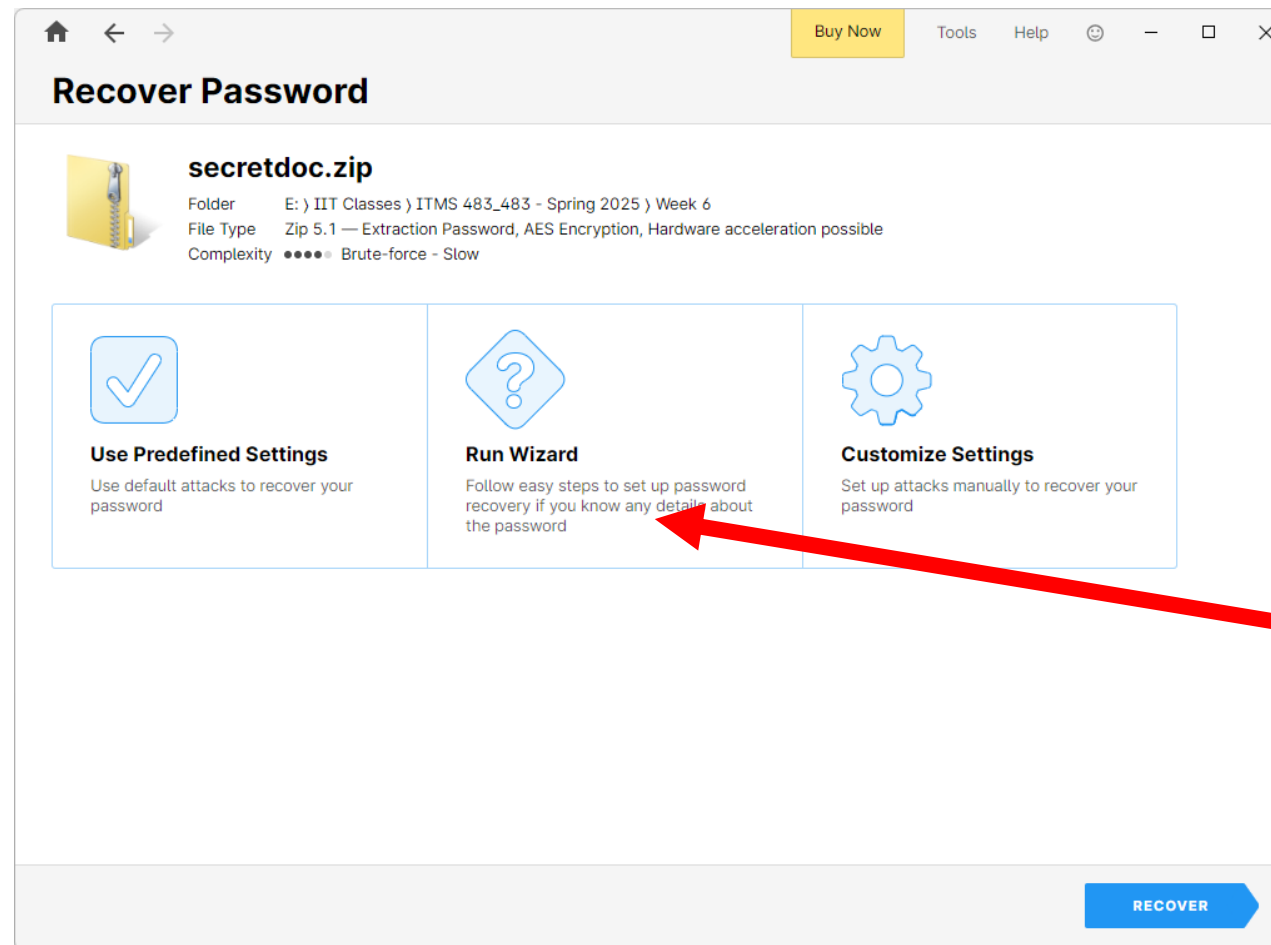
Password Demo

- Open Password
- Drag secretdoc.zip into Password



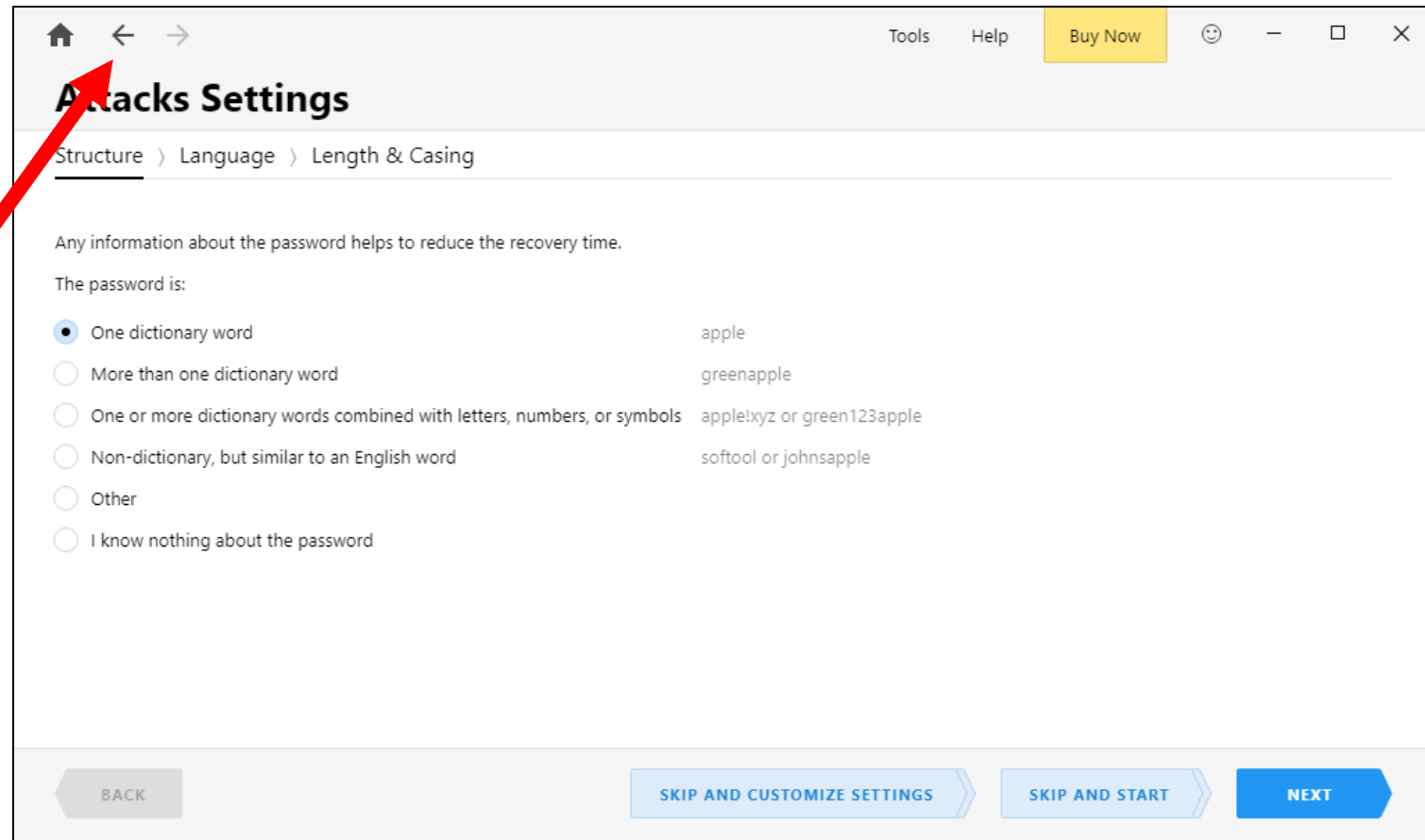
Password Demo

- Click on “Run Wizard”



