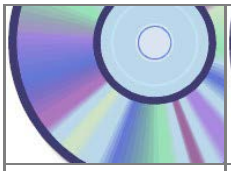
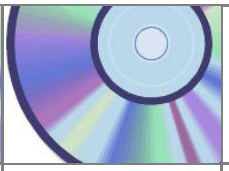
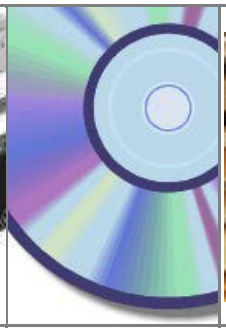
Digital is better, right?

What are the facts and fallacies of digital media? Here are some questions about the permanence and preservation qualities of some everyday items we encounter at work and at home.

				Which is the best place to store family photos?
a. CD-ROM or DVD	b. Online or cloud-based photo archive	c. Archival box	d. Desk drawer	Answer:

		Which will still be viable in 25 years?
a. 89-cent bulk-pack CD-ROM	b. $5 archival-quality CD-ROM	Answer:

		**Chapter One** Developing preservation processes for trusted repositories will require the integration of new methods, policies, standards, and technologies for periods of up			What is the safest long-term storage medium?
a. Stone	b. Parchment	c. Paper	d. Optical	e. Tape drive	Answer:

					What is the most convenient portable data medium?
a. Flash stick	b. CD-ROM	c. Book	d. Floppy disk	E. Cloud	Answer

True or false

1	Digitization of brittle books and other threatened materials is a sound preservation strategy.	T	F
2	It's a good idea to store important or archival CD-ROMs and DVDs in a vault or under other environmentally controlled conditions.	T	F
3	PDF is a robust standard for documents.	T	F
4	Because it's so ubiquitous, Microsoft Word will be around for a long time.	T	F
5	JPEG is a robust standard for images.	T	F
6	Because of is specialized technological knowledge, the IT department should be responsible for maintaining digital files.	T	F
7	Once an item has been scanned, it may be deaccessioned or weeded to save shelf space.	T	F
8	"Born-digital" documents are easier to preserve than scans of originals.	T	F
9	Most important institutions have written preservation policies.	T	F
10	A policy needs to cover electronic files.	T	F
11	A good policy should be flexible enough to accommodate users' and producers' changing needs.	T	F
12	In the Google world, cataloguing is less important than it used to be.	T	F
13	A digital collection, in the long run, will be cheaper to maintain than a traditional book-and-paper collection.	T	F
14	As much as possible, adherence to library and archives standards of interoperability should be observed.	T	F

To Boldly Go – into preservation metadata

Below is a very slimmed-down version of the PREMIS preservation metadata scheme that serves to illustrate how to describe a technology environment. How much of this can you fill out?

METADATA ELEMENT	FIELD VALUE	WHAT IS THIS?	WHERE DO I FIND THIS DATA?
File identification			
Unique file name			
Archives information			
Person authorized to take preservation actions			
Copyright status of object			
Description			
Describe the object			
Purpose of object			
Preservation information			
File size (round to two decimals)			
Initial checksum hash			
Application that created it			
Version of that application			
Type of application			
Source of application			
Format of object			
Format registry used			
Significant properties			
Dependencies			
Preservation level			
Retention period			
Storage location			
Storage medium			
Hardware model			
Processor name			
Processor speed			
RAM memory			
Operating system			
Operating system version			
Backup system			
Life cycle information			
Object event			
Event date			
Checksum hash			
Object event			
Event date			
Checksum hash			

Example – a populated scheme

Here is metadata for a digital photograph uploaded this week. If we were trying to capture minimal preservation metadata (which we're not), this is what it might look like.

METADATA ELEMENT	FIELD VALUE
File identification	
Unique file name	http://stmary2.sdlhost.com/#item/000000059002763/view
Archives information	
Person authorized to take preservation actions	McCargar, V., College Archivist
Copyright status of object	http://creativecommons.org/licenses/by-nc-nd/3.0/us/
Rights registry used	Creative Commons
Description	
Describe the object	Picture of Sister Teresita Espinosa, CSJ
Purpose of object	Print – magazine portrait
Preservation information	
File size in bytes	962,813
Initial checksum hash (CRC32)	555f8401
Application that created it	IrfanView
Version of that application	4.30
Type of application	Photo manipulation
Source of application	OIT department
Format of object	IrfanView JPEG (JFIF)
Format registry used	http://www.nationalarchives.gov.uk/PRONOM
Significant properties	Scanned grayscale
Dependencies	None
Preservation level	1 – Full preservation
Retention period	As long as possible
Storage location	http://stmary2.sdlhost.com
Storage medium	Cloud / Amazon through SimpleDL
Hardware model	Hewlett Packard Compaq 8100 Elite Small Form Factor
Processor name	Intel Core i5 CPU
Processor speed	3.33 GHz
RAM memory	2.00 GB
Operating system	Windows
Operating system version	7 Professional Service Pack 1
Backup system	Network backup
Life cycle information	
Object event	Upload
Event date	20130409
Checksum hash	555f8401
Object event	Validation
Event date	20131009
Checksum hash	157ced60

Fearless preservation

Want to try your hand at long-term digital preservation? Measure your institution against these attributes of a 'trustworthy' repository.

