

Illinois Wesleyan University

From the Selected Works of Meg Miner

September 20, 2013

Shining a Light on the Digital Dark Ages

Meg Miner, *Illinois Wesleyan University*



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Available at: https://works.bepress.com/meg_miner/16/



Shining a Light on the Digital Dark Ages

Meg Miner

University Archivist and Assistant Professor

Faculty Colloquium
September 20, 2013



Why “Dark Ages”?

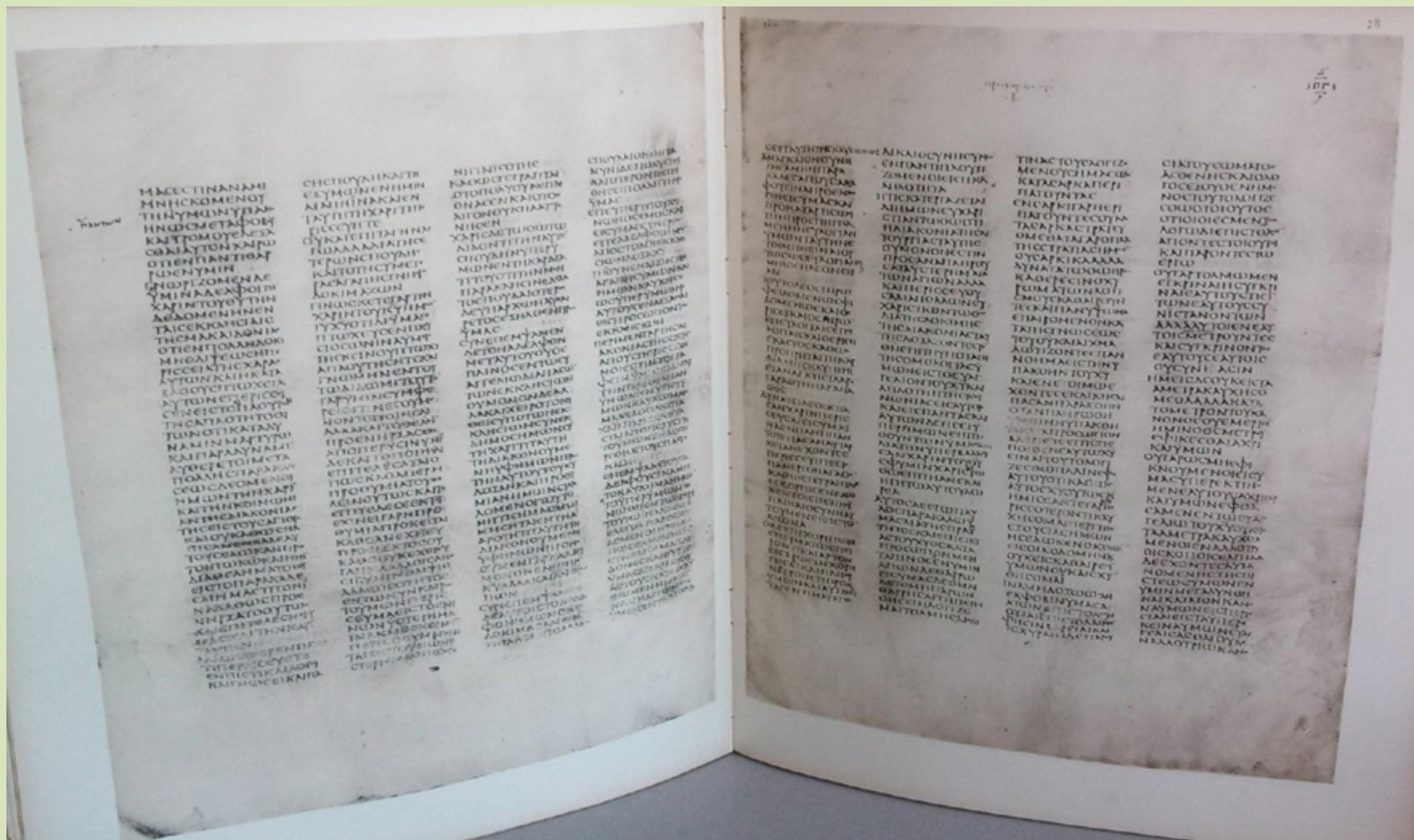
“Digital Dark Ages” is a term coined in 1997

- Need to care for humanities’ electronic heritage
- Recalls the efforts of monks in the Middle Ages
 - practice of copying texts and dispersing them saved knowledge that predated the Dark Ages

Connotes loss of knowledge or lack of intellectual growth due to a loss of understanding of what has come before.

Codex Sinaiticus

4th century mss. Bible, 20th century reprint





Why now?

- IWU's Digital Dark Ages date from late-1990s
 - Our historical record is fragmented: servers, hard drives, external drives and institutional memory.
Oh my!
- 2012 request for long-time administrator.
- 2011 request for 1920s student life.

Concerns for IWU Heritage

- Our Web site is our default archive, but
 - we are not consistent in how we post.
 - our ability to understand change is in doubt.
 - our file types are not stable for the long term.
- Which version of a record is the official IWU word on a subject?
 - If there is a discrepancy, how will it be resolved?
 - Where does the original live? Who cares for it?
The archives does *if found* but some slip by.

Concerns for Heritage (cont'd)

- Content Management Systems
 - Unlimited ability to create and distribute
 - You are our monks...but not all on the same page
- Social Media & Third Party platforms
 - Issues about ownership, ongoing access, file types

Moving IWU Out of the Dark Ages

Using the Web for promotion of our work is **important, necessary** and **useful** but we make assumptions about the safety of our records that are misleading.

We must start making decisions about what we value for our cultural heritage and secure that content in ways that will ensure its survival.



Shining a Light on the Digital Dark Ages

True Confessions of a
Book- and Paper-Loving Librarian

Meg Miner

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Assumptions in the Digital Age

Storage is cheap and everywhere!

Is the content secure/accessible? How? By whom?

If it is digital it will always be available!

*Will it be useable? If software changes or files decay
how will we know what is gone before it is too late?*

Storage

- Storage options are cheap and everywhere!

Storage ≠ Preservation



We'll save your memories.
Your stories and songs.
Your future.
Your legacy.
Your up all night long.
Your soundtrack.
Your passion.
Your reason for living.
We'll save your gift.
So it can keep on giving.

is **saving** your digital life
just the beginning?

absolutely™

Save
Digital
Storage

Save
Digital
Storage



Share
Personal Cloud
Storage



Stream
HD
Routers



Enjoy
Media
Players



Western Digital
may be mentioned



Storage (cont'd)

- Storage options are cheap and everywhere!
 - But human intervention is not (and we are so busy that it is easy to put off)
 - Files need naming, tagging, organizing
AKA *metadata*
 - Do your backed up versions all match?
 - Do you spend time synching devices? How much?