Password Demo

- Look at options
- Click back arrow



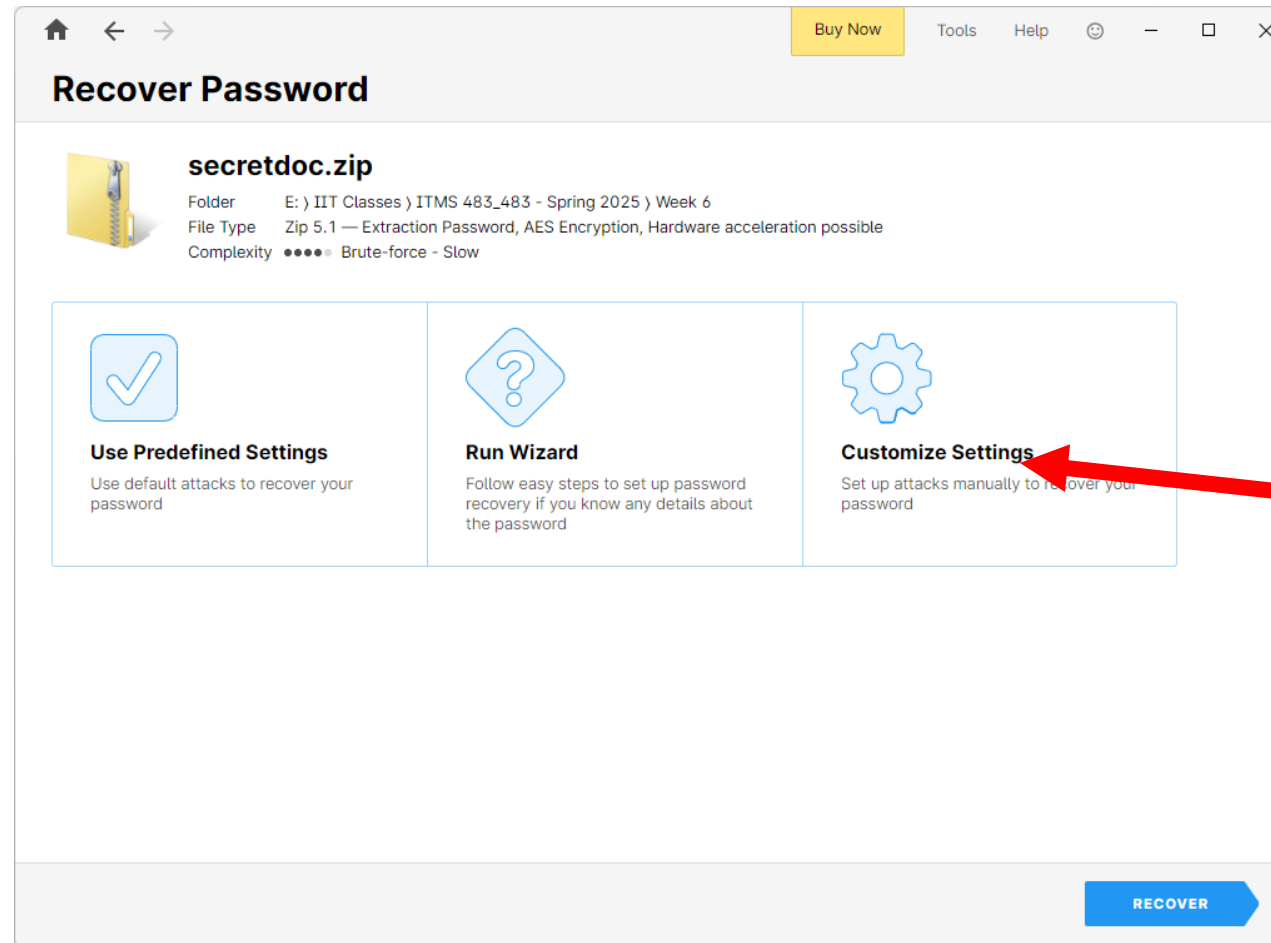
The screenshot shows a web application window titled "Attacks Settings". The browser's address bar shows a home icon, back and forward arrows, and a "Buy Now" button. The page has a breadcrumb trail: "Structure > Language > Length & Casing". Below this, a message states: "Any information about the password helps to reduce the recovery time. The password is:". There are six radio button options for password structure, each with an example:

Option	Example
☒ One dictionary word	apple
☐ More than one dictionary word	greenapple
☐ One or more dictionary words combined with letters, numbers, or symbols	apple!xyz or green123apple
☐ Non-dictionary, but similar to an English word	softool or johnsapple
☐ Other	
☐ I know nothing about the password	

At the bottom of the page, there are three buttons: "BACK" (disabled), "SKIP AND CUSTOMIZE SETTINGS" (disabled), and "NEXT" (active).

Password Demo

- Click on “Customize Settings”



Password Demo

- Click settings gear under “Dictionary”

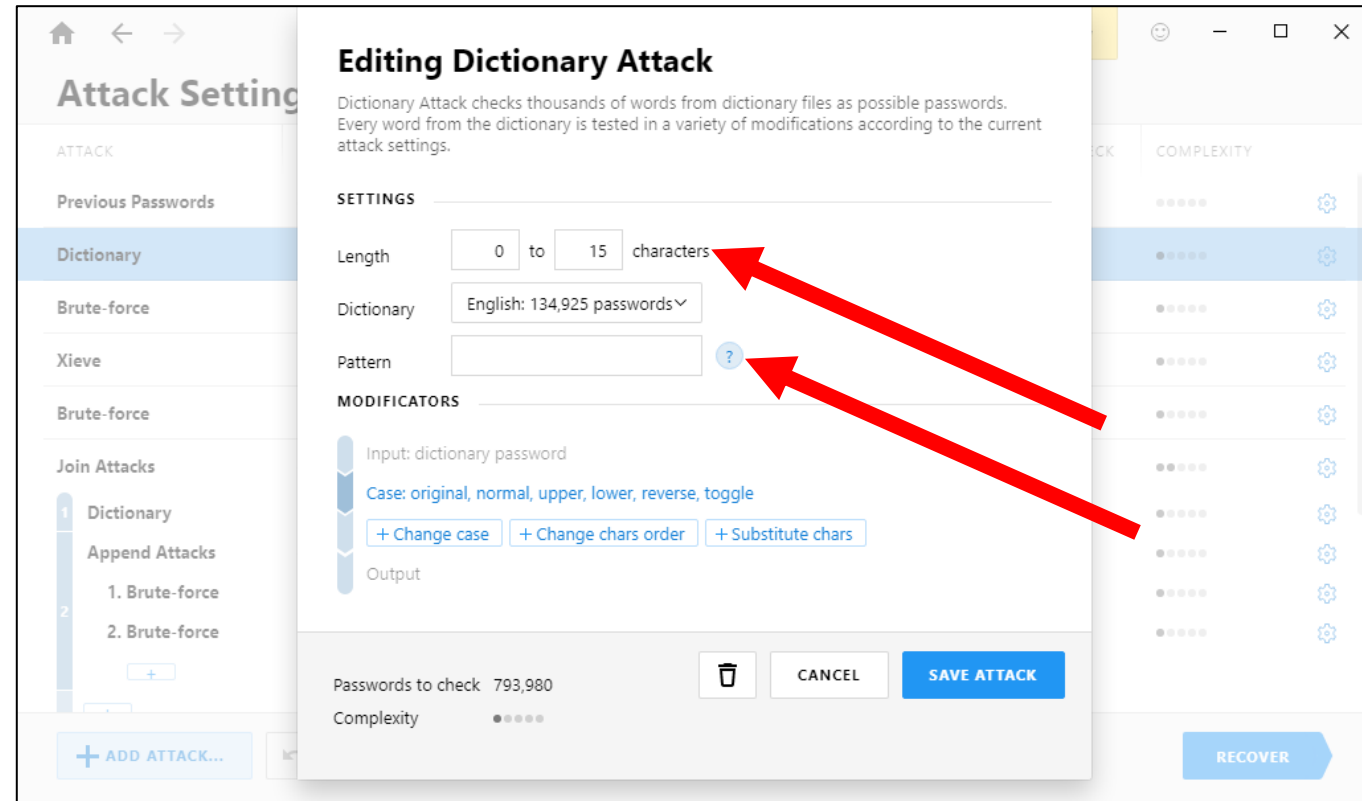
The screenshot shows the 'Attack Settings' window with a table of attack configurations. The 'Dictionary' row is highlighted in blue, and a red arrow points to its settings gear icon.