Criterion	Attribute	Yes? No? Maybe?
Organizational infrastructure	You have a mission statement that commits the institution to long-term preservation.	Y N M
	You have a long-term plan for the data in case the institution is closed or goes out of business.	Y N M
Structure and staffing	Your personnel is trained in preservation and you have enough people.	Y N M
	You understand your end-users' current and future needs and have mechanisms in place to adapt as they evolve.	Y N M
	You keep up with changes to relevant technologies and respond to them appropriately.	Y N M
	Your policy addresses the governance implications of all preservation actions, and you maintain appropriate permissions.	Y N M
	You document all changes to your operations, procedures, hardware and software and you are able to tie them to your policy.	Y N M
	Your activities are transparent and auditable.	Y N M
Finance	Your finances are transparent and auditable.	Y N M
	You engage in ongoing risk management with licenses, assets and liabilities.	Y N M
	Your business plan enables the repository to continue operations.	Y N M
	You have funds available to sustain the repository if the usual sources fail.	Y N M
Legal	You have contractual agreements with depositors spelling out your responsibilities, intellectual property rights and preservation authority for every digital object.	Y N M
Digital object management	You identify the properties you will preserve in a digital object.	Y N M
	You validate the completeness of each object when it is ingested.	Y N M
	You exercise constant physical control of an object in order to preserve it.	Y N M
	If you don't archive an object permanently, you dispose of it in a documented procedure.	Y N M
	You specify at what point in the workflow you become responsible for preservation.	Y N M
Archives management	You have a written definition of your archival in formation object, and it's adequate to meet long term preservation requirements.	Y N M
	You have written documentation on how you convert an ingested object into an archival object.	Y N M
	You validate the archived object for completeness at the point of conversion.	Y N M
	You generate a unique, permanent identifier.	Y N M
	You have a mechanism to audit the integrity of the entire archive.	Y N M

Preservation planning	You use documented preservation strategies and respond to them for migration and storage of your archival objects	Y N M
	You have access to authoritative information about the formats you keep in your archives.	Y N M
	You record representation information: i.e., what is required to render the object, and know what to do when it approaches obsolescence.	Y N M
	You can demonstrate that your preservation planning has been effective.	Y N M
Information management	You articulate the minimum metadata requirements to allow end users to discover and identify material of interest.	Y N M
	You let your user community know what delivery options are available.	Y N M
	You record all access actions and ensure they're permissible under your policy.	Y N M
	You record all failures of access and incidents of inappropriately denied access.	Y N M
	You can show that a requested object is generated and delivered in response to a request and that it is correct.	Y N M
	You can show that a delivered object is authentic and traceable to an original.	Y N M
Technologies and infrastructure	You report all incidents of loss or corruption and take steps to repair or replace lost data.	Y N M
	You have defined processes for refreshing and/ or migrating media.	Y N M
	You have thorough testing mechanisms for simulating critical changes to the system.	Y N M
Data security	You systematically analyze all aspects of security.	Y N M
	Personnel have specific security roles that are documented.	Y N M
	You have a disaster recovery plan calling for offsite data storage.	Y N M
	You have an offsite backup copy of your disaster plan.	Y N M
	You update the plan regularly.	Y N M
	You have a plan for continuity of service in the event of disaster.	Y N M

'SWOT' analysis

Strengths (Yes's)		
Weaknesses (No's)		
Opportunities (Maybes)		
Threats (Maybes)		

Fearless Lone Arranging

Feeling fearless? Worried? Check your confidence level and look for opportunities for growth.

I am comfortable developing and creating my own metadata	Y N M
I know the basics of Dublin Core and why it's useful for electronic objects	Y N M
I am familiar with common digital formats, and know which are robust and which to avoid	Y N M
I know my collections and organization well enough to draft a simple digital policy	Y N M
I am knowledgeable in my field and can enforce digital policy confidently	Y N M
Technology does not scare me. Even if I can't do certain things myself, I can ask	Y N M
I have a good idea going in which collections would be the best candidates for digitizing	Y N M
I am not shy about promoting the archives	Y N M
I am enthusiastic about digitizing and convey that to my colleagues and patrons	Y N M
I am comfortable with social media – not just Facebook – and would be up to blogging and tweeting	Y N M
I know enough about digital preservation to explain it to other people	Y N M
I can avail myself of continuing education opportunities	Y N M
I am not afraid to recruit MLIS student interns who know more than I do	Y N M
I can live without being perfect	Y N M
If I don't have a functioning crystal ball, I can make educated guesses and live with them	Y N M
I will continue to love what I do, even in the face of continual change	Y N M

SWOT analysis

Strengths (Yes's)		
Weaknesses (No's)		
Opportunities (Maybes)		
Threats (Maybes)		