Storage (cont'd)

Don't forget:
all drives fail
eventually



“Do you have a back-up plan?” by John K
<http://www.flickr.com/photos/johnkay/5200871042/>

Storage (cont'd)

Media needs
to be replaced
every five
years (aka
migration)

“Bit Rot” by
The Joy of the
Mundane



http://www.flickr.com/photos/mundane_joy/2316921309/

Storage (cont'd)

- Storage options are cheap and everywhere!
 - But human intervention is not (and we are so busy that it is easy to put off)
 - Do your backed up versions all match?
 - Remember: you get what you pay for with physical storage and in the Cloud!

Storage (cont'd)

Backups on
cheap and/or
fragile media



Deterioration
← here



Deterioration
← here

“Data deterioration”
Univ. of VA Library
Preservation Service
<http://www.flickr.com/photos/uvalibpreservation/803308599/>

Storage (cont'd)

Cloud providers
may not = stable, consistent access

- What security measures do they promise?
- Do they back up anywhere? How will you know?
- Do they offer an exit strategy if they go out of business?
- If the person who set up the account dies, who has access?

Served ≠ preserved

The screenshot shows the YouTube channel page for Illinois Wesleyan University. The header features the YouTube logo, a search bar, and an 'Upload' button. The channel banner image depicts a brick building with a large archway, partially obscured by pink cherry blossoms. Below the banner, the channel name 'Illinois Wesleyan University' is displayed, along with a 'Subscribe' button and a subscriber count of 40. Navigation tabs for 'Videos', 'Discussion', and 'About' are visible. The main video player shows a video titled 'discover v.tr. to find out or become aware of }' with a duration of 0:01 / 1:06. To the right of the video, the text 'Discover Illinois Wesleyan' and '676 views 2 years ago' is shown. On the left sidebar, there are links to various content categories like 'Popular on YouTube', 'Music', 'Sports', 'Gaming', 'Education', 'Movies', 'TV Shows', 'News', 'Live', and 'Spotlight'. Below these are 'CHANNELS FOR YOU' recommendations including 'freddiew / BrandonJLa', 'Machinima', 'Nerdist', 'BuzzFeed Central', and 'C. G. P. Grey'. A 'Sign in' button is also present. At the bottom, a section titled 'Explore Illinois Wesleyan' displays a row of five video thumbnails.

YouTube

Search

Upload

Popular on YouTube

Music

Sports

Gaming

Education

Movies

TV Shows

News

Live

Spotlight

CHANNELS FOR YOU

freddiew / BrandonJLa

Machinima

Nerdist

BuzzFeed Central

C. G. P. Grey

Browse channels

Sign in now to see your channels and recommendations!

Sign in

Illinois Wesleyan University

Subscribe 40

Videos Discussion About

discover *v.tr. to find out or become aware of }*

Discover Illinois Wesleyan

676 views 2 years ago

0:01 / 1:06

Explore Illinois Wesleyan


Compressed files

vimeo [Join](#) [Log In](#) [Create](#) [Watch](#) [Upload](#)

IWU Video

PRO

Joined 4 years ago 📍 Bloomington, Illinois



[✓ Follow](#) [✉ Message](#)

What's your passion? At Illinois Wesleyan, we'll help you to pursue it.

<http://www.iwu.edu>

NEED HELP?

If you have questions about what's on this page, look here first: [Help](#) / [FAQ](#)

[IWU Video's Videos](#)
[IWU Video's Likes](#)

100
Videos

0
Likes

0
Following


5
Collections

0
Portfolios

0
VOD


Featured Videos

What Happens After Classes? Campus Life at Illinois Wesleyan University



[LIKE](#)
[LATER](#)
[SHARE](#)

02:03 HD



Third party contracts



ILLINOIS WESLEYAN UNIVERSITY TITANS

[ATHLETICS HOME](#) [IWU HOME](#) [ADMISSIONS](#) [ACADEMICS](#) [ALUMNI](#) [CAMPAIGN](#)

MEN'S SPORTS

- BASEBALL
- BASKETBALL
- CROSS COUNTRY
- FOOTBALL
- GOLF
- LACROSSE
- SOCCER
- SWIMMING & DIVING
- TENNIS
- TRACK & FIELD
- GENERAL SPORTS

WOMEN'S SPORTS

- BASKETBALL
- CROSS COUNTRY
- GOLF
- LACROSSE
- SOCCER
- SOFTBALL



9.14.2013 | Men's Soccer
IWU Men's Soccer Dropped by Dubuque, 3-1

Illinois Wesleyan senior [Adam Flaughter](#) was the lone Titan to score for the men's soccer team against the University of Dubuque Saturday at Oyen Field late Saturday afternoon, where IWU fell to the Spartans, 3-1. [Full Story](#)

RECENT TITANS HEADLINES



09.13.13 | WOMEN'S TENNIS

EVENTS

Aug		September 2013					Oct
SU	MO	TU	WE	TH	FR	SA	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
29	30						

Sun, Sep. 15, 2013

WOMEN'S GOLF
vs Illinois Wesleyan Fall Classic
Normal, Ill.
9 a.m.

MEN'S TENNIS



**ORTHOPEDIC & SPORTS
ENHANCEMENT CENTER**

Sharing & convenience? Yes!

Continued access? Maybe.



