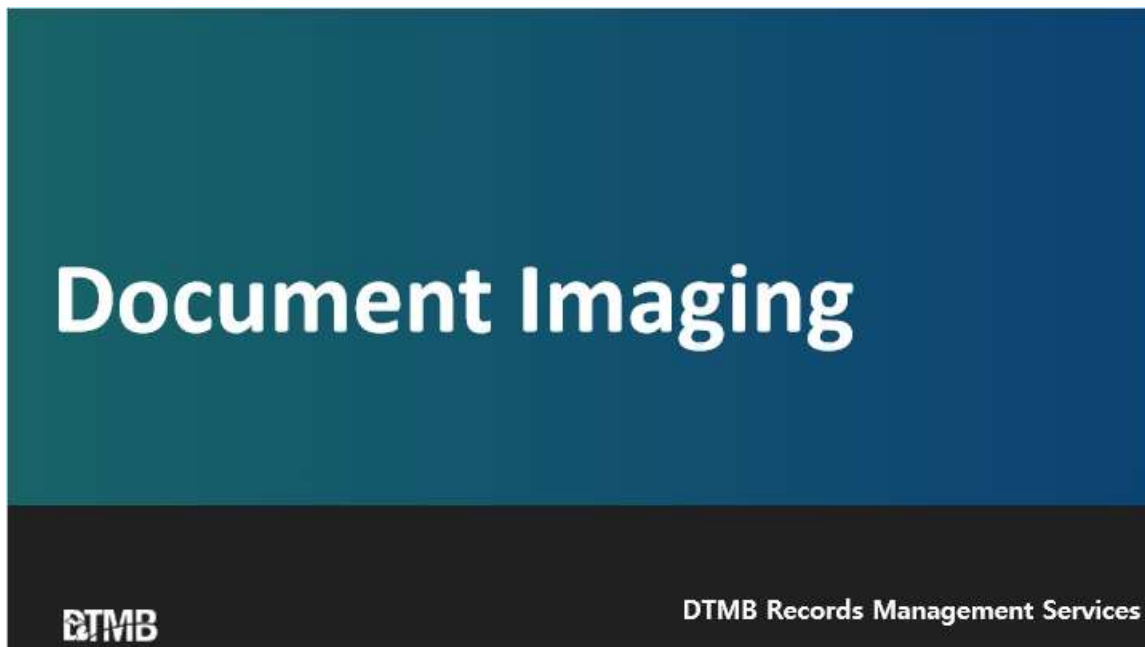


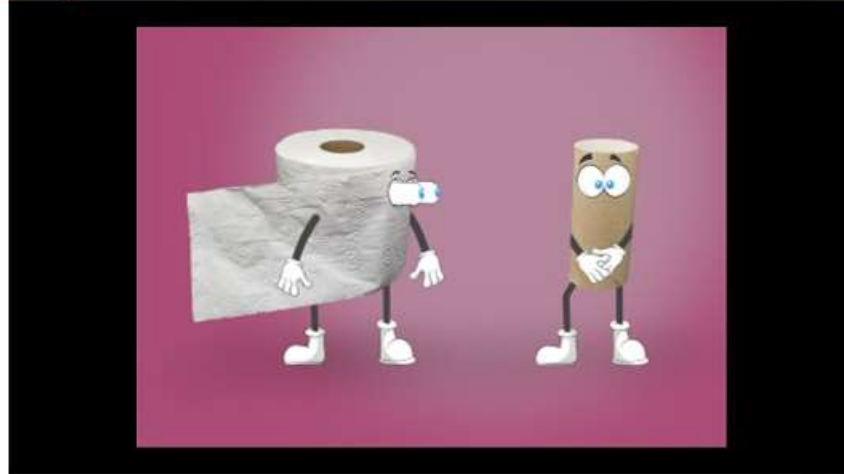
Document Imaging
Class Handout



Notes:

Welcome to the training module titled, Document Imaging. This training is offered by the State of Michigan, Records Management Services. This class contains audio. Users can click on the closed captions button in the player to view the transcript.

The Paperless World



00:00 / 00:38

RTMB

Source: Le Trefle ad (2013)



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Notes:

Everyone says the future is paperless, but there is a time and a place for paper. This video provides a humorous perspective on going paperless.

Records Management Services



DTMB



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Notes:

Employees who took other DTMB Records Management Services classes, heard quite a bit about the services provided by RMS. Just to recap, RMS is responsible for the development, review and approval of records Retention and Disposal Schedules. RMS also provides records management training, physical records storage services, electronic document management services, scanning services, eSignature solutions, and confidential records destruction services.