ATTACK	LANGUAGE	LENGTH	SETTINGS	PASSWORDS TO CHECK	COMPLEXITY
Previous Passwords	—	—	Case: original, normal, upper, lower	—	
Dictionary	English	0 – 15	Case: original, normal, upper, lower, reverse, toggle	793,980	
Brute-force	English	1 – 4	Lowercase, Uppercase, Numbers, Symbols, Spaces	78,914,410	
Xieve	English	5 – 9	Level: medium, Lowercase	185,623,980	
Brute-force	English	5 – 8	Numbers	111,100,000	
Join Attacks	—	—	Trim from 1 to 13 chars	2,154,979,580	
1 Dictionary	English	1 – 9	Case: original, normal	169,390	
Append Attacks	—	—	—	12,722	
1. Brute-force	English	1 – 2	Numbers, Symbols	1,722	
2. Brute-force	English	3 – 4	Numbers	11,000	

Buttons at the bottom: + ADD ATTACK..., Undo, Redo, Trash, All, Reset to Default, Save..., Load..., Sort by Duration, RECOVER.

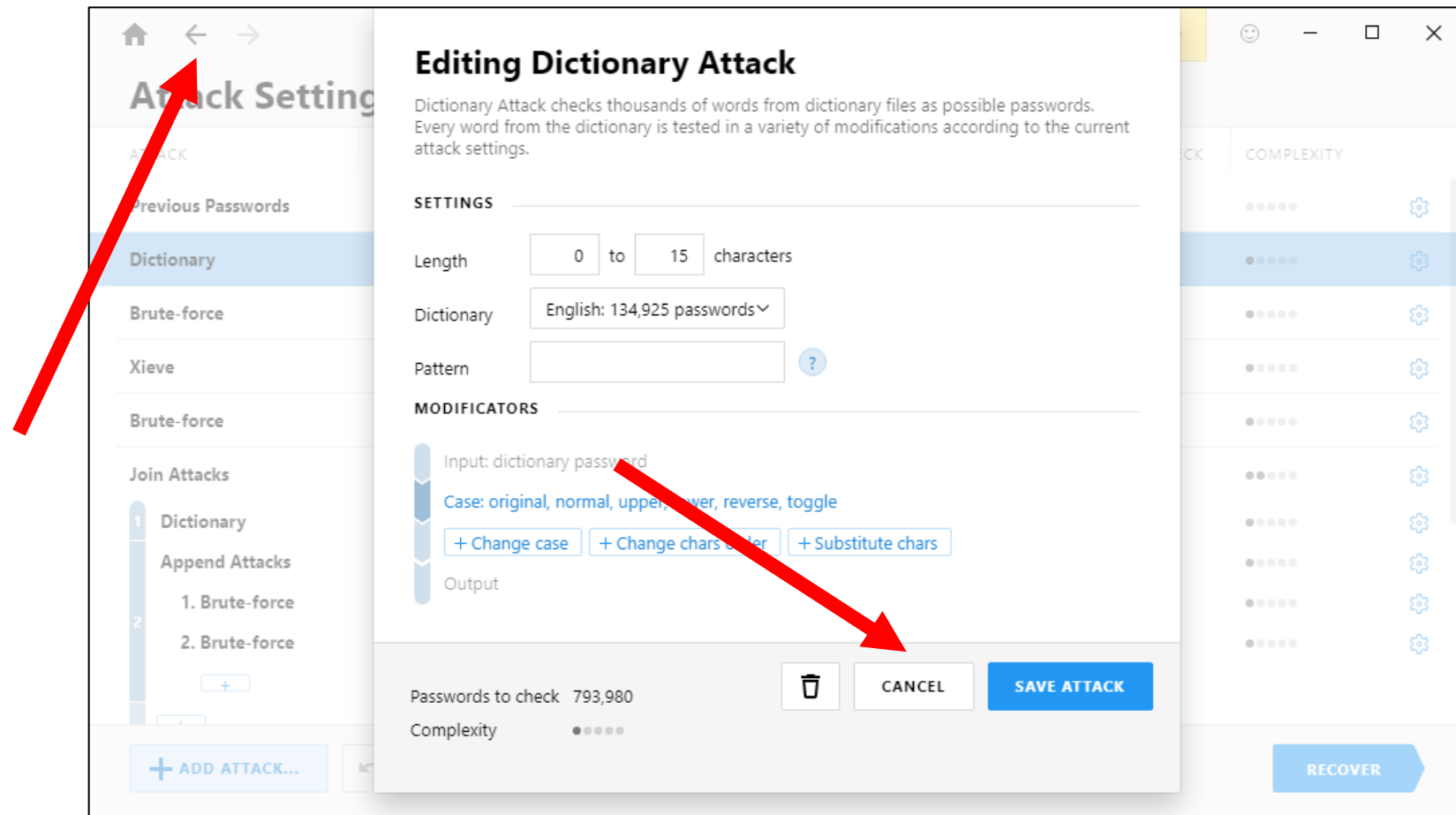
Password Demo

- Make sure upper length is 15 characters and look at “Passwords to check” amounts at bottom
- Click the ? after “Pattern”
- What does that do?
 - Can specify known password portion



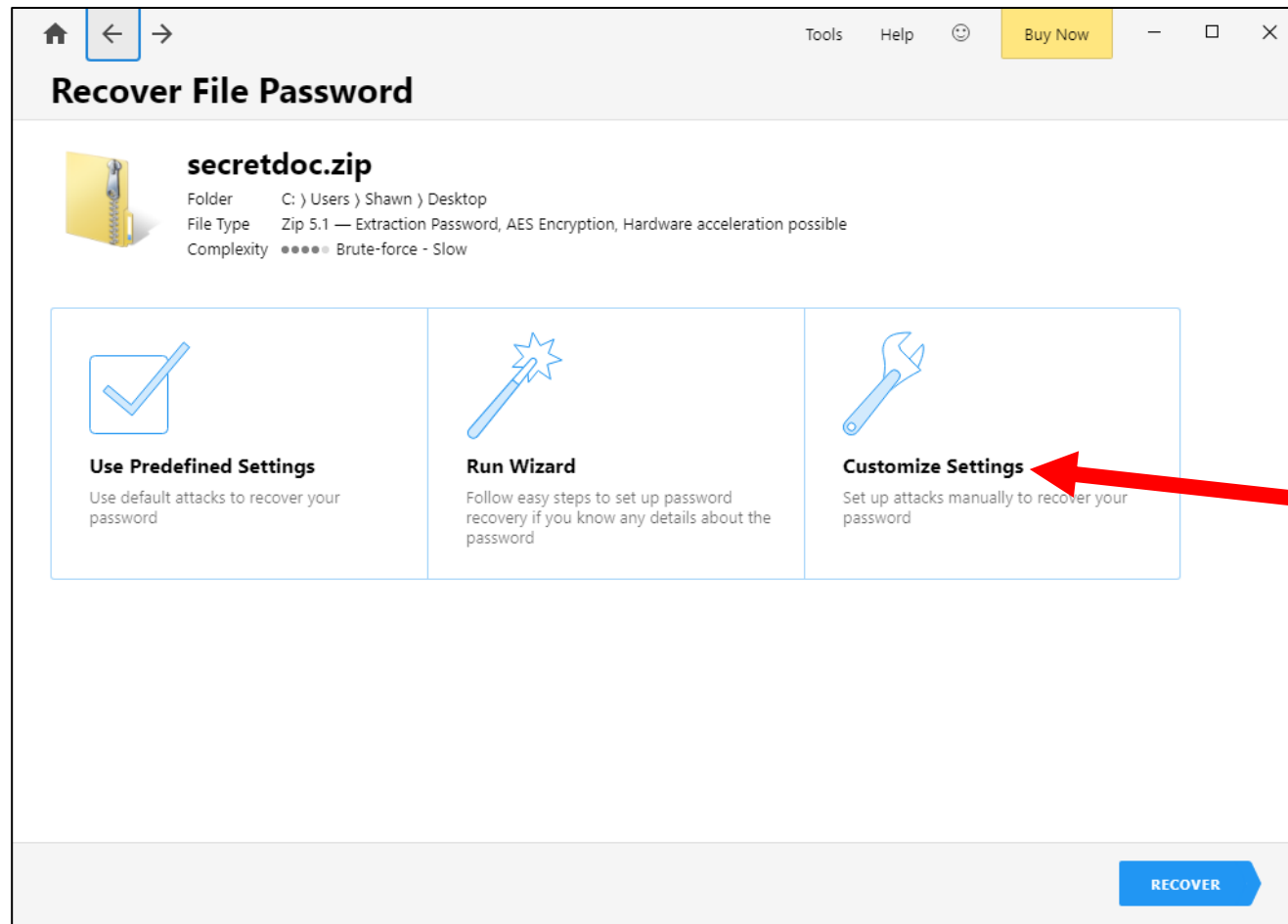
Password Demo

- Click “Cancel” and then back arrow



Password Demo

- Click on “Customize Settings”