Drive

Welcome to Google Drive, the new home for Google Docs



Access everywhere



Store files safely

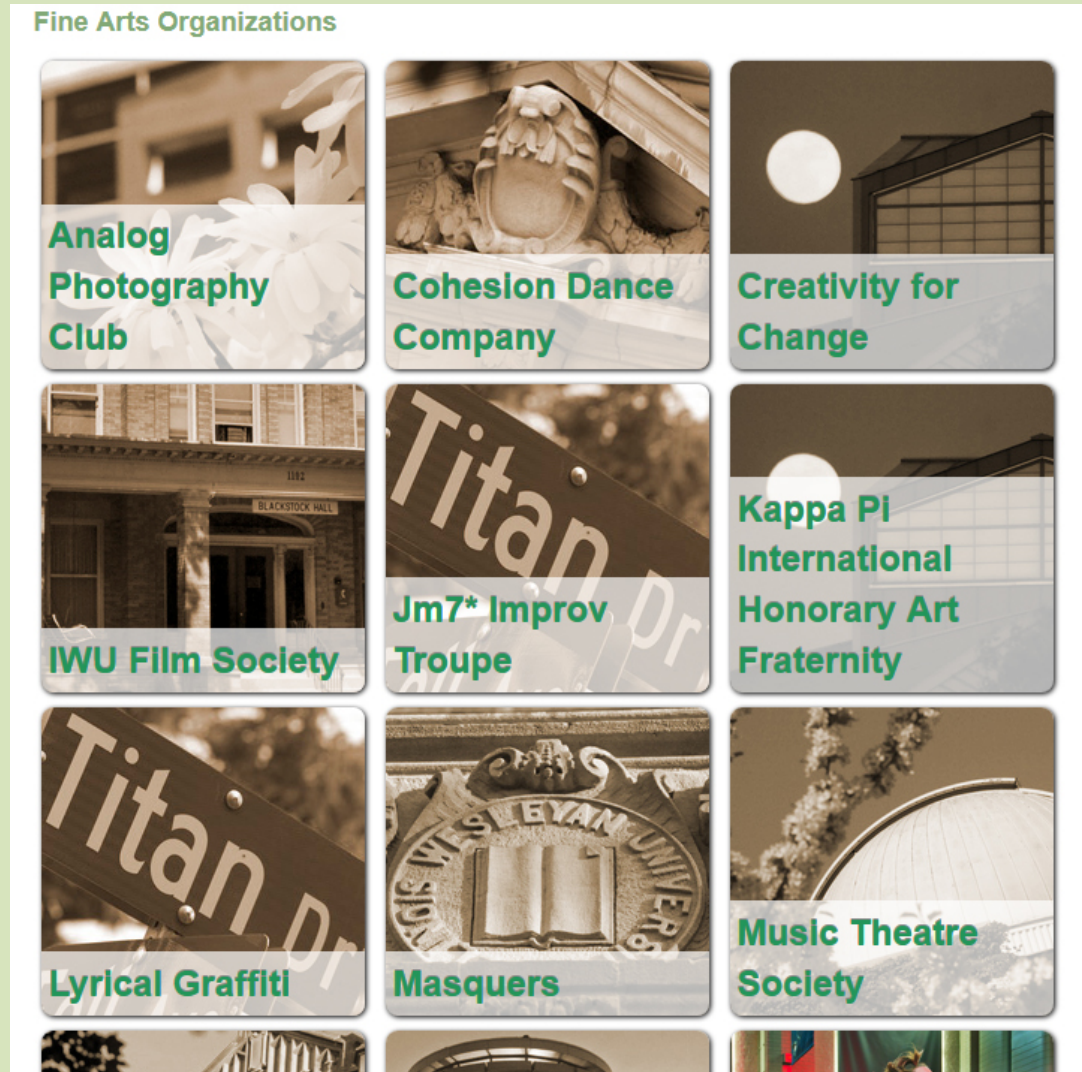


Collaborate with Google Docs

[Learn more](#)

Homepages only on IWU servers

Where is
Student
Life?



Some is here...
sometimes.

Blogs at Illinois Wesleyan

Student Teaching

Just another Blogs at Illinois Wesleyan site

ITS @ IWU

Comments on Illinois Wesleyan University's Information Technology: planning and operations

IWU SAAC

Student-Athlete Advisory Committee

Hispanic Studies

¿Qué pasa? Otro blog de Illinois Wesleyan

ACTION RESEARCH CENTER at Illinois Wesleyan University

Use the Navigation Menu to Learn More About ARC's Connection to the Community!

NSLS at IWU

Welcome to the National Society of Leadership and Success



The John Updike Society



GREENetwork

Tips and updates from Illinois Wesleyan University's

GREENetwork

IWU Anthropology Club

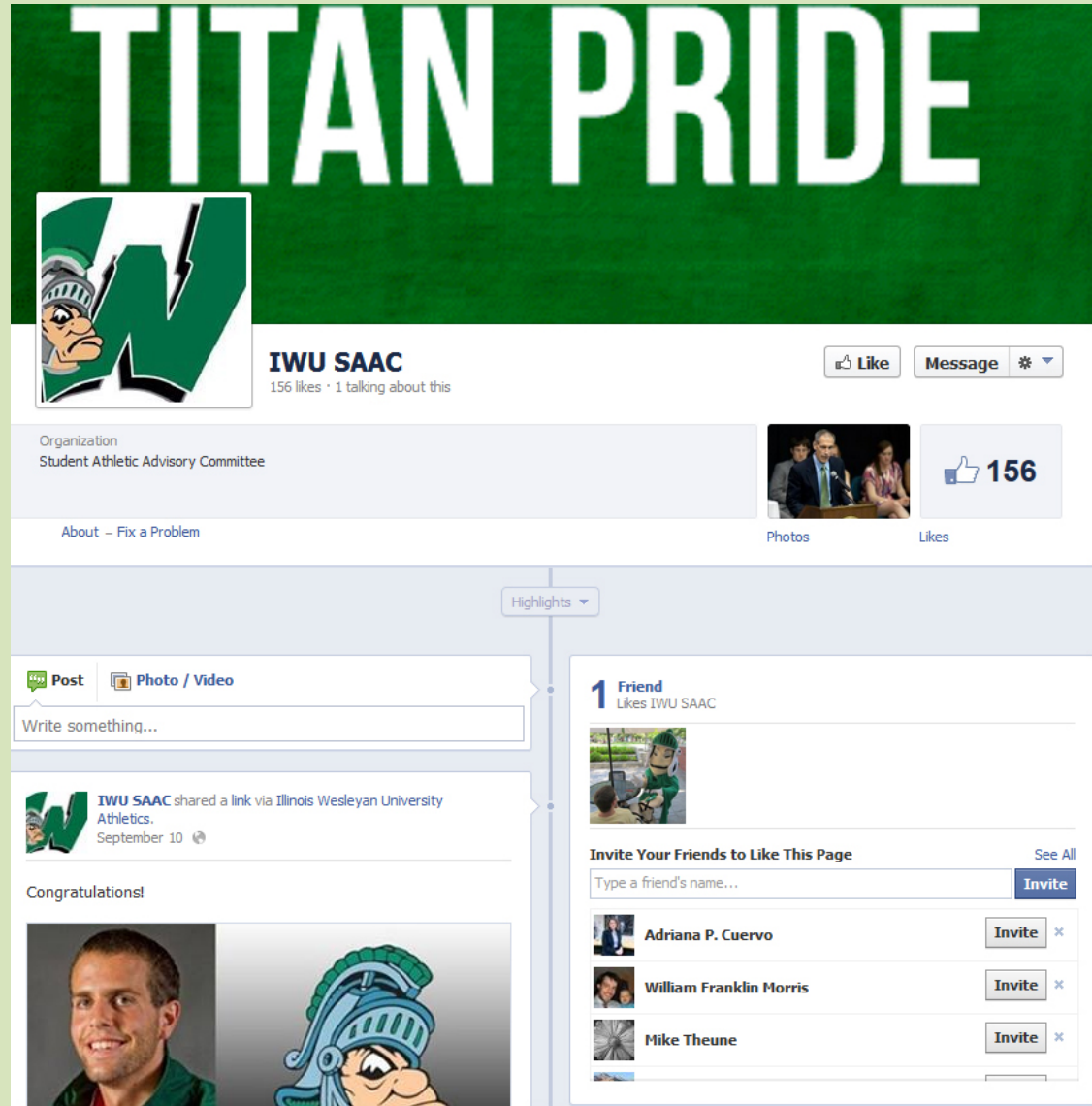
Information for students interested in anthropology