Class Overview

- Electronic records
- Digital images
- Backfile conversions
- Scanning process options
- Equipment selection
- Scanning components
- DTMB RMS solutions



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Notes:

This class will cover:

- Electronic records
- Digital images
- Backfile conversions
- Scanning process options
- Equipment selection
- Scanning components
- DTMB Records Management Services solutions

**Document
Imaging**

**Electronic
Records**



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Notes:

What are electronic records?

The files are in the computer...



RTMB

Source: Zoolander (2001)



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Notes:

Electronic records can be a challenging concept for some users, as this video from 2001 illustrates.

What are electronic records?

- An electronic record, also known as a digital record, is a record that is created and/or stored using computers
 - Scanned paper documents (digital images)
 - Born electronic documents (Microsoft Office suite)
 - Email
 - Data
 - Social Media
 - Digital Photos

Notes:

An electronic record, which can also be called a digital record, is a record that is created and/or stored on a computer. This can include scanned paper documents (digital images), electronically born documents (like this PowerPoint presentation), email, data in a database or spreadsheet, social media postings, digital photos, and more.

Are electronic records legal?

- Yes - Michigan law does not require that records be kept in their original format
 - Few laws specify the format for storing records
- Same laws apply to paper, images and data
 - FOIA
 - Litigation Discovery
- Retention and Disposal Schedules apply to records in all formats, regardless of where they are stored



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Notes:

A common question received by RMS is: are electronic records legal? The short answer is yes. Michigan law does not require that records be kept in their original format. Occasionally, there are laws that specify the format that records must be stored in, but this is rare.

Paper documents can be scanned. There is nothing special or magical about the paper copy. As long as a good copy of the paper was created when it was scanned, then the paper copy does not need to be kept. A good copy is complete and readable.

All the same laws that apply to paper records also apply to electronic records. They are subject to FOIA and to litigation discovery. Retention and Disposal Schedules apply to records in all formats, regardless of where they are stored.

Longevity of Electronic Records

- Electronic records are technology dependent
- When technology becomes obsolete, the electronic records are at risk
- To keep electronic records accessible over the long-term, they must be migrated to new technology
- Migration can be difficult and expensive

Notes:

It is important to be aware that electronic records are technology dependent. When technology becomes obsolete, the electronic records are at risk of becoming unusable. To keep electronic records accessible over the long-term, they must be migrated to new technology. Migration can be difficult and expensive.

Document Imaging

Digital Images



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Notes:

Digital images are a type of electronic records.

What are digital images?

- Digital reproductions (like a photograph or photocopy) of a physical record (paper or microfilm)
- Quality of the digital image depends upon the quality of the capture process and the quality of the original paper or microfilm

Notes:

What are digital images? They are digital reproductions (like a photograph or photocopy) of a physical record (paper or microfilm). The quality of digital images depends upon the quality of the capture process and the quality of the original paper or microfilm.

State of Michigan Law and Standards

- Records Reproduction Act of 2005
 - MCL 24.401 – 24.406
 - Regulates the reproduction of public records by Michigan government agencies
- State of Michigan Standards
 - Regardless of the format, records must be authentic, reliable, have integrity, and be usable and accessible
 - Standards and best practice documents available at www.michigan.gov/recordsmanagement



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Notes:

The primary law addressing digital imaging in Michigan is the Records Reproduction Act of 2005. The law says that if a good electronic or microfilm copy of a record is created, the agency does not need to retain the original paper.

A good copy complies with the State of Michigan's standards, which are available online. The Michigan standards say that regardless of format - paper, electronic, or microfilm - records must be authentic, reliable, have integrity, and they must be usable and accessible. They must be complete, unaltered, what they claim to be, and they must be usable. Images that are so poor that they cannot be read are not usable.

Michigan's Digital Image Standard

- Format
 - Any lossless compression
 - Prefer TIFF (Tagged Image File Format)
 - PDF (Portable Document Format) concerns
- Resolution of 200-300 DPI
- Black and white, when possible
- Sample for quality
- Written procedures
- Storage media



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Notes:

Michigan's digital imaging standard calls for the use of a lossless compression. The alternative is a lossy compression. Lossy may sound like a made up word, but it is not. It means that every time the image is altered in any way, it degrades. For example, sometimes a picture in an email is forwarded so many times that it becomes pixelated and unreadable. That happens because it is a lossy image. It is like making a photocopy of a photocopy of a photocopy. Lossless compression, is like photocopying the original image every time, so that it does not degrade over time.

