



DIGITAL RECORDS MANAGEMENT GUIDELINES

This Digital Records Management Guidelines document will primarily address the following types of digital records:

-  Email
-  Media
-  Born Digital Records
-  Scanned Records

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EMAIL

Based on the criteria for managing email records put forward by the National Archives and Records Administration (NARA), there are four (4) areas to consider to successfully manage email records:

Policies

- Policies and training programs should explain staff responsibilities for managing email records.
- The policies and training should instruct staff how to distinguish between permanent, temporary, transitory, and non-record email messages.

Systems

- Systems should be in place that can manage, and preserve email records in an acceptable electronic format until disposition.

Access

- Email records should remain discoverable, retrievable, and usable throughout their lifecycle.
- Safeguards against unauthorized loss or destruction should be in place

Disposition

- Appropriate retention periods for email records should be established
- Systems should be implemented to support the appropriate disposition of email records according to the retention schedule.

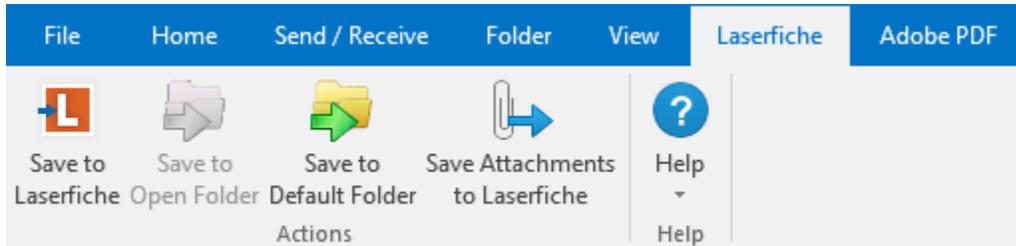
This document will focus on the systems and training required to address the success criteria outlined above.

Management Tools and Methods

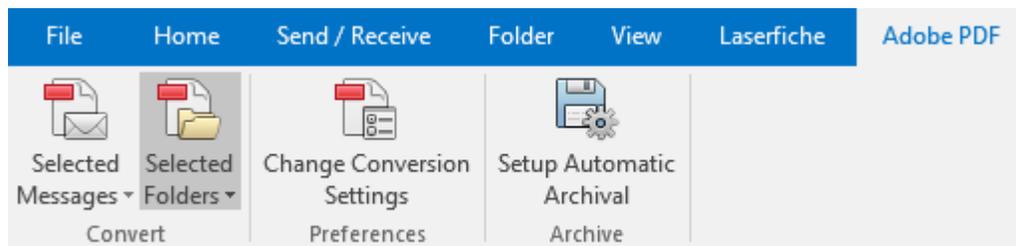
There are several available tools with disparate approaches to managing email records to consider:

1. Laserfiche
2. Adobe PDF Archiver
3. Microsoft Outlook AutoArchive Settings

Laserfiche and Adobe PDF Archiver tools can be embedded within Microsoft Outlook as an additional toolbar.