Around the House

IWU English Department News

Can't crawl content

Student Life &
Culture in the
Cloud =
History at Risk



The image is a screenshot of the Facebook page for the Illinois Wesleyan University Student Athletic Advisory Committee (IWU SAAC). The page has a green header with the text "TITAN PRIDE" in large white letters. Below the header is the IWU SAAC profile picture, which features a green and white logo with a cartoon character. The page name is "IWU SAAC" with 156 likes and 1 person talking about it. The page is categorized as an "Organization" and "Student Athletic Advisory Committee". There are buttons for "Like", "Message", and a dropdown menu. Below the page information, there are tabs for "About", "Fix a Problem", "Photos", and "Likes". The "Likes" tab is selected, showing a list of people who like the page. The first person listed is a friend, "Adriana P. Cuervo". Below the list, there is a section titled "Invite Your Friends to Like This Page" with a search bar and an "Invite" button. The search bar contains the text "Type a friend's name...". The list of friends to invite includes "Adriana P. Cuervo", "William Franklin Morris", and "Mike Theune".

TITAN PRIDE

IWU SAAC
156 likes · 1 talking about this

Organization
Student Athletic Advisory Committee

About · Fix a Problem

Photos Likes

Highlights

Post Photo / Video

Write something...

IWU SAAC shared a link via Illinois Wesleyan University Athletics.
September 10

Congratulations!

1 Friend
Likes IWU SAAC

Invite Your Friends to Like This Page See All

Type a friend's name... Invite

Adriana P. Cuervo Invite x

William Franklin Morris Invite x

Mike Theune Invite x

Perceptions of Permanence

- “All that’s on the internet, it’ll always be there.”
 - Quality of what’s there? Who is responsible?

Perceptions of Permanence



Is it usable?

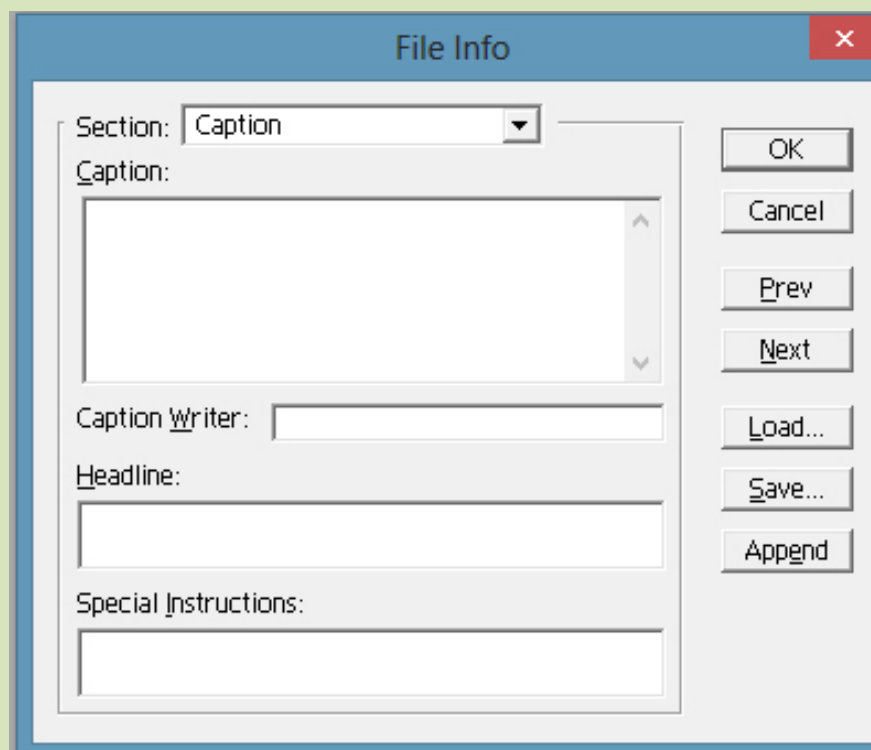
IWU Greek
System page
1997



<http://web.archive.org/web/19971007185105/http://www.iwu.edu/organizations/greeksystem/index.html>

Perceptions of Permanence

Is it useful?
Not without
metadata!