The standard also calls for the use of TIFF for images. The most common alternative is JPEG, but that is usually lossy, while TIFF is usually lossless. Agencies may want to take that TIFF and convert it to PDF for usability. PDF reader software generally has bells and whistles that users like. It is important to understand that PDF is a wrapper that goes around something else, in this case a TIFF. Think of it as wrapping paper around a box. It is essential to ensure that the image in the box is a lossless TIFF.

The standards call for 200-300 DPI resolution and black and white images, when possible. They mandate that agencies sample for quality to ensure the scanned images are legible, and that written procedures are developed for the scanning process to promote consistency. RMS can help agencies develop procedures. RMS has sample scanning policies that can be modified and adopted. Finally, the standards require agencies to pick an appropriate media for storing the digital images.

Common Misconceptions

- Scanning is free
- Storing digital images is cheaper than storing paper
- Scan everything and keep it forever



Notes:

There are some common misconceptions about scanning. People often think scanning is free. It is not. Scanning takes equipment and time. Then there is a cost for the digital storage space, and a system to manage the images.

Many people think that storing digital images is cheaper than storing paper. It is not. Records born as paper are cheaper to store as paper. However, they may not be as usable and accessible as digital images. The cost savings related to scanning comes from faster search and retrieval of documents.

Often people think that they should just scan everything and keep it forever. However, not all records are good candidates for scanning, especially if they are rarely retrieved. Also, keeping anything forever has costs and risks.

Document Imaging

Backfile Conversion



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Notes:

Many state agencies have active paper records in their offices. These older records can take up a lot of space and agencies are often motivated to consider converting the paper to digital images. When discussing digital imaging, backfile conversion refers to scanning existing paper documents in the office. Ongoing operations refers to scanning new paper that is created and received by the office.

Conversion Strategy

- **Scan everything**
 - All records
 - Expensive and time consuming
- **Scan most active records**
 - Records in most use
 - Less expensive
 - Dual filing systems
- **Scan records as needed (scan on demand)**
 - Spreads the cost and time of conversion out
 - Delay in accessing records while they are scanned
- **Leave existing records in paper, new records electronic (day forward)**
 - No conversion costs
 - Slow to realize efficiencies and physical space savings



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Notes:

There are multiple methods of converting existing paper files into digital images. Agencies could just scan all of their paper. This is frequently an agency's first instinct, and while it does put all of the records at an employee's fingertips, it can be expensive and time-consuming.

Agencies could scan in their more active records, making them readily available. This method is less expensive. However, this leaves the agency with dual filing systems, both paper and digital. This option can work well when it is combined with scan on demand.

Scan on demand only scans records when they are requested. It can spread the cost and time of a conversion out over years. However, there will be a delay in accessing records while they are getting scanned.

Agencies could adopt a day-forward approach, which leaves their existing records in paper, and only stores new records electronically. Most records are born electronically now, so there are no conversion costs for those records. New records that are created or received as paper would need to be scanned, but the volume of these documents will be low in many situations. The agency will be slow to realize the efficiencies and physical space savings offered by digital storage using this approach.