Password Demo

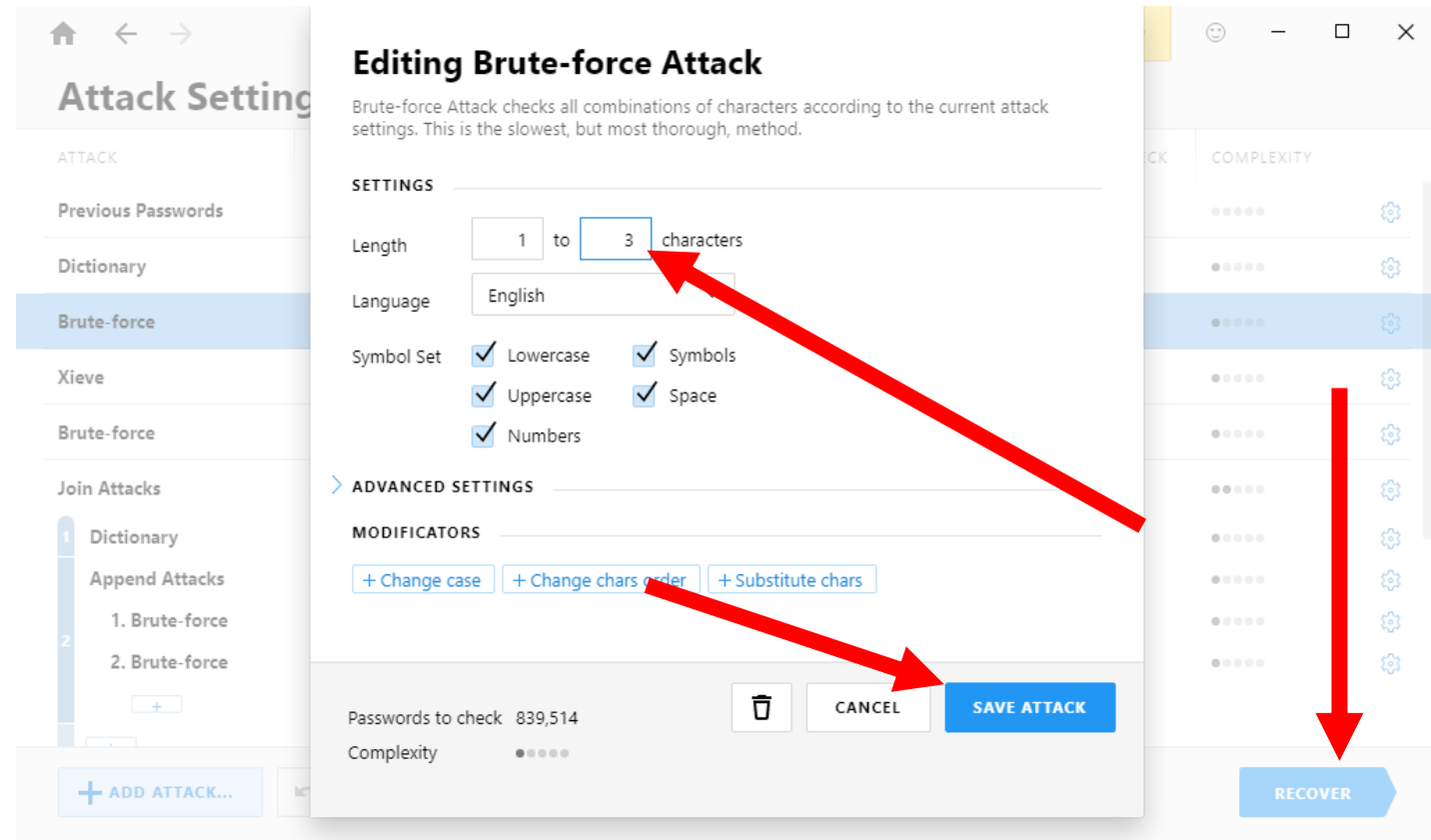
- Click settings gear under top “Brute-force”

The screenshot shows the 'Attack Settings' window of a password cracking tool. The window has a navigation bar at the top with a home icon, back/forward arrows, and buttons for 'Tools', 'Help', and 'Buy Now'. Below the navigation bar is the 'Attack Settings' title and a table of attack configurations. The table has columns for 'ATTACK', 'LANGUAGE', 'LENGTH', 'SETTINGS', 'PASSWORDS TO CHECK', and 'COMPLEXITY'. The 'Brute-force' row is highlighted in blue, and a red arrow points to its settings gear icon. The bottom of the window contains a toolbar with buttons for '+ ADD ATTACK...', undo, redo, delete, 'All', 'Reset to Default', 'Save...', 'Load...', 'Sort by Duration', and a 'RECOVER' button.

ATTACK	LANGUAGE	LENGTH	SETTINGS	PASSWORDS TO CHECK	COMPLEXITY
Previous Passwords	—	—	Case: original, normal, upper, lower	—	
Dictionary	English	0 – 15	Case: original, normal, upper, lower, reverse, toggle	793,980	
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1. Brute-force	English	1 – 2	Numbers, Symbols	1,722	
2. Brute-force	English	3 – 4	Numbers	11,000	

Password Demo

- Modify length to 1 to 3 and check all Symbol Set boxes. Look at “Passwords to check” amounts at bottom
- Hit “Save Attack”
- Hit “Recover”



Password Demo

- What is the password?
 - pas
- How long did it take your system to crack it?
 - <1 second
- Hit “Done” and you can exit this program

Large Data Collections

- Storage and media costs can increase in correlation to the amount of data collected
 - Cost of hard drives for storing and transferring data is a factor
 - Cloud storage is a factor as well
 - Recommend monthly review meetings to archive cases not being investigated

Large Data Collections (Cont.)

- Shipping and data-integrity costs must be factored into the e-discovery process
 - Encrypted removable hard drives can be used to secure data and preserve authenticity
 - Data being shipped might contain personally identifiable information (PII) and its loss during shipment could constitute a breach of data security

Large Data Collections

- With large data collections, multiple attorneys or paralegals might be needed to review data
 - On-prem and cloud systems allow multiple access and permissions rights

Medium to Small Data Collections

- Smaller companies may have fewer computer systems and smaller IT infrastructures
 - Risk of losing relevant data is higher
 - A broad e-discovery scope might ensure that as much data as possible is searched and collected

Cost and Time Considerations

- Using forensics tools can delay discovery collection and increase costs
 - Mainly for criminal cases, sometimes civil
- Costs increased due to what?
 - Travel and costs for imaging consultant
 - Time costs for indexing and processing
 - Cost of expert for analysis and reporting

Part III

Digital Forensic & E-discovery Tools

Using Digital Forensic Tools for E-discovery

- Digital forensics tools are used to:
 - Capture hard drive images
 - To mount forensic images in read-only mode so other tools can extract or search for relevant data
 - Identify deleted files, Registry entries, and partial files
 - Find file and data fragments
- Many tools offer activity logging to capture the examiner's actions as well as system activities and events
 - Log can be used to review search settings

XWays Demo

- Forensic Processing Options
- General overview
- Can rent software from Xways for experience

	X-Ways Forensics <i>non-perpetual</i> license, immediately usable with BYOD or BYOD+	License for 1 year Please choose one...	\$1,589 2+: \$1,389 5+: \$1,289	Quantity 0
	X-Ways Forensics <i>perpetual</i> license for indefinite use, dongle-based or with BYOD	Updates till Feb 2027 Please choose one...	\$3,899 2+: \$3,579 5+: \$3,309	Quantity 0

E-discovery Software

- E-discovery software is used to extract information from electronic data
- We'll talk about a few tools today but will use them in class next week
 - Don't forget to bring your laptop to class each week
 - Some of the tools in the book are out of date, so I will cover the most popular current tools

E-discovery Software

- Several processes for extracting data are common to all software packages:
 - Keyword searches, converting data to TIF or PDF format, using optical character recognition (OCR) software, Bates numbering for document tracking, and exporting results in a report or a native file format
- There are at least 29 suites of e-discovery software available
 - The scale of the litigation is an important factor when choosing e-discovery software

E-discovery Software – On-Prem vs. Cloud

- On-Prem: software installed on a workstation or server on the premises
 - Advantages??
 - Security as it could be air gapped
 - Speed, if on a high-end server
 - Disadvantages??
 - Software is usually much more expensive and requires expensive on-site storage and hardware
 - Harder to collaborate remotely