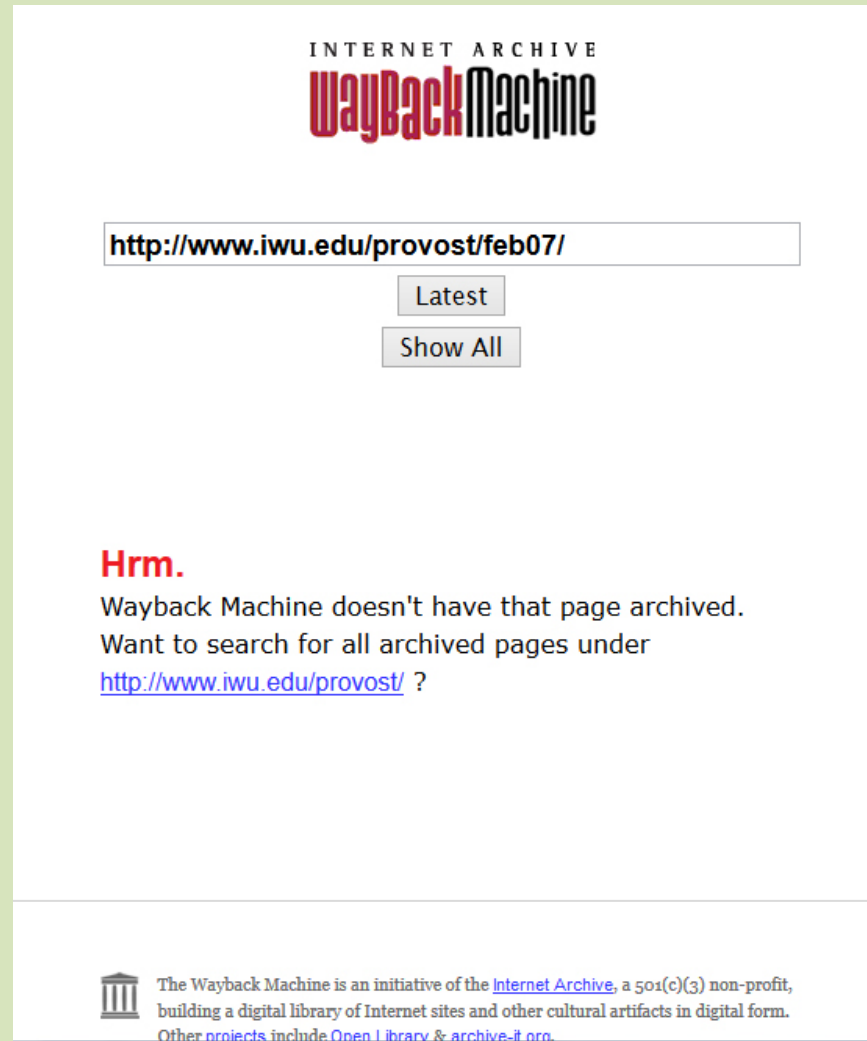
A screenshot of a 'File Info' dialog box, likely from a digital library or archival software. The dialog has a blue title bar with the text 'File Info' and a red close button. It contains several input fields and buttons. On the right side, there are buttons for 'OK', 'Cancel', 'Prev', 'Next', 'Load...', 'Save...', and 'Append'. The main area on the left has a 'Section:' dropdown menu set to 'Caption'. Below it is a 'Caption:' label followed by a large text area. Further down is a 'Caption Writer:' label followed by a text field. Below that is a 'Headline:' label followed by a text field. At the bottom is a 'Special Instructions:' label followed by a text field.



Perceptions of Permanence

NOT
always
going to
be there

IWU Provost
2007



http://web.archive.org/web/*/http://www.iwu.edu/provost/feb07/*

Perceptions of Permanence

Illinois Wesleyan University Disclaimer of Content

Information in the Illinois Wesleyan University Web is provided by many different people. While the authors of these pages try to keep them accurate and up-to-date, the University cannot guarantee that they always will be. If you see something in an IWU document that should be corrected or updated, send mail to the address on the document (or to webmaster@iwu.edu if the document is unsigned.) Be sure to give the full URL of the document in your letter.

Unless otherwise noted, the web information does not represent official statements or views of Illinois Wesleyan University.

“...cannot guarantee that they always will be....”

<http://www.iwu.edu/disclaimer.html>

Accessed September 14, 2013

Perceptions of Permanence

- “All that’s on the internet, it’ll always be there.”
- Digital files deteriorate.

They call it *Bit Rot*

“The stakes are high. Mistakes 30 years ago mean that much of the early digital age is already a closed book (or no book at all) to historians.”

The Economist
April 28, 2012

The Economist

World politicsBusiness & financeEconomicsScience & technologyCu

Digital data
Bit rot

The world is losing its ability to reconstruct history. Better regulation could fix that

Apr 28th 2012 | From the print edition

Like939

Tweet288

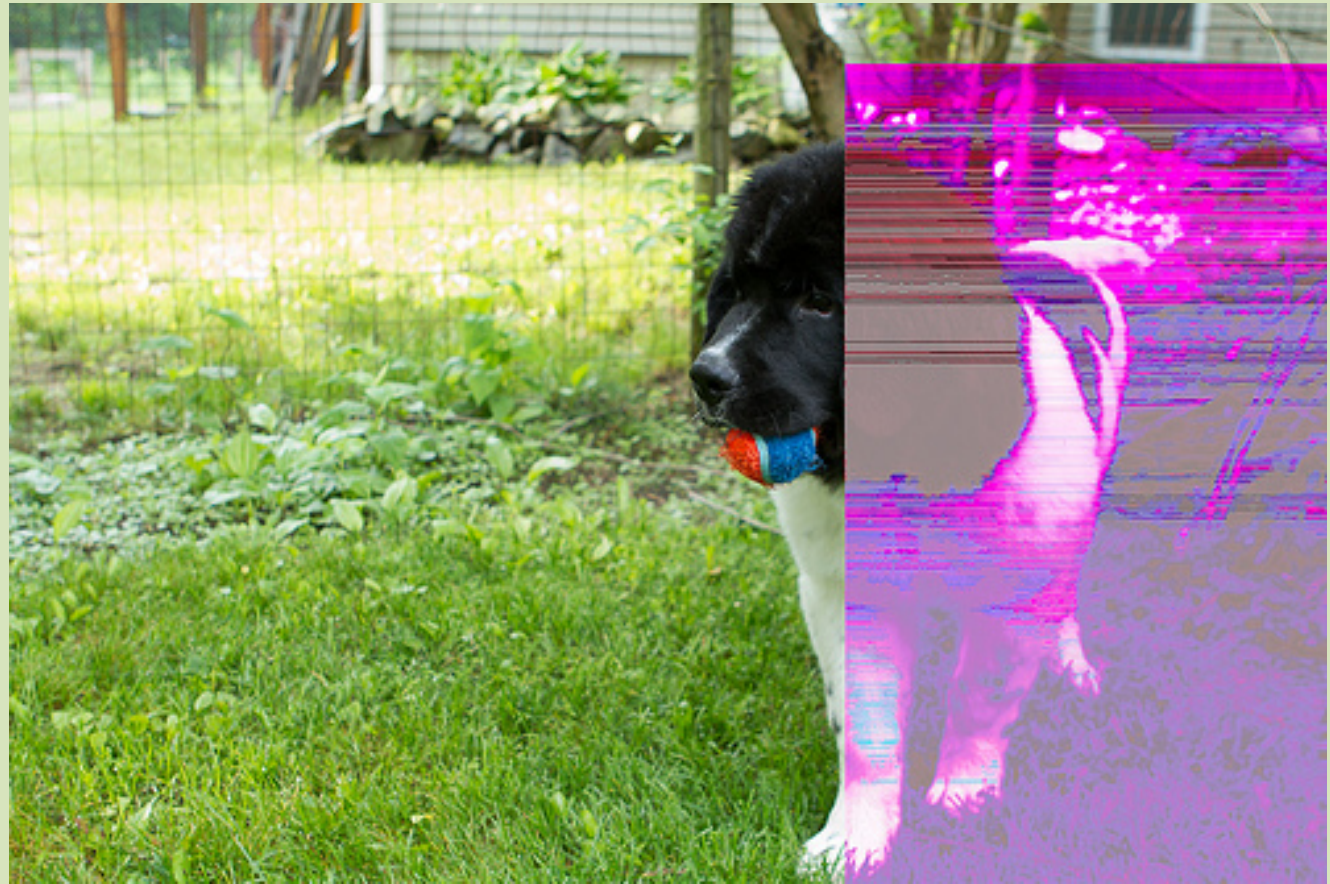


PICTURE yourself as a historian in 2035, trying to make sense of this year's American election campaign. Many of the websites and blogs now abuzz with news and comment will have long since perished. Data stored electronically decays. Many floppy disks from the early digital age are already unreadable. If you are lucky, copies of campaign material, and of e-mails and other materials (including declassified official documents), will be available in public libraries.