Conversion Costs

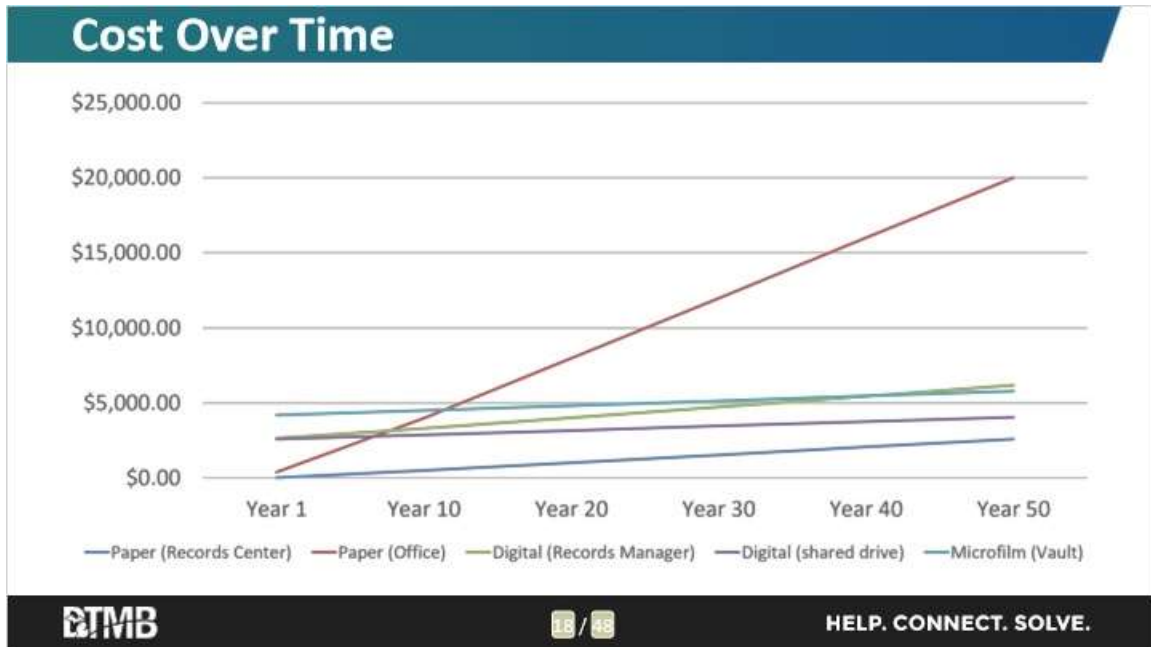
Media		
Paper	Digital	Microfilm

↓

Conversion cost/unit		
\$0	\$2,500/cabinet	\$4,200/cabinet

Notes:

Agencies that decide to do a backfile conversion need to consider the cost. On average, it will cost about \$2,500 to convert one five-drawer 36-inch file cabinet of paper to digital images. It will cost about \$4,200 to convert the same cabinet to microfilm.



Notes:

The retention period for the records should be considered when comparing the cost of conversion for different record formats, because it will impact the long-term storage costs. This chart compares those costs over time. It does include conversion costs, and assumes that costs are consistent over time with each solution.

The dark blue line along the bottom is the cost of off-site paper records storage. This is always going to be the cheapest option, but it only works for inactive records that need to be maintained. It does not work for active records.

The red line is the cost of keeping paper records in an office. It is only cost-effective for about seven years, and after about year 10, it is the most expensive option. Agencies that need to retain active paper records in their office for longer than seven years should consider a different storage option.

The purple line is digital storage in an unmanaged environment, like a shared network drive. The green line is digital storage in a managed environment, such as an EDM system. The unmanaged environment is always going to be less expensive, and while it offers some benefits, it does not offer robust security, indexing and retention management.

The light blue line along the top is microfilm. Microfilm is expensive to create. However, around year 45 it becomes less expensive than an EDM system. It takes about 45 years to get a return on investment for microfilm, but it may be a good option for long-term records with a retention period of 50 or more years.

Inactive Records

- Do not scan inactive records
- Box and send to off-site storage



Notes:

Finally, do not scan inactive records. The retrieval activity for these files is low, so the cost-benefit of storing them electronically will not be achieved. It is better to box them up and send them to off-site storage. The average cost to store a box for one year at the State Records Center is just \$4. Single files or entire boxes can be returned to agencies within one business day if a file needs to be retrieved.

Document Imaging

Scanning Process Options



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Notes:

Ongoing scanning can take place in a variety of locations, and at different phases of the business process workflow. The following are options that agencies can consider when developing their scanning procedures for ongoing operations.

Designing the Scanning Process

- Where should the records be scanned?
- When should the paper be scanned?
- Who should scan the records?

Notes:

Agencies have a lot of options when designing their scanning processes. Agencies need to ask following questions:

Who should scan the records? Should they be scanned internally by office staff, or should a vendor be hired to do the scanning? How many staff will be needed to perform the task? Should the scanning work be centralized to designated staff, or distributed to staff working at their desk?



When should be paper be scanned? Should it be done as the documents are received, so the office can improve the efficiency of the business process? Or, should it be done after the transaction or business process is completed, so the office has a repository to support retrieval later on?

What should be scanned? Should the agency only scan newly received paper documents? All existing paper files (also called backfile)? Selected existing paper files, such as those that are retrieved and used, or the most recent? Or, none of the existing paper files?

These decisions have a significant impact on the resources that are needed for a successful scanning operation and the costs of that operation.

Where should the records be scanned?

Centralized	De-centralized	Task-oriented
<ul style="list-style-type: none"> All scanning done at one location Highly controlled Consistent quality Can capture too much Delivering paper to one location 	<ul style="list-style-type: none"> Scanning done at multiple locations Somewhat controlled Good quality Cost of setting up multiple operations Changes over time 	<ul style="list-style-type: none"> Scanning by individual staff as needed Little control Varying quality Only captures what is needed Records immediately available



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Notes:

Where should the records be scanned? Records can be scanned at a single centralized operation, at multiple locations, such as district offices, or by individual staff. These options all have pros and cons.

Centralized scan operations, where scanning is done at a single location, are highly controlled and produce consistent quality. They may require hiring dedicated staff, but that staff will become proficient over time. However, paper must all be routed to the central location, and too much can be captured, including duplicates or irrelevant documents, as the scan operators will not be making decisions about the value of the paper received. Centralized operations generally involve the purchase of a large production scanner. Centralized operations are good for agencies with a large volume of daily intake.