E-discovery Software – On-Prem vs. Cloud

- Cloud: SaaS application where all documents are uploaded to and all review occurs in the cloud
 - Advantages??
 - Cheaper cost all around (no storage, hardware, etc. needed)
 - Easier to collaborate and work remotely
 - Disadvantages??
 - Greater potential for security issues since always online
 - May not be as fast as some on-prem solutions

General Flow for Document Production

- Upload evidence and metadata to system
- OCR images, redact portions
- Choose relevant evidence and metadata fields for production
- Pick production types (native, pdf, tiff)
- Select file naming conventions
- Bates stamp production
- Add confidentiality statements
- Pick production format to send to opposing counsel

Note for Native Only Productions

- If producing all native files, no load files need to be produced
 - The native files will have the metadata embedded in them

Note for Imaged Productions

- If creating TIFF images of original native files, then you need to create load files that contain the metadata
 - This is called an “Imaged Production” and there is a specific folder structure
 - A load file allows the structure, metadata, and production files to be loaded into the receiving E-Discovery software database
- Many productions will have a mixture of imaged and natives

Imaged Production Folder Structure Example

Folder Structure

The Concordance load file grouping is located within the following folder structure and must be present:

Level 1	Level 2	Level 3	Description
LOADFILES	VOL1.DAT		Concordance load file
LOADFILES	VOL1.TXT		Concordance load file with tab delimiter substitutions (LEP output only)
LOADFILES	VOL1.OPT		Opticon image cross-reference file
IMAGES	/001, /002, etc.	XYZ 00177.TIF	Single-paged TIFF images; first page of multi-page document
TEXT	/001, /002, etc.	XYZ 00177.TXT	Text file accompanying single-paged TIFF image; first page of multi-page document
ORIGINALS	/001, /002, etc.	XYZ 00177.DOCX	Original native file (entire multi-page document)

Imaged Production Folder Structure Example (Cont.)

- IMAGES:
 - Overall, these files created from paper documents being scanned or native documents being converted to TIFF
 - B&W images as 300 DPI TIFF files
 - Color images as JPEG
 - Each image file must have Bates number in lower right corner
 - File and Folder names should not contain spaces or special characters
- **These files do not hold metadata and are not text searchable**

Imaged Production Folder Structure Example (Cont.)

- TEXT:
 - Simple .txt files that hold the text from the image files (TIFF, JPG, etc.) after they are processed with OCR
 - Named by Bates numbers

Imaged Production Folder Structure Example (Cont.)

- ORIGINALS:
 - Copies of original email and native file documents such as:
 - Spreadsheets, audio/visual files , Word, Excel, database files, etc.
 - Named by Bates number

Imaged Production Folder Structure Example (Cont.)

- **LOADFILES:**

- **Metadata load file (.DAT)**

- This is the file that holds the original metadata for the files that were scanned to TIFF, JPEG, etc. and will be loaded into the database and references one document per line
 - Full path to OCR TEXT files and path to native document attachments (email attachments, etc.) listed in here

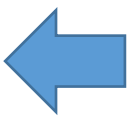
- **Image Cross-Reference load file (.OPT)**

- This file links the images to the database records
 - References one Bates number per line

OPT Image Load File Example

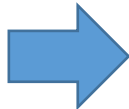
Example entries:

```
XYZ 000177,PROD_IMG001,IMAGES\030\XYZ 000177.TIF,Y,3,,
XYZ 000178,PROD_IMG001,IMAGES\030\XYZ 000178.TIF,,,,
XYZ 000179,PROD_IMG001,IMAGES\030\XYZ 000179.TIF,,,,
XYZ 000180,PROD_IMG001,IMAGES\030\XYZ 000180.TIF,Y,1,,
XYZ 000181,PROD_IMG001,IMAGES\030\XYZ 00
```



Actual OPT file

Key that describes fields



Field Name	Example	Description
Bates Number	XYZ 000177	
Volume Label	PROD_IMG001	
Image File Path	IMAGES\030\XYZ 000177.TIF	Relative image file path
Document break	Y	Y if a new document is starting and blank otherwise
Page Count	10	Number of pages converted to TIF. Field populated on the first page of a document
Empty		Not used
Empty		Not used

DAT Metadata Load File

- In the Week 6 Module on Canvas, open this doc:
 - [datadeliverystandards.pdf](#)
 - This is the SEC's technical requirements for document productions provided to them
 - Scroll down to Addendum A / Page 6
 - Read through the descriptions of the common metadata fields that are stored in the **.DAT** file

DAT Metadata Load File Example

- Open the Example DAT File in EXCEL Format that you downloaded earlier from the Canvas Week 6 module
- Check out the structure and metadata fields
 - Normally this is just a delimited .DAT text file but I converted it to excel format to make it easier to view

General Flow for Document Review

- Upload load files (images and metadata) as well as the actual discovery data from opposing counsel
- Search for relevant evidence by keywords, metadata fields, etc.
 - Tag, comment, place in folders potentially relevant evidence
- Machine learning may help by mimicking and expanding on reviewers' usage signatures

Popular E-Discovery Software

- Enterprise

- Relativity One
- AccessData AD eDiscovery
- AccessData Summation
- Ipro
- Veritas eDiscovery
- CloudNine Concordance

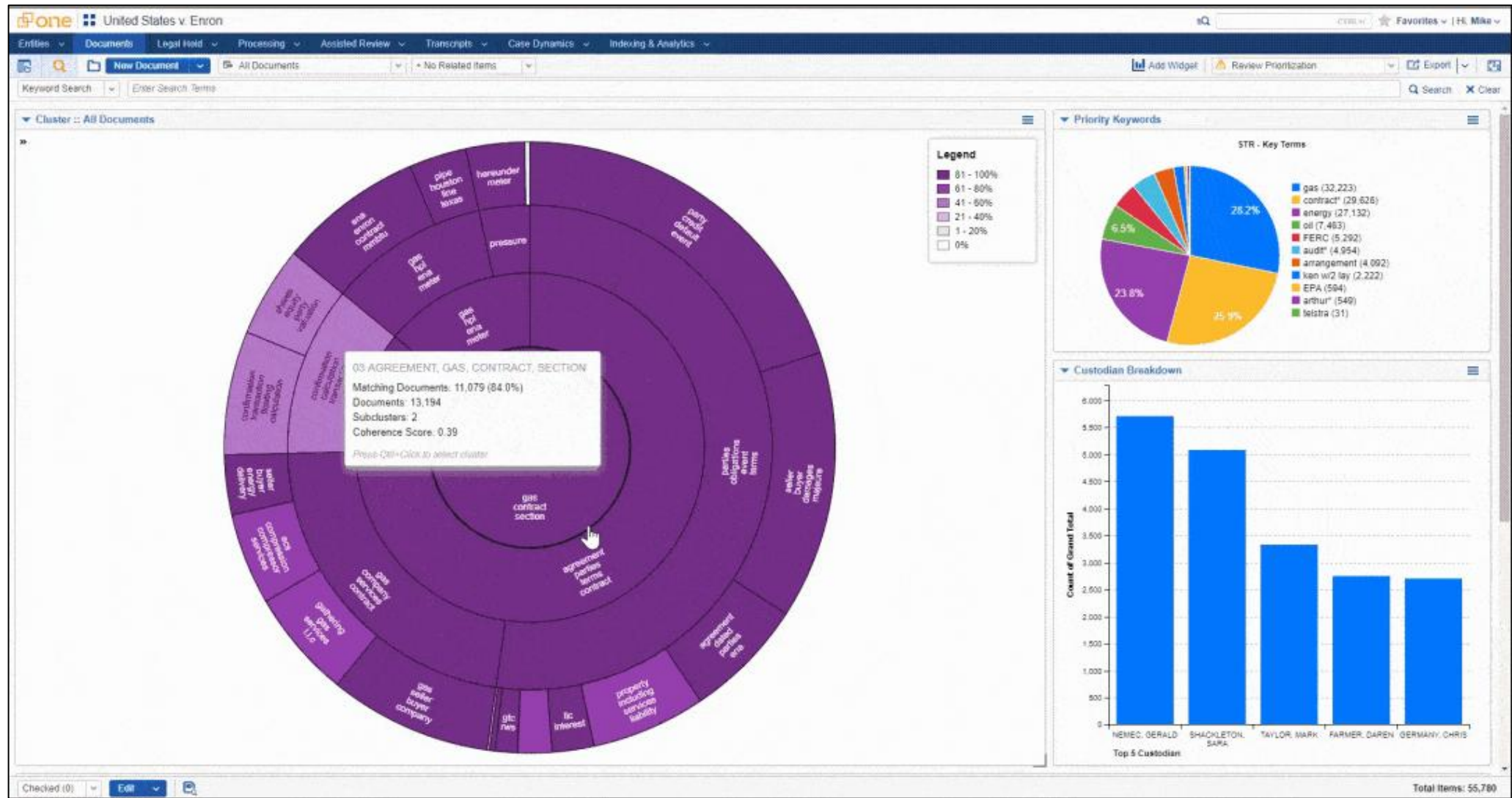
- SMB

- Logikcull eDiscovery
- Everlaw Discover
- NextPoint Discovery Cloud
- Sherpa Discovery Attender