But will you be able to read them? Already, NASA has lost data from some of its earliest missions to the moon because the machines used to read the tapes were scrapped and

Regarding Permanence

Files do
deteriorate &
with no sign
until you try
to open them



“And this is why you backup your files...” By npurmort
<http://www.flickr.com/photos/npurmort/7158077037/>

Perceptions of Permanence

- “All that’s on the internet, it’ll always be there.”
- Digital files deteriorate.
- Software changes make the ability to read file content uncertain over time.

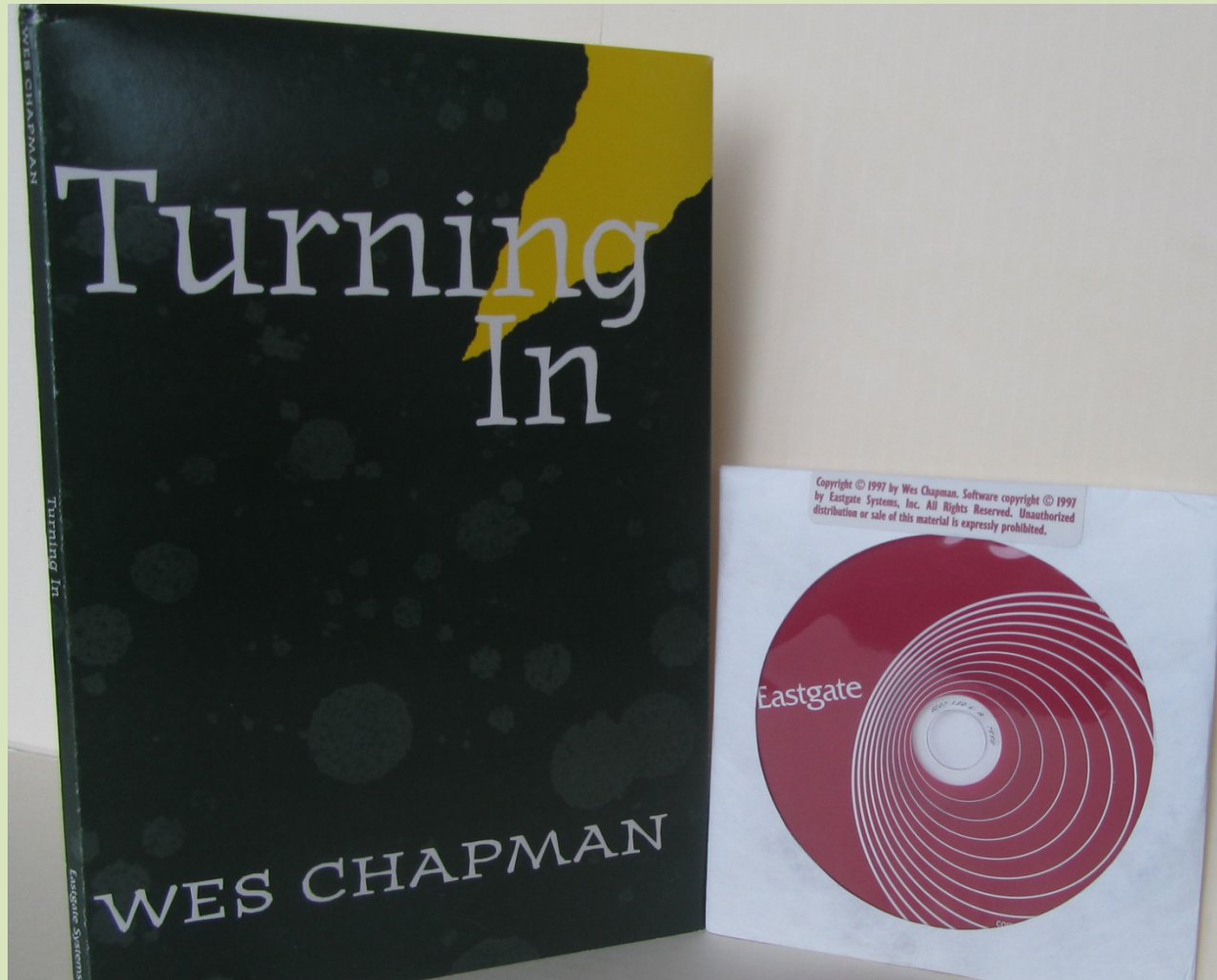
Software and “Permanent”



Dear Enid:

Thankó verù mucè foò á lovelù luncheoi a
imaginã yoõ no÷ ií Indiá anã wondeò iæ y
samã Indianó witè whoí wã talkeã yearó a
werã quitã remarkable÷ buô thã political
atomiã bombó foò Indiá witè eager÷ burni
noó tĩ kilì anù insects® (Several haã t
silk so that no insect would get caught

Software and “Permanent” (1997)



Software and “Permanent” (2001)



Perceptions of Permanence

- “All that’s on the internet, it’ll always be there.”
- Digital files deteriorate.
- Software changes make the ability to read file content uncertain over time.
- Some online content should not be permanent.
 - “Official” files are superseded and old content not removed from the Web site.