De-centralized scan operations, where scanning is done at multiple locations, are less controlled and but can still produce a good quality image. They do involve the cost of setting up multiple operations, including the purchase of multiple scanners and possibly the hiring of multiple staff. Over time, scanning procedures at the different sites can begin to differ, affecting quality. De-centralized operations are good for agencies with district offices that receive time-sensitive documents.

Task-oriented scan operations, where scanning is done by individual staff, have very little control and therefore widely varying quality. This may involve the purchase of many small scanners, or the use of existing multi-function machines. This only captures exactly what is needed, and records are immediately available. Task-oriented scanning is good for agencies with a low volume of scanning needs.

When should the records be scanned?

Pre-Process

- Leverage digital system for entire process
- Must wait for documents to be processed and loaded
- Staff must learn new system

Post-Process

- No change for staff
- Must manage both paper and digital records
- Greater risk of misplaced documents

Notes:

When should records be scanned? Should the agency scan all paper documents as soon as they are received, or wait until a file is closed and then scan in the final product?

Scanning all documents when they are received allows the agency to leverage the digital system for the entire process, but also includes a great deal of change management for staff. Also, agencies must wait for documents to be processed and loaded before staff can access them.

Scanning all documents when the agency is done with them means the office will have dual filing systems, both paper and electronic at the same time. There is a greater risk of misplaced documents, and the office is not leveraging its digital system to maximum advantage.

Who should scan the records?

Vendor – Pros

- No equipment purchases
- No staff training
- No physical space needed
- Vendor responsible for standards compliance
- Consistent quality control

Vendor – Cons

- Availability of records during process
- Costs

Notes:

All of these scanning options can be done by an outside vendor or in-house. There are pros and cons to outsourcing scanning operations to a vendor. On the pros side, the agency will not have to purchase any equipment, train any staff, or set aside any physical space. The vendor is responsible for complying with state standards, and consistent quality control will be applied.

On the cons side, records will not be immediately available during the conversion process, as this typically involves boxing up records and sending them to an off-site facility. There is also a hard cost associated with using a vendor, compared to the soft costs of using existing staff.

The State of Michigan has a contracted imaging vendor who can perform a no-cost assessment of a paper collection and provide cost estimates for different scanning options. RMS recommends that any agency considering the digital conversion of a paper collection get an assessment. It does not obligate the agency to use the vendor for any scanning operation, and it will give the agency a solid description of the volume and condition of the collection, as well as the cost value of a conversion.

Document Imaging

Equipment Selection



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Notes:

Agencies that decide to do in-house scanning will need to acquire equipment. This section provides some tips for selecting appropriate equipment for the task.

Scanning Components

- Scanner
- Additional hardware (computers, monitors, etc.)
- Capture software



Notes:

The State of Michigan has a vendor that provides scanning services for agencies that want to convert their paper or microfilm records into digital images. However, some agencies want to do their scanning in-house. In-house scanning requires the purchase of a scanner, computers and monitors to use with the scanner, and capture software that can assist with the indexing and quality control.

Selecting a Scanner

- Price
- Daily duty cycle (volume)
- Paper size
- Feeder capacity
- Speed – pages per minute
- Black & White vs. Color
- Single vs double-sided



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Notes:

The price of scanners can vary from \$800 to \$30,000. Selecting the right scanner will depend on the office's needs. Know what types of documents will be scanned to evaluate the scanner.

The daily duty cycle refers to how many pieces of paper can be scanned in a day before the scanner burns out. Do not try to shove 20,000 pages a day through a scanner that has a 3,000 page per day duty cycle, it will not last very long.

Consider the size of the paper to be scanned. Some scanners can handle oversized paper, while others cannot. Also, look at the feeder capacity - that is how many sheets of paper can be put in the feeder tray at one time.

Other issues to address when selecting a scanner include the speed of the scanner, which is rated by how many pages can be scanned per minute. Also look at whether the scanner can handle only black and white documents, compared to color documents. Some scanners can handle copying of double-sided documents, while others can only handle single-sided documents.

Selecting a Scanner

- Different equipment meets different needs
- Portable scanners (*left*) for field staff
- Flat-bed scanners (*right*) for delicate or under-sized documents
- Large documents (maps, drawings, etc.) require special equipment



Notes:

Specialty scanners that might be an option to consider. The portable scanner shown on the left is great for workers in the field who only need to scan a couple of documents at a time. Flatbed scanners, like the one shown on the right, are good for photographs or delicate paper. Really large documents, such as maps or building plans, may require giant scanners that are mounted to the ceiling. These scanners are expensive, so they are not a good investment, unless they will be used frequently. If the volume of oversized items is small, it might be better to send them to a vendor for scanning.