Relativity One

- Biggest player in space
- Cloud based built on Microsoft Azure
- Extendable with apps from over 85 partners
- Machine learning
- Advanced searching and analytics
- On-prem version available as well
- 180k active users, 198 of top 200 law firms use

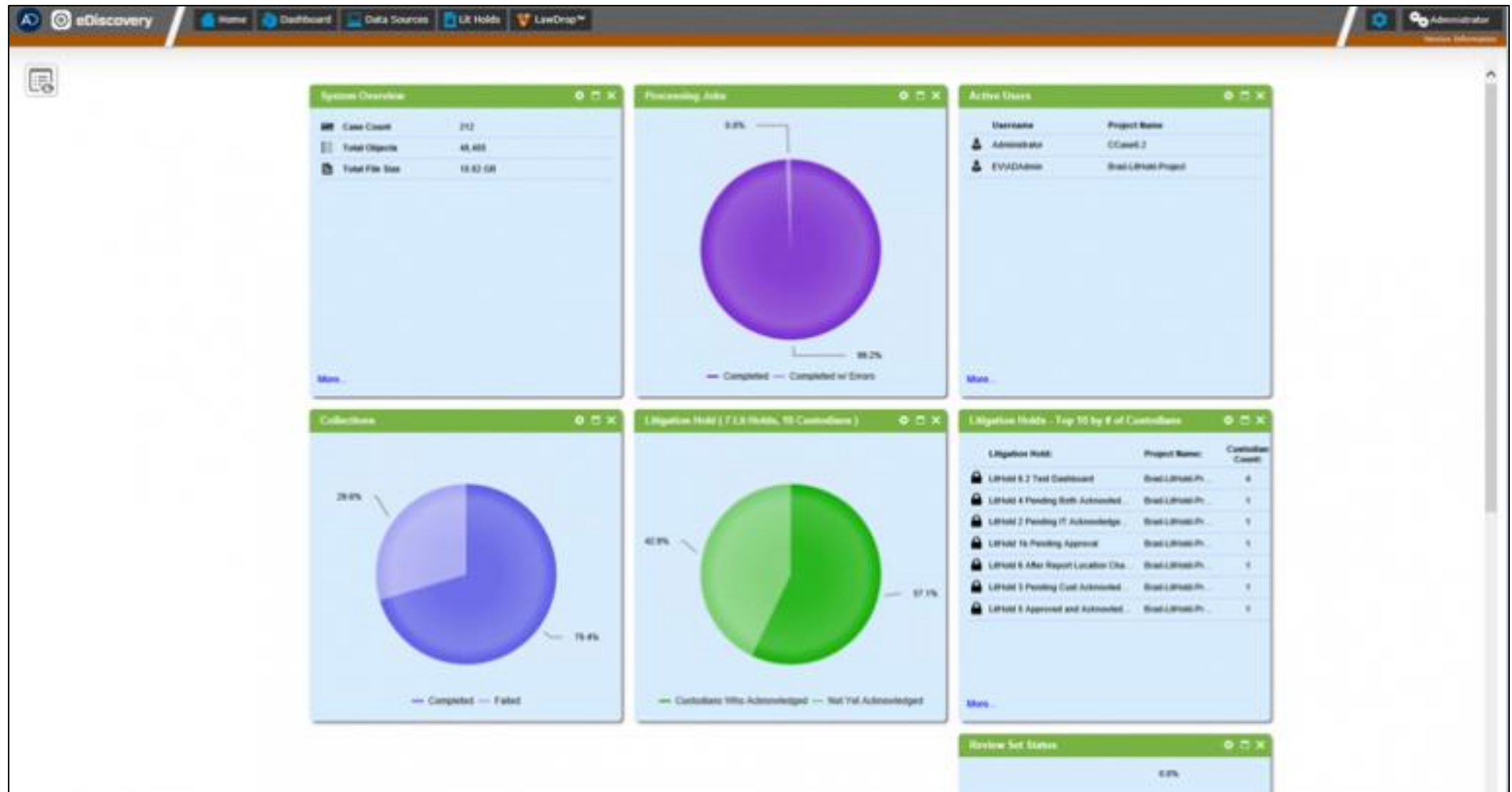
Relativity One (Cont.)



Access Data AD eDiscovery

- On-prem suite of tools that support the entire e-discovery lifecycle
- Offers real-time status for litigation holds
- Collection tool enables you to gather data in many formats from systems and servers on a network
- Agentless collections from Box, Gmail, OneDrive, etc.
- A processing tool retains the chain of custody for data collected and data is automatically categorized

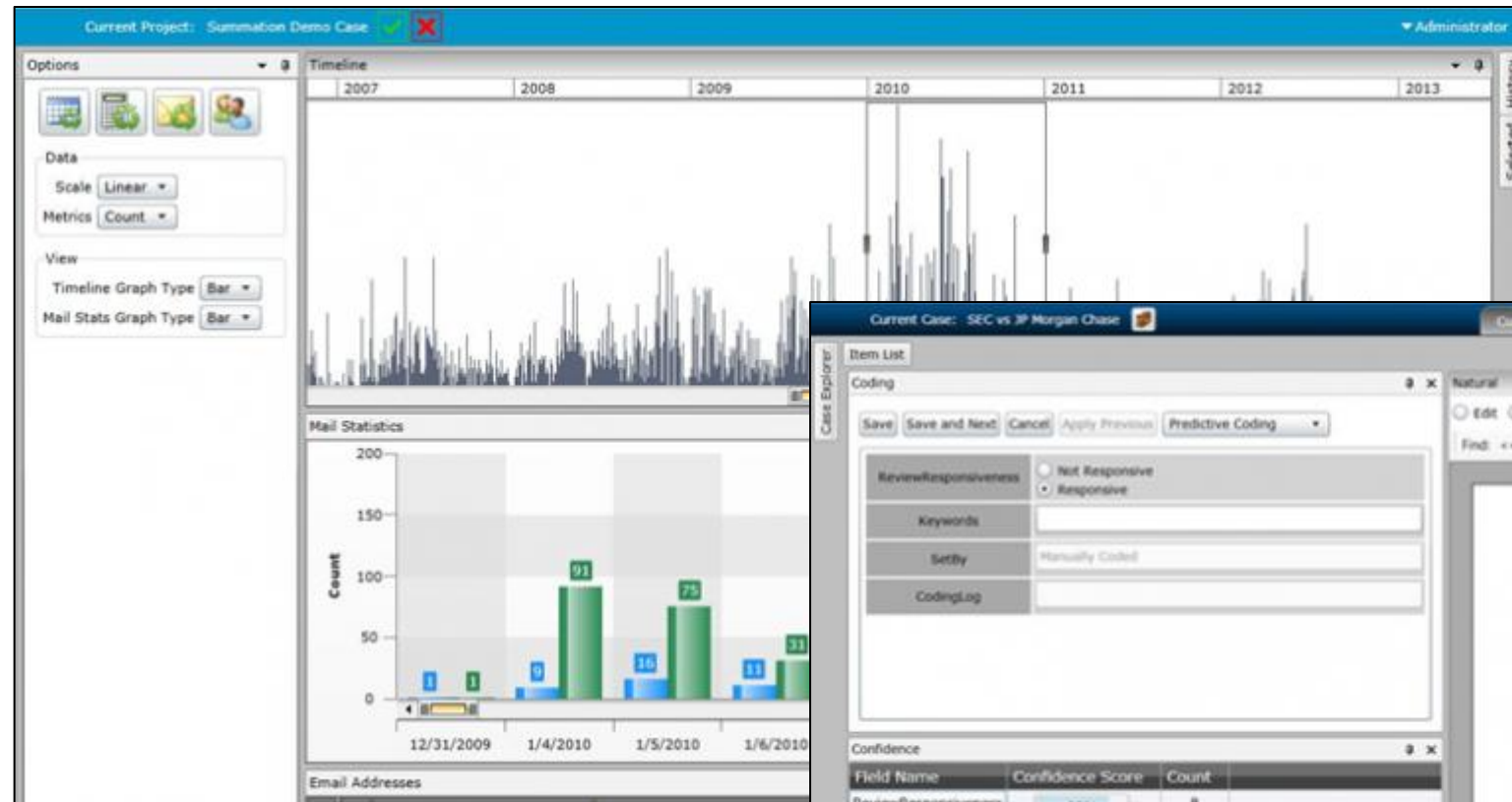
Access Data AD eDiscovery (Cont.)