Perceptions of Permanence

Version
control

[Illinois Wesleyan: Alcohol Policy and Adjudication Guidelines](#)

IWU Philosophical Statement. PHILOSOPHY. A review of alcohol issues at IWU begins with guiding principals upon which **policies** and programs are built.
www.iwu.edu/judicial/Alcohol_Policy.html

[Illinois Wesleyan: Student Handbook Policy and Regulations](#)

Campus Environment. Illinois Wesleyan encourages the entire community to engage in positive dialogue involving different life experiences. Intercultural ...
<https://www.iwu.edu/judicial/.../StudentHandbookPolicies.html>

[Illinois Wesleyan: Judicial Affairs - Whistleblower Policy](#)

Whistleblower **Policy**. I. PURPOSE AND APPLICABILITY. The purpose of this **policy** is to set forth Illinois Wesleyan University's **policy** on Board member, faculty , ...
<https://www.iwu.edu/judicial/policy/WhistleBlowerPolicy.html>

[Illinois Wesleyan: ITS Usage Policy](#)

IT USAGE **POLICY**. Just as knowledge and discussion are at the heart of teaching and learning, so too are information and communications technology such as ...
<https://www.iwu.edu/its/about/itsusage.html>

[Illinois Wesleyan: Student Handbook Alcohol and Substance Policy](#)

Alcohol and Substance **Policy**. Illinois Wesleyan University endorses the Drug Free Schools and Campuses Act and the required provisions of that act may be ...
<https://www.iwu.edu/judicial/.../StudentHandbookAlcoholPolicy.html>

[Illinois Wesleyan: Sexual Harassment and Sexual Violence Policy](#)

Sexual Harassment and Sexual Violence **Policy**. Section 1: Statement of Purpose . Illinois Wesleyan University ("University" or "IWU") is committed to creating, ...
www.iwu.edu/judicial/handbook/SexualHarassment.html

[Illinois Wesleyan: Judicial Affairs Federal Policies](#)

Federal **Policies**. Federal Drug-Free Schools and Communities Amendment Act. The federal government has enacted two phases of legislation aimed at ...
www.iwu.edu/judicial/MandatedPolicies.html

[Social Media Policy This policy provides guidelines for ...](#)

File Format: PDF/Adobe Acrobat

Social Media **Policy**. This **policy** provides guidelines for communicators using social media on behalf of. Illinois Wesleyan University academic and ...
www.iwu.edu/writingguide/social-media-policy.pdf


Two steps towards preservation

Making back up copies of digital objects
vs.

Making back up copies of digital objects
and storing them in different places


- The minimum recommendation
- Geographic distance = more protection
 - IWU Web site and networked servers are backed up to another city.
 - Specialized software like Digital Commons

Searchable, stable, migrate-able

**ILLINOIS WESLEYAN**
Knowledge and Wisdom

[My Account](#) [FAQ](#) [About](#) [Home](#)

Digital Commons @ IWU



[Home](#) > [Faculty and Staff Governance](#)

FACULTY AND STAFF GOVERNANCE

This collection holds records for elective and appointive governing committees whose permanent records were being hosted on IWU Web pages. The [University Archives](#) holds print records of these and other groups.

[Follow](#)

Browse the *Faculty and Staff Governance* Collections:

- [Assessment Committee](#)
- [Child Care Committee](#)
- [CUPP](#)
- [Curriculum Council](#)
- [Faculty Meetings](#)
- [GREENetwork](#)
- [IWU AAUP](#)
- [Staff Council](#)
- [Teaching, Learning and Technology Roundtable](#)

[Follow](#)

Enter search terms:

in this collection

[Advanced Search](#)

Notify me via email or [RSS](#)

SelectedWorks

Log into SelectedWorks
Set-up Instructions (Campus Access Only)

Links

Child Care Committee home
Faculty Meetings home
GREENetwork home
Staff Council home

Browse

Collections
Disciplines
Authors

Author Corner

Digital Commons @ IWU

Browse Journals and Peer-Reviewed Series

Constructing the Past *(History Department)*

A publication of the Nu Gamma chapter of Phi Alpha Theta and the Department of History at Illinois Wesleyan University

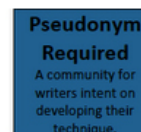
[Visit Journal](#)



Pseudonym Required *(English)*

This website is home to the creative writing of student authors at IWU. At Pseudonym Required, our goal is to help students become better writers by providing feedback to the authors and offering them a chance for their pieces to be published. Our main focus is helping authors improve their writing, but our submission and revision process is also designed to give us an opportunity to showcase the creative talents of our fellow IWU students. All of the pieces published this year as well as our archives of past publications are located on this site. Take a look at some of our student writers' work!

[Visit Journal](#)



Res Publica - Journal of Undergraduate Research *(Political Science Department)*

Res Publica - Journal of Undergraduate Research is a publication of Pi Sigma Alpha, the Political Science Honorary Society. It is funded by the Illinois Wesleyan University Student Senate.

[Visit Journal](#)



Enter search terms:

in this repository

[Advanced Search](#)

Notify me via email or RSS

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[Set-up Instructions](#)
(Campus Access Only)

Browse

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[Disciplines](#)

[Authors](#)

Author Corner

[Author FAQ](#)

[Submit Research](#)

[Copyright Information](#)



Full digital preservation

Deciding which digital objects need to be saved, describing them, backing up in geographically distant places, *and* monitoring the digital files for deterioration.