Equipment Available Through State Contract

Image	Model	Price	Max Daily Duty Cycle	Max Paper Size	Tray Capacity	Max Speed	Recommended Applications
	Fujitsu ScanBed i1150	\$285.00	1500	8.5 x 11.7	50	18ipm	Multi-user Scan Station, Unattended Document, Platform for Special Needs
	Fujitsu ScanBed i1150	\$2,200.00	15,000	11 x 17	200	18ipm	Multi-user Scan Station, Unattended High Volume
	Fujitsu ScanBed i1150	\$285.00	1500	8.5 x 11.7	50	18ipm	Multi-user Scan Station, Unattended Document, Platform for Special Needs
	Fujitsu ScanBed i1150	\$2,200.00	15,000	11 x 17	200	18ipm	Multi-user Scan Station, Unattended Document
	Fujitsu ScanBed i1150	\$2,200.00	15,000	11 x 17	50	18ipm	Multi-user Scan Station, Unattended Document, Platform for Special Needs
	Fujitsu ScanBed i1150	\$285.00	1500	8.5 x 11.7	50	18ipm	Single user, Unattended
	Fujitsu ScanBed i1150	\$2,200.00	15,000	11 x 17	200	18ipm	Multi-user Scan Station, Unattended High Volume



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Notes:

The State of Michigan offers a wide variety of scanners available for purchase through the state's computer contract. RMS can email this chart to agencies that need to compare options.

Scanning with Mobile Devices

- New technology offers new ways to make digital copies of records
- Using new technology should be an agency business decision
- Individuals should not use new technology independently
- Mobile devices carry confidentiality/security concerns



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Notes:

Lots of employees use mobile devices, like phones or tablets, that can be used to take pictures of documents. There are even apps that will convert those images to PDF.

It is important that individual employees do not make independent decisions about using new technologies. Records are the property of the office, not the employees, so the office should decide how mobile devices will be used. Then the office can address confidentiality and security issues, and it can establish policies and procedures for appropriate use.

Scanning Software – NAPS2

- NAPS (Not Another PDF Scanner)
 - Creates a PDF from the scanned image
 - Available free from Microsoft Software Center
 - Pre-approved SOM software
 - Can scan and OCR documents



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Notes:

Agencies also need to select scanning software.

NAPS (Not Another PDF Scanner) software is available free from the Microsoft Software Center, and is pre-approved for use by State of Michigan for employees. The software can scan and it can OCR documents. OCR will be discussed in a few minutes in the Indexing section of this class.

Document Imaging

Scanning Components




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Notes:

Scanning is the process that is used to create digital images. This section will discuss the scanning process components that are needed to successfully produce quality digital images.

Scanning Components

Preparation	• Essential for good quality
Scanning	• Scanner settings and procedures
Indexing	• Index attributes and how that information will be gathered
Quality Control	• Verify and correct
Quality Assurance	• Test and measure the results
Storage	• Where/how/when
Disposition	• Getting the image out

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Notes:

In-house scanning operations require the following components: preparation, scanning, indexing, quality control, quality assurance, storage and disposition. Each of these components will be discussed in more detail.

Preparation is Essential

- Objective is to make documents scanner-ready without human interaction
- Time/cost is often under-estimated
- Impacts image quality and retrieval

Notes:

Document preparation takes a lot longer than everyone thinks it will. Preparation refers to getting the paper ready to go through the scanner without human interaction. It can take a significant amount of time to do correctly. Preparation impacts the image quality, and the ability to retrieve the images, so it should be done by someone who understands how the records are used. The work can be done in-house, or by a vendor with specific instructions.

Preparation Activities

- Remove staples, paper clips, etc.
- Copy or repair of torn documents
- Non-standard size documents
- Sticky notes or attachments must be copied or affixed to a separate sheet of paper
- Condition of documents
- Order arrangement
- Identify missing documents
- Remove duplicates
- Use of barcodes or dividers



Notes:

Preparation activities may include: removing staples and paper clips, copying or repairing torn documents, reducing or enlarging non-standard size documents, copying sticking notes or attachments to a separate sheet of paper, copying delicate documents, putting the paper in the correct order, identifying missing documents, removing duplicates, and inserting barcodes and dividers.