Laserfiche Toolbar in Microsoft Outlook



Adobe PDF Toolbar in Microsoft Outlook

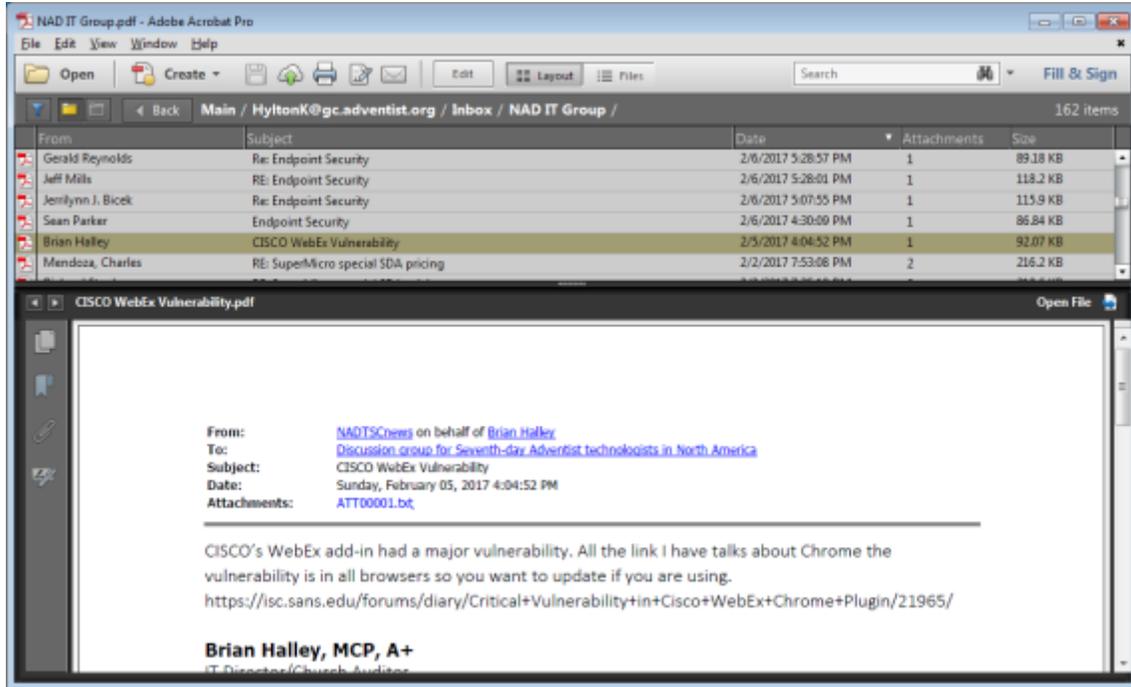
Laserfiche would allow users to save specific messages or a group of messages to a Laserfiche repository. A dedicated repository can be setup for email records, or they can be combined with existing repositories. Having them combined with existing repositories will allow like documents that exist outside of email to reside in the same space as email. As such, word documents, PDFs, and email within the same record group would be together. The 2nd option of having email records in a separate repository would allow them to be managed and secured separately. This may also prevent the repository from being crowded with email conversations.

Key points to note:

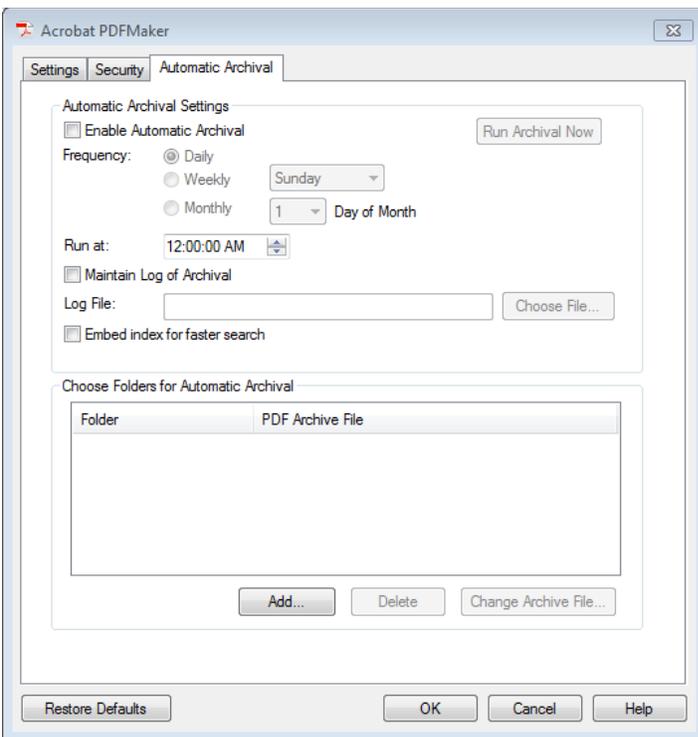
- Email entries in Laserfiche are stored as email (.msg file extension), and therefore will open in an email client such as outlook.
- Default folders can be configured to expedite the process of saving email records to a Laserfiche repository.