Access Data AD Summation

- Cloud based tool for search, review, and production
- Capable of managing transcripts
 - Including real-time feed of a transcript from the court reporter
- Quick Search feature allows broad searches
- Production capabilities are flexible and enable exporting data into multiple types of load files
- Can access stamping and redacting tools needed for producing documents to opposing counsel

Access Data AD Summation (Cont.)



Current Case: SEC vs JP Morgan Chase

Current Doc ID: SEC000161

Item List

Coding

Save Save and Next Cancel Apply Previous Predictive Coding

Review/Responsiveness ☐ Not Responsive ☒ Responsive

Keywords

SetBy: Manually Coded

CodingLog

Confidence

Field Name	Confidence Score	Count
Review/Responsiveness	80%	8

Actions: Confidence Score Calculation Go

Family: Confidence

Natural

Edit View Create Image

Find: << >>

EnronOnline and KiodeX Co-Marketing Proposal

General:

- 1) Our goal is to come to agreement on commercial terms and execute a Co-Marketing Agreement as soon as possible; however, EnronOnline needs some time before committing significant resources to begin implementation.
- 2) KiodeX will, at their expense, procure private lines to insure the secure transfer of EnronOnline customer and transaction data.
- 3) KiodeX will, at their expense, be responsible for any required databasing of positions, trades and/or reports for their customers.
- 4) If EnronOnline customers would like to continue to see their data and reports by sub-user and master-user, KiodeX will have to mirror the EnronOnline user/corporate hierarchy. Specifically, KiodeX will have to create a class of master-users with the exclusive ability to grant rights to sub-users.
- 5) Enron will post on the EnronOnline website any Enron releases mentioning KiodeX.
- 6) EnronOnline agrees to work with KiodeX to try and provide end of day mids for the products traded on EnronOnline that day. Enron will not be responsible for generating curves for KiodeX to mark against. KiodeX will have to recognize the

Ipro

- Cloud, On-Prem, or Hybrid deployments
- Ingest, analyze, and prepare 1000s of filetypes
- Very fast batch processing of imaging, OCR, etc.
- Simple data uploads

Ipro (Cont.)

The screenshot displays the Ipro Eclipse SE Desktop interface, version 2016.9.2. The main window is titled "Ipro Eclipse SE Desktop - 2016.9.2 User: Eclipse | Client: Ipro Product Management | Case: Streaming Ingestion Case". The interface is divided into several panes:

- Case Folders:** A tree view on the left showing folders like Case Alerts, Case Instructions, Streaming Ingestion Case, Private Folders, Public Folders, Smart Folders, Journal, Non Discovery Docs, and Searches.
- Case View:** A table view showing a list of records. The table has columns: Record, BegDoc, EndDoc, BegAlt, EndAlt, and Nat. The first record is highlighted, showing STI-0000000001.
- Document Content:** The main pane displays the content of the selected document, which is a legal document titled "TITLE 20 - OFFICIAL REVENUE CODE". The document is divided into sections like "Section 10-1" and "Section 10-2".
- Doc Tags:** A pane on the right showing tags for the document, including "Privileged" and "Attorney / Client Communicat...".
- Page Navigation:** At the bottom, there is a page navigation bar showing "Page 1 of 1" and various navigation icons.

Veritas eDiscovery

- On-prem solution with automatic data classification that improves data culling and review by prioritizing items with PII or sensitive content
- Bulk Redaction automates data masking to prevent sensitive data leaks
- Machine learning and advanced analytics
- Annotation Toolkit improves reviewer collaboration and supports a more agile review process

Veritas eDiscovery (Cont.)

Symantec eDiscovery Platform
Powered by Clearwell

User: **dpalmer**

All Cases | **Legal Users Course Case 1** | **Case Home** | **Legal Holds** | **Collections** | **Processing** | **Analysis & Review**

Dashboard | Documents | Folders | Tags | Prediction Status | Automation Rules

Search: in **All Documents** **Search** [Advanced Search](#)

Documents | Discussions | Files | Participants | Report

Style ☒ Advanced ☐ Freeform ☐ Audio ☐ Tag Event History **Run Search** **Save** **Save As...** **Back** **Clear**

Scope Find by type and by folder

Families Include document families

Keywords Find by keyword or phrase

Any of these words [Help](#)

All of the words

The exact phrase

None of the words

Fields to search **All Clearwell fields and custom fields**

☒ Search all variations of the keyword terms (stemmed search) [Help](#)

Filter and Count Generation

☐ Limit filter and count generation for improved search speed [Help](#)

☒ Normal filter and count generation

☐ Generate keyword details for filters and report

Participants Find by participant, email address, and domain name

any **(All)** **Participant**

☒ Search in contained senders and/or recipients [Help](#)

Date Find by sent or last modified date

Email Find by email properties

File Find by attachment or file properties

Size Find by size

Languages Find by language properties

Tags Find by tags or notes

Actions Find by the history of actions taken on them

Cloudnine Concordance

- On-prem solution with streamlined collaboration features
- Automatic OCR during import
- Simple drag and drop to organize folders
- Fast search engine

Cloudnine Concordance (Cont.)

The screenshot displays the Cloudnine Concordance interface. On the left, a table lists documents with columns for CloudNine DocID, Image Filename, and Text FileName. Document 23, 'Wild Goose Open Season.doc', is highlighted. On the right, a preview window shows the document content, which is a 'Long Term Firm Base Load Storage ("BLS") Service Open Season' notice from Wild Goose Storage Inc., dated January 12, 2001. The preview window includes tabs for 'image', 'native', 'text', and 'html', and a search bar at the bottom.

CloudNine DocID	Image Filename	Text FileName
21	FW_ Wild Goose Open Season	FW_ Wild Goose Open Season
22	Offer Sheets.xls.pdf	Offer Sheets.xls.txt
23	Wild Goose Open Season.doc	Wild Goose Open Season.doc
24	BLS Summary.doc.pdf	BLS Summary.doc.txt
25	Storage Services Agreement.	Storage Services Agreement.
27	NWP System Notice - 01-235	NWP System Notice - 01-235
66	AGA storage for week ending	AGA storage for week ending
67	ngstorage_us.pdf	ngstorage_us.pdf.txt
75	01-235 04-19-2001 includes	01-235 04-19-2001 includes
76	NWP System Notice - 01-235	NWP System Notice - 01-235
77	FW_ Wild Goose Open Season	FW_ Wild Goose Open Season
78	Offer Sheets.xls.pdf	Offer Sheets.xls.txt
79	Wild Goose Open Season.doc	Wild Goose Open Season.doc
80	BLS Summary.doc.pdf	BLS Summary.doc.txt
81	Storage Services Agreement.	Storage Services Agreement.
132	Wild Goose Storage and the	Wild Goose Storage and the
143	AGA Storage for week ending	AGA Storage for week ending
144	ngstorage_us.pdf	ngstorage_us.pdf.txt
200	AGA storage for week ending	AGA storage for week ending
201	ngstorage_us.pdf	ngstorage_us.pdf.txt
209	01-235 04-19-2001 includes	01-235 04-19-2001 includes
210	NWP System Notice - 01-235	NWP System Notice - 01-235

WILD GOOSE STORAGE INC.