Scanning Procedures

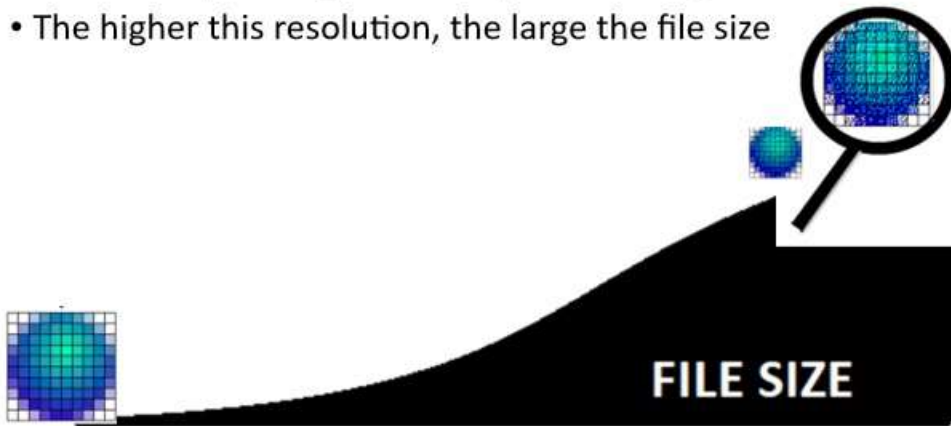
- File format – recommended TIFF or TIFF-wrapped PDF
- Resolution – recommended 200-300 DPI
- Black and white for standard business documents
- Color only for special documents that require it
- Dimensional aspects of original documents
- Single-sided or duplex pages

Notes:

Every scanning operation needs procedures to ensure consistent image quality. Decisions need to be made about file format, resolution, color, enlarging or shrinking non-standard sized documents, scanning double sided pages or just the front, and text searchability.

Resolution

- DPI – dots per inch, the density of the image
- The higher this resolution, the larger the file size



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Notes:

It is important to select a resolution level before documents are scanned, to avoid the creation of images that are overly large. Larger documents are more expensive to store and slower to open.

Resolution is measured in dots per inch, also called DPI. The more dots that are squeezed into a square inch, the clearer the image will be. But this clarity comes with a price. Each increase in the DPI setting will increase the file size exponentially. Agencies should test different settings before scanning large quantities of documents.

Color

- Color images are much larger than black-and-white images
- Grayscale images are also much larger than black-and-white images
- Only scan in color if document cannot be interpreted without it



FILE SIZE

Notes:

Just like resolution, color settings should be selected before documents are scanned, because color images are dramatically larger than black-and-white images. Again, agencies should test different settings before scanning large quantities of documents.

Only scan in color if the document cannot be interpreted without it, such as a map, blueprint, or graph with a color legend.

Indexing Considerations

- Number of indexing values
- Source of index data
- Data entry options
- Pre-existing data
- Barcodes
- Optical Character Recognition (OCR)
- Intelligent Character Recognition (ICR)



Source: Raiders of the Lost Ark (1981)



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Notes:

Indexing can be as simple as a naming convention for the digital images. However, agencies can decide to attach many index values to a single document. Each index value that is added will increase the cost of creating the digital images, as well as increase the size of the image file, and the cost of storing the image. Additional index values also increase the risk of inaccuracies within the index, and that too many documents will be retrieved for a query. However, additional index values can provide the flexibility to run full-text searches of documents to help people find what they are looking for.

Agencies need to consider a variety of options and issues when designing the index, such as how the index data will be collected. Indexes can be created using manual staff data entry, by importing of existing data from a database, by using barcodes, etc.

The image capture software may be used to read text on the paper and create the index. The software could target specific fields on a form, or it could read every word on the page into the index. This is called Optical Character Recognition (also called OCR), and Intelligent Character Recognition (also called ICR). OCR reads typed words on the paper, and ICR reads handwritten words on the paper. ICR does not work very well, but OCR works extremely well, especially with black text on white paper. However, weird fonts, stains or creases on paper, or darkly colored paper can decrease the success of OCR.

The most important thing is to be able to find the records quickly and easily when they are needed.

Quality Considerations

Quality Control

- Completed at the scanner

Quality Assurance

- Completed after conversion, usually by the end user

Notes:

Any scan operation must include quality control and quality assurance.

Quality control occurs at the scanner and involves checking for resolution, contrast, orientation, and ensuring that all pages were scanned.

Quality assurance takes place after the images are loaded into the imaging system. It is usually performed by an end user. During the quality assurance, the user will confirm the accuracy of the index through the retrieval of a sampling of images, will verify that the pages are readable, and will verify that all of the pages were scanned for a document or file.