Adobe PDF Archiver

This tool simply allows emails to be converted and packaged into a PDF. Multiple emails can be combined and archived into a single PDF as illustrated below.



Archived email in a PDF package

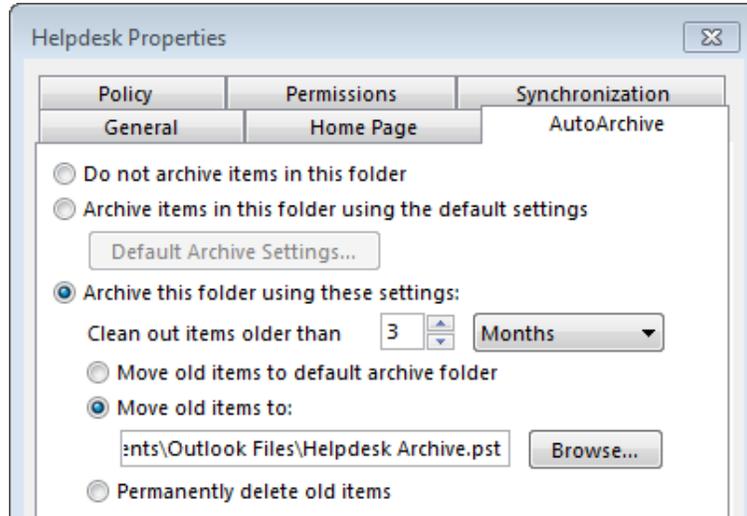


Acrobat PDF Maker Auto Archival Settings

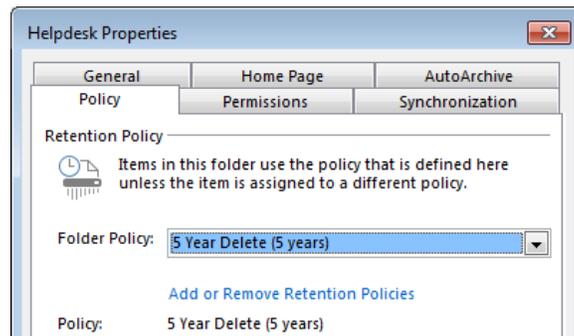
Adobe PDF tool can also be configured to automatically archive specific folders on a set schedule. This can be setup by ITS and configured to export the PDFs to a location on the network. Archival folders could be setup so users may simply move emails into these folders for auto archiving. This option will be easier for end-users; however, the emails will only be grouped based on the folders that are setup.

Outlook AutoArchive

This is built into Microsoft Outlook, and the settings allow for email within folders to be automatically archived based on an established schedule. Email is archived to a .PST file and can be configured to be sent to a location on the network.



Outlook AutoArchive Settings



Outlook Retention Policy Settings

Administrators can create default retention policies for primary folders — such as Inbox, Drafts, Sent Items, Deleted Items, and Junk E-mail. Specific retention policies can be applied by users for individual items or select folders.

Important points:

- Folders will need to be created to which users will move email into for archiving.
- Emails are exported to a PST file.
- Outlook 2016 for Mac does not have this feature, but files can be exported manually to an OLM file.
- This will not require the installation or purchase of any additional software if Microsoft Outlook is already deployed.
- The archived files may be imported into a Laserfiche repository for further management

HYBRID Model A - (Adobe PDF Archiver + Laserfiche)

A hybrid approach that uses both tools is possible where the files are first scheduled to automatically be archived to PDF, then the PDF is imported and managed in Laserfiche. This method would be easier on end-users while allowing records to be managed through Laserfiche. However, it would not be feasible for metadata to be added to each email record being stored.

HYBRID Model B – (Outlook AutoArchive + Laserfiche)

This approach would rely on Microsoft Outlook to have initial retention policies applied to email. Retention policies can be created by an administrator and pushed to all PC outlook users. The retention policies established at this point would need to be straightforward (e.g. 1 year then delete). Based on the a AutoArchive settings or when an employee leaves the organization, the email may be exported to a PST file and managed in a Laserfiche repository. All that would be required from users is to move email into established folders. The drawback to this approach would be that archived email in PST format is not searchable, and metadata if applied would be to the general PST file and not specific email records.