January 12, 2001

Long Term Firm Base Load Storage ("BLS") Service Open Season

For service commencing April 1, 2001

Customer offers required by 2:00 pm MST, Friday January 26, 2001

Customer offers must be reasonably open for acceptance by Wild Goose pm MST, Thursday February 1, 2001 subject only to significant changes final approval of customer's management. Preference for offer acceptance term contracts (5 years) and offers, which exceed 100% of our rack rate, provided in Microsoft Excel and are set up to calculate the percentage of convenience. It is the intent of Wild Goose Storage Inc. to negotiate and the participants providing acceptable offers in this open season as close 1, 2001. Wild Goose Storage Inc. reserves the right to not necessarily ac offer per to award all or any of the storage capacity available.

fulltext: [Document Text (FullText)] contains "storage" (current)

Logikcull eDiscovery

- Cloud based platform geared towards simplicity for SMB for upload, processing, search, and review
- Drag and drop uploading and automation of processing steps
- Produce natively or in any common format
- Mobile app

Logikcull eDiscovery (Cont.)

The screenshot shows a web browser window with the URL <https://app.logikcull.com/projects/160803509/downloads#>. The page is titled "Logikcull" and features a sidebar on the left with a user profile icon, a notification bell with a "1" badge, a "14 Days" filter, and a question mark icon. The main content area is titled "Load File format" and includes several configuration options:

- Load File format:** A dropdown menu set to "CSV".
- Include Images:** A section with the instruction "Select if you want to include images". It contains two dropdown menus: "Yes, include images in download" and "PDFs, multipage, color".
- More options and image defaults:** A link with a plus icon.
- Include Native Files:** A section with the instruction "Select if you want to include native files". It contains a dropdown menu set to "No, don't include native files in download".
- Include Text Files:** A section with the instruction "Select if you want to include text files". It contains two dropdown menus: "Yes, include text files in download" and "Within a folder named 'TEXT'".
- Include Reports:** A section with the instruction "Select if you want to include reports". It contains a dropdown menu set to "Yes, include reports in download".

At the bottom of the page, there are "Back" and "Next" buttons.

Everlaw Discover

- Cloud based solution for SMB
- Built for speed (400k documents per hour) and is updated monthly with new innovations
- Can be used to manage litigation, respond to FOIA requests, and conduct internal investigations
- Drag and drop functionality and works with any popular cloud file sharing solution
- Can transcribe audio/visual files

Everlaw Discover (Cont.)

The screenshot displays the Everlaw Certification Sandbox interface, specifically the 'New Upload' section. The top navigation bar includes the Everlaw logo, the title 'Everlaw Certification Sandbox (Uploads and Productions)', and user information 'Christina • Log Out'. A left sidebar contains navigation links: 'Uploads' (selected), 'New Upload', 'Native Data', 'Processed Data', 'Notifications', 'Processing Jobs', and 'Productions'. The main content area is titled 'New Upload' and features a large dashed box for file uploads. Inside this box, there is a yellow document icon with a bar chart, the text 'Drag and drop files here or [browse](#)', and a blue image icon. Below the dashed box, the section 'Upload from Cloud Storage' is visible, containing buttons for 'Box', 'Google Drive', 'Google Vault', 'Dropbox', 'OneDrive', 'SharePoint', and 'Direct Link'.

Nextpoint Discovery Cloud

- Cloud based solution with a complete set of Boolean controls for search and results filtering
 - Results can be filtered in order of relevance
- Project administrators can create custom access permissions for each reviewer
 - Can process files up to 5 GB
- Unlimited data and free hosting

Nextpoint Discovery Cloud



Sherpa Software Discovery Attender

- Cost-effective on-prem solution
- Designed mainly for working with Microsoft Exchange, Office 365, PST files, compressed files, file shares, SharePoint, etc.
- Locates PCI info and PII in files and email
- This tool can be used with many of the optional hands-on-projects in the book

Sherpa Software Discovery Attender (Cont.)

The screenshot displays the Sherpa Software Discovery Attender Dashboard for IBM Domino. The interface is divided into several sections:

- Left Sidebar:** Contains the Sherpa Software logo, a file path (website\dsattend.nsf on Everest/Sherpa), and a navigation menu with categories like Searches, Administration, Debug, Form Help, and Hints. It also lists Administration actions, Support actions, and Miscellaneous actions.
- Dashboard Header:** Features the title "Discovery Attender for IBM Domino" and a "DASHBOARD" label.
- Overview Panel:** Welcomes users to the dashboard and explains its purpose: to allow users to view important information regarding Discovery Attender. It includes a link to the Administrator's Dashboard tab.
- Available Panels:** A list of expandable/collapsible panels including Sherpa Information, Attender Utilities, Compliance Attender, Discovery Attender, Mail Attender, and Sherpa Products.
- Attender Utilities Panel:** Lists various utilities such as Consolidation Attender, DAOS Attender, Decryption Attender, Design Attender, and Export Attender.
- Compliance Attender Panel:** Provides detailed information about the Compliance Attender, including its purpose and how it addresses business needs.
- Mail Attender Panel:** Provides detailed information about the Mail Attender, including its purpose and how it addresses business needs.
- Footer:** Displays the copyright notice: © 2004-2015 Sherpa Software Group, L.P.

Part IV

E-discovery and Trial

E-discovery and Trial

- After discovery has been acquired and processed
 - Information can be transferred from the litigation database to a format for use in the courtroom
- This process involves narrowing the information further into case issues
 - In order to present to a jury or a judge
- Some cases may go to a mediator or arbitrator
 - Becoming more common in order to avoid the expense of jury trials

E-discovery and Trial

- Case issues are key points of legal dispute identified in the complaint, indictment, and subsequent case motions
- Each case issue is supported or disputed by case facts

Trial Presentation Tools

- Many trial presentation tools are available
 - Range from basic to high-end tools
- The tool to use depends on the trial team's experience and background
 - As well as nature of the case and case strategies
- PowerPoint is often used as a trial presentation tool

Trial Presentation Tools

- The top 3 tools for trial presentation:
 - TrialDirector, Sanction, and Visionary
- These tools import and export documents by using load files from popular E-discovery software databases

Trial Presentation Tools

- Load files can allow:
 - Exhibits and documents can be organized before trial or searched during trial
 - Audio and video presentation with linking to a deposition transcript
 - Editing and animation tools for adding callouts, zooming, and other graphic features
 - Bar-code features used with a bar-code scanner
 - Scanner sends a signal to the presentation computer to display the scanned exhibit

Trial Presentation Tools

- Early in a case, consider document formats, naming conventions, and capacities of your presentation tool
 - To avoid needless costs associated with format changes or file renaming
 - Naming conventions are important because most trial presentation tools limit the number and type of characters in filenames

Trial Presentation Tools

- Most courts prefer digital trial presentation methods for “judicial economy”
 - Judicial economy: anything that reduces the time the judge, court staff, and jury need to spend on the case yet still offers adequate service
- If digital presentation tools are used correctly
 - They reduce the time spend on presenting evidence
- Some courts have dedicated IT support and training classes that give an overview of the court’s technology capacities

Summary

- A broad e-discovery scope is intended to capture as much data as possible
- A targeted e-discovery scope begins with small, focused data collections and expands based on parsing and reviewing data during the initial collection
- When planning a discovery approach, consider factors such as network size, extent of IT resources, and use of backups
- Data must be collected in a manner that allows recovery file contents and metadata in an unaltered form

Summary

- The size of a data collection is determined by the scope of the discovery activity
- A broad e-discovery scope increases discovery costs because of storing, searching, and reviewing data that might not be relevant
- Digital forensics tools and e-discovery tools have many common features but are designed for different purposes
- Trial presentation tools process key evidence for use at trial by transferring information from the litigation database to a format for use in the courtroom

Summary

- The EDRM is a widely accepted approach to culling massive amounts of digital data
- The duty to preserve requires data custodians to take all precautionary measures to make sure information pertaining to an upcoming case isn't destroyed or deleted

Text References

- Phillips, A., Godfrey, R., Steuart, C., & Brown, C. (2014). E-discovery: An Introduction to Digital Evidence. Boston, MA: Cengage Learning.
- EDRM Model (n.d.). Retrieved from <https://www.edrm.net/frameworks-and-standards/edrm-model/>

Homework

- Review and understand this slide deck on Canvas
- Read Chapter 4 before next class
- Read the entire SEC document on document production requirements
 - Modules / Week 6 / [datadeliverystandards.pdf](#)
- Research paper outline due tonight before midnight

Homework (Cont.)

- Research paper bibliography due in two weeks on Mar. 2nd
 - Check out the instructions and rubric on Canvas in the Week 6 module
- Research paper due in seven weeks on Apr. 6th

Questions???