Storage

- Electronic Document Management (EDM)
 - Strong central security, robust searching, routine and regular backup
- Cloud (OneDrive, SharePoint)
 - Routine and regular backup, user-controlled security
- Network Storage (Shared Drive)
 - Routine and regular backup, security varies
- External Media
 - Good portability, no backup, no monitoring for data loss, loose security



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Notes:

Electronic Document Management Systems (also called EDM systems) provide the best storage and management features for digital images and other electronic records. They have strong, centrally-controlled security, robust searching, and good backup protections. Records Management Services offers a separate class about EDM that goes into detail about how to select a system.

Cloud storage (such as OneDrive, and SharePoint) have good backup. However, users often have the ability to control the security settings, and may not receive sufficient training to protect the records.

Network storage (such as shared drives) provides a routine and regular backup of the documents and data. Networks often have central security to protect the records from inappropriate access.

External media (such as disks and drives) are great for portability, but they do not have a built-in backup process, and they are not monitored for data loss. Also external media lack good security. Even if the media is encrypted (which is recommended), it could still be misplaced or lost.

Disposition

- How long to keep paper after scanned?
 - 30-90 days for quality checks
- How will paper be disposed of?
 - Confidential destruction?
- How long to keep scanned images?
 - Retention and Disposal Schedules
 - Triggers
- Frequency of disposition
- Legal holds
- Documentation



Notes:

Records Management Services recommends that agencies keep the paper for 30 to 90 days after it is scanned to allow adequate time for quality assurance activities. Once the quality assurance is completed, determine how the paper will be destroyed. If it contains confidential or sensitive information, use the confidential destruction bins provided by the State of Michigan's vendor. If not, recycle the paper.

Retention and Disposal Schedules apply to all records, including digital images. Know the retention period for the digital images. Is it chronological, or conditional on a trigger, like the case is closed or the contract expires? Develop procedures for identifying and reviewing digital images that have met their retention period and are eligible for disposition. Determine how frequently images will be destroyed (monthly, quarterly, annually, etc.). Ensure the procedures have instructions for complying with legal holds, and that documentation is created as evidence that the procedures were followed.

Documentation

- Standard operating procedures
- Document preparation instructions
- Scanning process workflow
- Indexing methods
- Quality control instructions
- Quality assurance instructions
- Disposition procedures
- Contact information for technical support or vendors

Notes:

Agencies need to develop documentation for their entire scanning operation, so employees can consistently perform their tasks. This documentation should include standard operating procedures or instructions for document preparation, scanner settings, scanning process workflow, indexing, quality control, quality assurance, disposition, and contact information for technical support or vendors.

**Document
Imaging**

**DTMB RMS
Solutions**



HELP. CONNECT. SOLVE.

Notes:

DTMB Records Management Services offers a number of solutions that can help with agencies with scanning records.

SOM Master Contracts

- Microfilm conversion (from paper or images)
- Imaging conversion (from paper or microfilm)
- Vault storage
- Microfilm inspection and repair
- MMCC (Michigan Master Computing Contract)
 - Purchase/Lease/Rent Scanners



Notes:

The State of Michigan has a master imaging contract that provides for the conversion of paper records to digital images or microfilm, and the conversion of microfilm to digital images. It also has a contract that provides for long-term vault storage of microfilm, and for microfilm inspection and repair. There is also a master computing contract that allows for the purchase, lease or rent of equipment such as scanners.

DTMB manages all of these contracts, and Records Management Services manages the imaging and microfilm contracts.

Benefits of Using the SOM Contracts

- Eliminate the “bid” process
- All billing is handled through RMS
- RMS monitors the vendor throughout the project
- Users benefit from RMS expertise, experience and competitive pricing
- Confidence that scanning standards are followed

Notes:

Using one of these master contracts means that agencies do not have to go through a bid or Request for Proposal process. RMS handles the billing and works directly with agencies and the vendor to monitor the services that are provide. Agencies gain from our knowledge and experience, and receive competitive prices. For imaging and microfilm creation - yes, some people are still making microfilm - RMS provides confidence that all of the Michigan standards are followed. These contracts can also be used by local governments.

Other RMS Solutions

- Off-site storage
- Scan on demand
- E-Signature
- Confidential records destruction



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Notes:

Records Management Services has other solutions that can work hand-in-hand with digital imaging. These include off-site storage, scan-on-demand, eSignature, and confidential records destruction.

We can help!

Records Management Services

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Lansing, Michigan 48909

(517) 335-9132

dtmb-imagingservices@michigan.gov

State Gov: inside.michigan.gov/recordsmanagement

Local Gov: www.michigan.gov/recordsmanagement



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Notes:

Thank you for watching this online class. Please visit the RMS website, <https://inside.michigan.gov/recordsmanagement> for additional information about digital imaging, electronic document management, retention schedules, training and more.