	PROS	CONS
Laserfiche	<ul style="list-style-type: none"> + Save directly into Laserfiche repository where it can be more easily managed and secured + Better organized as templates can be assigned by users for each email being archived + Facilitates adding metadata to each entry if necessary + Each entry can be managed and retained independently 	<ul style="list-style-type: none"> - More effort required of end users - Not available on Outlook for Mac - Laserfiche Client would be required for each computer being used
Adobe PDF Archiver	<ul style="list-style-type: none"> + Little effort required by end users + Auto archival will allow designated email to be archived periodically according to an established schedule + Archived mail can be viewed using a PDF reader 	<ul style="list-style-type: none"> - Exported files will still need to be managed on the network - Not available yet for Mac Outlook - Adobe Acrobat may need to be installed on each computer to facilitate the PDFMaker add-in for outlook
Outlook AutoArchiver	<ul style="list-style-type: none"> + Path of least resistance, very little effort required by the end users + Available without additional software or addins to install + An auto-archive schedule can be setup for email folders 	<ul style="list-style-type: none"> - AutoArchiver not available for Mac, but a manual process is possible - Exported files will still need to be managed on the network - Emails are exported to PST file which has some notable drawbacks
Hybrid Model A - (PDF AutoArchive with Laserfiche)	<ul style="list-style-type: none"> + The process if designed well, may be able to be partially automated + Exported PDF files can be imported into a managed Laserfiche repository + Metadata can be added to the imported file if necessary 	<ul style="list-style-type: none"> - Acrobat PDFMaker add-in not available yet for Mac Outlook - Adobe Acrobat may need to be installed on each computer to facilitate the PDFMaker add-in for outlook
Hybrid Model B - (Outlook AutoArchive + Laserfiche)	<ul style="list-style-type: none"> + Little effort required of users + No additional software required + An auto-archive schedule can be setup for email folders 	<ul style="list-style-type: none"> - Outlook retention policy and AutoArchive not available yet for Mac Outlook - Emails are exported to PST file which has some notable drawbacks

Training & Awareness Initiatives

After the approach has been determined and the technical aspects of the system put in place, appropriate training and awareness initiatives are necessary. These may include the following:

- Developing documentation that provide guidelines and raise awareness regarding proper email management. These may be issued in the package for new workers, as well as sent via email to all employees in the organization
- Reminders in the organization’s newsletter or other internal communication medium if available
- A training video produced to demonstrate the process
- Formal training sessions organized through the relevant department
- General awareness discussion with departments during retention schedule updates

Additional Considerations

- Retention schedules for email may need to be reviewed towards taking the “big bucket” approach that would make it easier for users to adopt. This will involve creating general categories for retention. The following is an example:

Travel	2 years then delete
Finance	5 years then delete
General Correspondence	3 years then archive

The categories should be as general as possible to capture the many possibilities. “Other” or “Miscellaneous” should not be used.

Recommendations

- A model should be decided on which may also be a combination of approaches outlined above. Consideration should be given to already deployed and available software when making a determination as to which method to use.
- Depending on software availability, GC Archives recommends a variation of the Hybrid Model B.
 - All that will be required of users is to create folders within Outlook and drag relevant messages to those folders.
 - Outlook will be configured to automatically archive emails within these folders.
 - Users will have the flexibility of creating their own folders but will be encouraged to do so based on their office/department’s established retention schedule.
 - Laserfiche client will be installed for specific users who will be able to use the embedded toolbar in Outlook to save selected emails directly to a Laserfiche repository.

