

Electronic Records Preservation – What IT Should Know

PRIA Webinar

Jim Harper • Brent Holladay

• Joyce Mascena

January 31, 2019



All Material © 2019 Property Records Industry Association.
All Rights Reserved. Unauthorized Use Prohibited.

Objectives

- Establish the need for a partnership between Recorders and IT
- Help participants understand that a good computer backup process does not achieve the goals of records preservation
- Define the goals of an effective strategy
- Educate participants on the fundamental principles of an effective electronic preservation program



Objectives



Seek first to understand and
then to be understood.

- *Stephen R. Covey*

Need for Conversation with Recorder

- Seek a partnership to develop a preservation strategy
- Acknowledge Recorder is not an IT expert
- Acknowledge IT is not a preservation expert
- Recognize growing role of IT in records preservation
- Reach mutual understanding of requirements



Preservation System

- Preservation - a new concept for IT
 - Responsibility to preserve records forever
- Many components / roles
 - Software System (LRMS and title industry)
 - IT computer backups
 - Dedicated preservation systems
 - Data and image formats
 - Technology evolution



Preservation Terminology

Custodial responsibilities for records:

- Existence
- Authenticity
 - Maintain integrity
- Archival auditing
 - Fingerprinting/hashing
- Recovery/Restoration
- Versioning
 - Index files?
- File uniformity
 - TIFF G4 or PDF/A
- Life Expectancy (LE)
- Data migration

Electronic Preservation Processes

- Existence & Authenticity
 - The baseline identifiers
 - Write Once Read Many (WORM) media
 - Hash algorithms (aka fingerprinting or fixity)
- File Auditing (Monitoring)
 - Comparing the current hash value against the baseline
- File Recovery or File Repair
 - Alternate recovery sites or auto-audit/correct system
 - Reed Solomon software is a repair process
- Notification
 - Alert those responsible when something is wrong



Important Considerations

- If records are lost, what processes are in place to recover those records?
- Is there a chance that anything that was input into the system may be lost?
- Is there any assurance that the recovered data is identical to the original file?

Important considerations (cont.)

- If someone has a copy that is different from ours, can we prove that ours has not changed?
- What checks are in place to make sure no one can or *has* tampered with our images?
- If an image or data is lost and not discovered for a long time, can it be recovered?

Backup → Preservation

- Important to understand your backup processes
- Backup and Preservation have similar but possibly different goals
 - Traditional backup is for recovery of records after a service disruption or disaster but may not guarantee 100 percent recovery
 - Preservation is to guarantee the long-term existence and integrity of the record

Backup Terminology

- Recovery Point Objective (RPO)
 - What is the time interval between backups?
 - What would happen if systems failed between backups?
- Recovery Time Objective (RTO)
 - How long will it take to recover?
 - From electrical outage?
 - From total loss of computer systems?

Moving the Discussion Forward

- How to guarantee existence and authenticity
- Any corruption might be perpetuated
- How to identifying loss or change

Observations on Backups

- Backup is for business continuity
- Potential risks with backups
 - An error can be permanently perpetuated
 - Records may be accidentally overwritten
- Backups restore what is on the backup copy; they do not monitor, protect or correct

Strategies for Recorders & IT

- Need a comprehensive plan
- May require a separate system
 - Role of software systems (LRMS or Title)
 - Systems that self-audit and self-correct
- Need layers of protection
 - Backup is one layer
 - Storage of multiple media types is another

Strategies (cont.)

- Preservation starts at capture
 - Fingerprinting the original image through a hashing algorithm or digital certificate
- Offsite storage is a component
 - Offsite copy of microfilm
 - Offsite backup copy
 - Cloud (system or storage)
- Electronic Preservation paper discusses aspects of preservation

Duties of the Recorder

- The Recorder must take concrete steps to meet legal requirements
 - Determine the acceptable level of loss
 - Consider a separate system to self-audit and self-correct
 - Partner with other public or private entities
 - Consider costs and justify expenditures
 - Secure ongoing funding
 - Monitor, monitor, monitor

Conclusions

- Land records are permanent in all recording jurisdictions
 - Permanent is forever
 - Every Recorder must meet this requirement
- Anticipate legal & technology changes, as well as obsolescence
- Preservation programs and costs have been underestimated

PRIA Presenters

Jim Harper

PFA, Inc.

jharper@pfainc.com

(800) 429-8200

Brent Holladay

Seminole County Florida - IT

bholladay@seminoleclerk.org

(407) 665-4475

Joyce Mascena

Glastonbury, CT - Town Clerk

joyce.mascena@glastonbury-ct.gov

(860) 652-7616