Technical Notes on Implementation

The approach selected would determine the next steps, however there are some general things that would need to be done regardless:

Software Configuration

- The selected tool will need to be installed and appropriately setup on each user's computer.
- It may be possible to push the configuration onto all computers connected to the network

Network Storage

- Allocate space for and determine the storage location for email records

Server Configuration

- Laserfiche repository will need to be setup to facilitate managing the email records that are archived
- Depending on the approach used, Laserfiche's Import Agent (if available) may need to be configured to import email records into the repository

Training

- Appropriate training and awareness initiatives should be effected

Media (Digital Photos/Audio/Video) Records

Steps to Addressing Digital Media Assets

There are 4 steps towards addressing Digital Media assets:

Audit

- Review holdings to identify and record what we have.
- Add entries to a records management system if one is in place

Selection

- Determine what to do with what we have
- What should be digitized and what should be tossed

Digitization

- Digitize the media holdings that have been so designated
- Establish metadata

Storage

- Aptly store items in a determined physical location
- Store digitized content in the network space allocated

Important Points

- The selection process can be laborious and time consuming, but it is critical to the entire process as it will allow the best use of available resources. This will ensure that we do not digitize unimportant material, and that we purge content that does not need to be stored. Note too that finding out what is on a tape that is not clearly labeled can also be challenging, as it will require a review of the contents using an appropriate device.
- Third-party vendors may be utilized to undertake A/V digitization projects if a reliable vendor is available. Appropriate vetting of these 3rd party vendors should be performed – this may include submitting sample material to be digitized to evaluate their performance before trusting them with valuable collections.
- Provision adequate storage space to facilitate your collection of digital media assets. The following tables offers file size estimates that can be used as a guide:

300 DPI PRINT SCANS:			
	Pixel Dimensions	JPEG File Size	TIFF File Size
3 X 5	900 x 1500	650 KB - 1 MB	3.9 MB
4 X 6	1200 x 1800	1.1 MB - 1.6 MB	6.3 MB
5 X 7	1500 x 2100	1.6 MB - 2.3 MB	9.2 MB
8 X 10	2400 x 3000	3.2 - 4.5 MB	21.2 MB

600 DPI PRINT SCANS:			
	Pixel Dimensions	JPEG File Size	TIFF File Size
3 X 5	1800 x 3000	2.4 MB - 3.5 MB	15.8 MB
4 X 6	2400 x 3600	3.6 MB - 5.2 MB	25.3 MB
5 X 7	3000 x 4200	4.8 MB - 6.9 MB	36.9 MB
8 X 10	4800 x 6000	9.1 MB - 14.3 MB	84.4 MB

Video file sizes vary by format and compression (2GB – 1TB per hour of video)

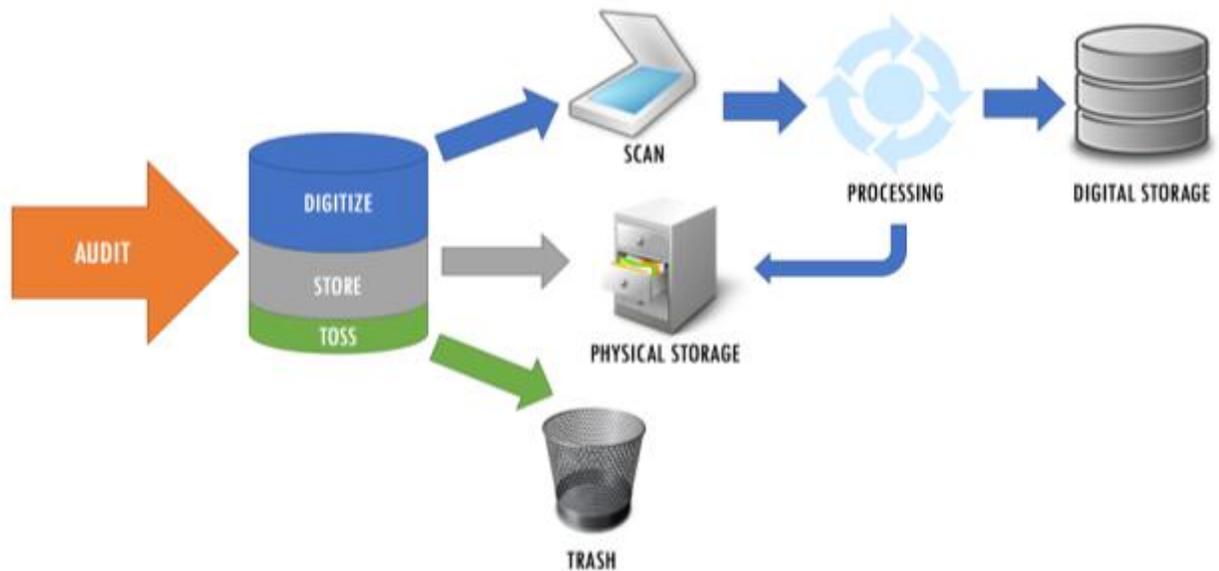
Recommendations

- Perform an audit of Media assets that is currently held, and outline the number of files of each type and total disk space being used for each type.
- A separate storage space for digitized media files should be created. This should ideally be on a location that can be accessed through the organization’s network.
- A backup to an external storage device of all digital media assets should be done at least once a year
- Depending on the magnitude of the digital media asset collection, there may be a need to deploy a robust Digital Asset Management System for managing photos and all media assets. There are a number of Digital Asset Management systems available, and a selection should be made based on your requirements. Visit www.capterra.com to search for descriptions and reviews of these systems. Daminion and Adobe Bridge are examples of software that may be considered.

- Metadata for existing media assets will need to be entered over time.
- Appropriate tags should be created and applied to each asset to facilitate easily finding or filtering content.
- Users should be trained appropriately on how best to use this new system.
- Establish access control for asset collections based on user roles. The following is an example:

User	Collection	Access Type
Director	All	Full Access
Administrative Assistant	Ellen White Collection Adventist Buildings	Read Only
Assistant Archivist	Audio Collection	Full Access

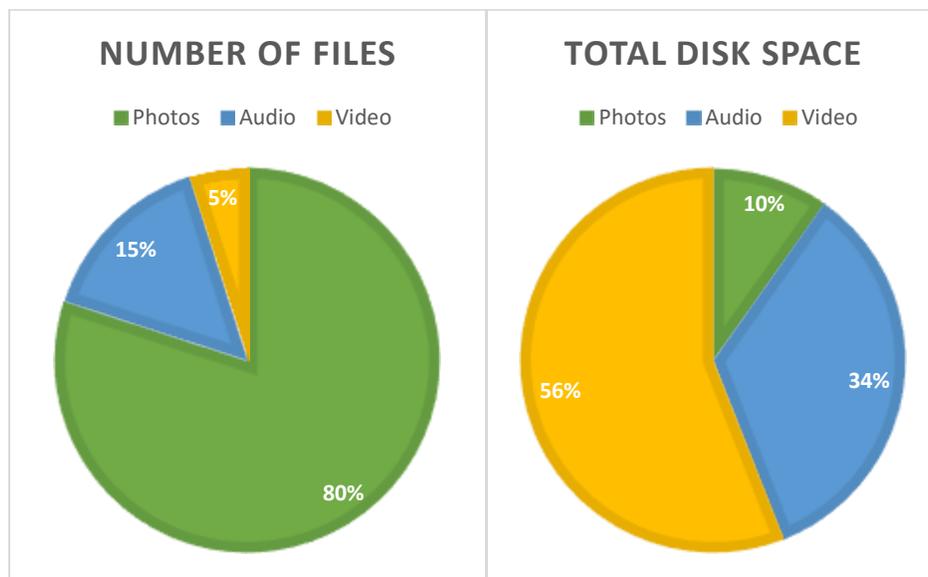
Media Asset Organization Process



Digital Media Assets Audit

An audit should be done to assess our current holdings, how much digital space is being occupied by these files, and where they are being stored. The following is an excerpt from such an audit:

Media Type	Number of Files	Total File Size
Photos	28,722	261 GB
Audio	5,434	915 GB
Video	1,752	1,495 GB
TOTAL	35,908	2,672 GB



File Type	Number of Files	Total Disk Space
TIFF	6,803	222 GB
JPG	21,788	39 GB
PNG	131	0.1 GB

Location of Media Files	File Types
External Hard Drive > Videos	MOV, MP4
Network Drive > Photo Collection	JPG, TIFF

Born Digital Records

Document Management Systems

There are currently two prominent platforms being utilized to manage documents at the General Conference – Sharepoint and Laserfiche.

Laserfiche provides security and ease of use among other noteworthy advantages. Laserfiche does have the capability to publish documents online and make them available to the public. However, its functionality in this regard is limited and does not easily facilitate the level of customization needed. Consequently, if documents are to be published to a public website, Sharepoint does a better job at facilitating this.

Recommendations

- Laserfiche is a suitable and recommended platform for managing digital records.
- Departments where Laserfiche is in use should create Laserfiche document templates with metadata fields based on their established retention schedule. This will facilitate better management of records.
- Establish retention schedule rules on department's Laserfiche repositories towards having files automatically archived as needed.
- Establish a system for purging or archiving files that should be deleted based on the retention schedule. Large repositories are more difficult to manage, it is therefore important that files be removed if they have gone beyond their retention period and are designated to be deleted.

Scanned Records

Scanning Guidelines

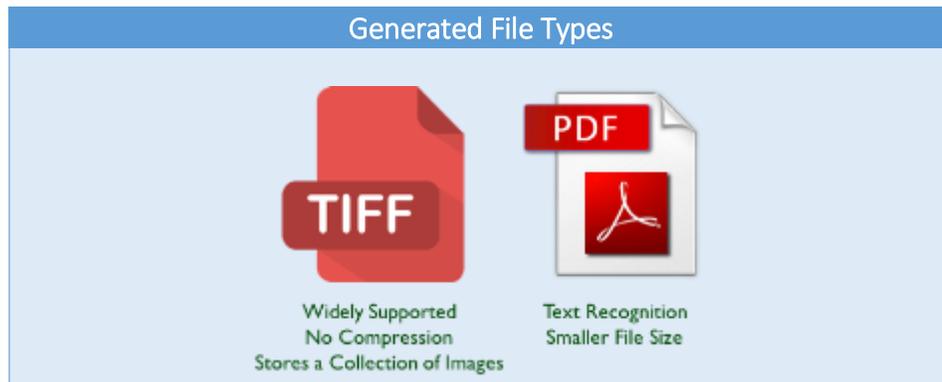
- Scanning Preparation (Cleaning)
 - Remove and Discard Binding Objects: Paper Clips, Staples, Pins, etc.
 - Handle Atypical Paper: Reposition nonstandard sized paper within the stack to facilitate feeding into scanner.
 - Expose All Content: Separate content that may obscure useful information on the page it is attached to (e.g. large photographs taped to an application).

- Scan Document and Ensure all pages are scanned

- Documents should be scanned to the industry standard as follows:

Business Documents:	300dpi
Archival Images:	600dpi

- Delete blank pages, rescan misfeeds, rotate pages (if necessary)
- Process Scan - convert to PDF and TIFF formats



- The filename should include the following fields in the order presented:
 - Record Number/Identifier (e.g. 123456)
 - Box Number (e.g. B101) – *if applicable*
 - File Title

<Record Number>_<BoxNumber>_<File Title>

EXAMPLE FILENAME:

123456_B101_Title of File

This structure ensures a unique filename, and also helps to easily identify records by their Record ID and box number.

- Files should be stored in an appropriate location where it will be periodically backed up

Archival Photos Scanning Guidelines

- Archival Photos should be scanned at 600dpi in TIFF. If necessary, a JPG scan should be generated to facilitate online publishing.
- The scan should be straight and have an even strip of space around the edges of the photo. We are scanning the object instead of merely the picture.
- Relevant metadata should be added as available.

Resources and Advice

Online resource:

<https://www.adventistarchives.org/records-center>

Contacts:

Dr. David Trim, Director of Archives, Statistics, and Research: trimd@gc.adventist.org

Dr. Kenrie Hylton, Digital Records Manager: hylton@gc.adventist.org

General advice on archives and records: archives@gc.adventist.org