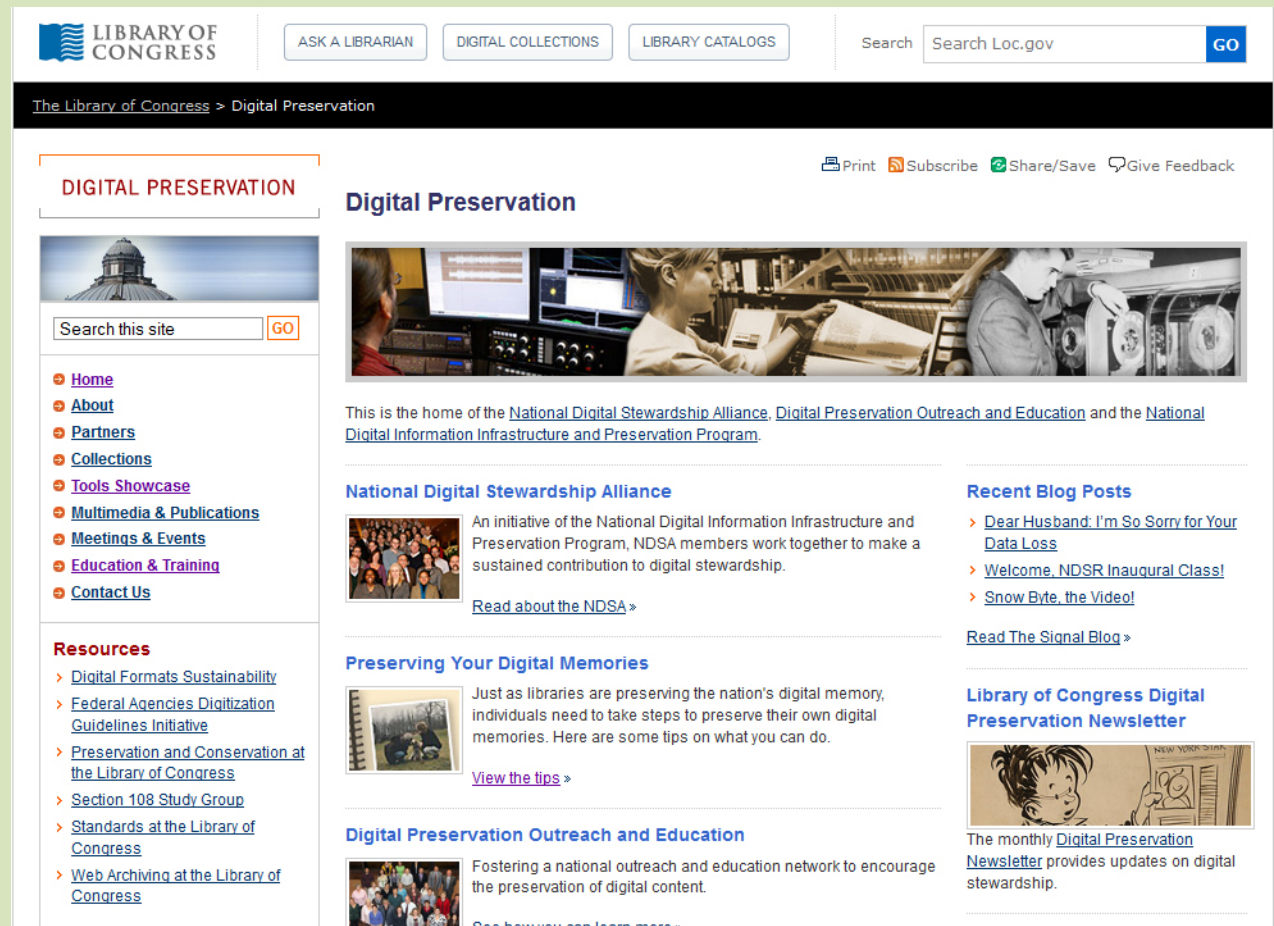
4 Ds and 1 M

**Decision making + Description +
Duplication + Distance + Monitoring =
Digital Preservation**

Official definition: LoC

“Digital preservation is the **active management** of digital content over time to ensure ongoing access.”

<http://www.digitalpreservation.gov/about>



The screenshot shows the Library of Congress Digital Preservation website. At the top, there's a navigation bar with the Library of Congress logo, links for 'ASK A LIBRARIAN', 'DIGITAL COLLECTIONS', and 'LIBRARY CATALOGS', a search bar with 'Search Loc.gov', and a 'GO' button. Below this is a breadcrumb trail: 'The Library of Congress > Digital Preservation'. The main content area is titled 'Digital Preservation' and features a large image of people working with digital equipment. To the left is a sidebar with a 'DIGITAL PRESERVATION' header, a search box, and a list of links: Home, About, Partners, Collections, Tools Showcase, Multimedia & Publications, Meetings & Events, Education & Training, and Contact Us. Below the links is a 'Resources' section with links to Digital Formats Sustainability, Federal Agencies Digitization Guidelines Initiative, Preservation and Conservation at the Library of Congress, Section 108 Study Group, Standards at the Library of Congress, and Web Archiving at the Library of Congress. The main content area also includes sections for the National Digital Stewardship Alliance, Preserving Your Digital Memories, and Digital Preservation Outreach and Education. On the right, there are 'Recent Blog Posts' and a 'Library of Congress Digital Preservation Newsletter' section.

LIBRARY OF CONGRESS

ASK A LIBRARIAN DIGITAL COLLECTIONS LIBRARY CATALOGS

Search Search Loc.gov GO

The Library of Congress > Digital Preservation

DIGITAL PRESERVATION

Search this site GO

Home About Partners Collections Tools Showcase Multimedia & Publications Meetings & Events Education & Training Contact Us

Resources

- > Digital Formats Sustainability
- > Federal Agencies Digitization Guidelines Initiative
- > Preservation and Conservation at the Library of Congress
- > Section 108 Study Group
- > Standards at the Library of Congress
- > Web Archiving at the Library of Congress

Digital Preservation

This is the home of the [National Digital Stewardship Alliance](#), [Digital Preservation Outreach and Education](#) and the [National Digital Information Infrastructure and Preservation Program](#).

National Digital Stewardship Alliance

An initiative of the National Digital Information Infrastructure and Preservation Program, NDSA members work together to make a sustained contribution to digital stewardship.

[Read about the NDSA >](#)

Preserving Your Digital Memories

Just as libraries are preserving the nation's digital memory, individuals need to take steps to preserve their own digital memories. Here are some tips on what you can do.

[View the tips >](#)

Digital Preservation Outreach and Education

Fostering a national outreach and education network to encourage the preservation of digital content.

[See how you can learn more >](#)

Recent Blog Posts

- > [Dear Husband: I'm So Sorry for Your Data Loss](#)
- > [Welcome, NDSR Inaugural Class!](#)
- > [Snow Byte, the Video!](#)

[Read The Signal Blog >](#)

Library of Congress Digital Preservation Newsletter

The monthly [Digital Preservation Newsletter](#) provides updates on digital stewardship.

Official definition: ALCTS

“Combines **policies, strategies** and **actions** to ensure access to content that is born digital or converted to digital form **regardless of the challenges** of file corruption, media failure and technological change.

“The goal of digital preservation is the **most accurate rendering** possible of authenticated content over time.”

- Preservation and Reformatting Section,



Association for Library Collections & Technical Services, a division of the American Library Association;


<http://www.ala.org/alcts/resources/preserv/2009def>

Then & now: the BIG difference

DP is widespread, cultural heritage concern.

- Time elapsing between technological changes and scale of potential problems ahead.
 - Consider span of time between technological changes: handwriting to print to audio/visual media to digital media.
 - Consider the relative difficulty in creating earlier types of media and the proliferating paths to creating and storing that are available today.
- Attention to our needs now = survival.

A time travel survivor

Codex Sinaiticus

Contact | Copyright | Sitemap

Advanced search →

HOME ABOUT CODEx SINAITICUS ABOUT THE PROJECT SEE THE MANUSCRIPT

GO TO: (BOOK) ▾


choose a passage: choose a page: display options:

Mark ▾ Chapter 1 ▾ Verse 1 ▾ Quire: 76 ▾ Folio: 2 ▾ v ▾ ↩ ↪ ↻ ↺

Mark, 1:1 - 1:35 library: BL folio: 217b scribe: A

Image

Standard Light Raking Light i



Transcription

view by verse view by page i

	κατα μαρκον	
1:1	αρχη του ευαγγελι	ω
2	ου ιου χυ τ καθως γε	9 α και εγενετο εν εκε
	γραπται εν τω ησα	ναις ταις ημεραι
	ια τω προφητη	ηλθεν ις απο να
	ιδου εγω αποστε	ρετ της γαλιλαι
	λω τον αγγελον μου	και εβαπτισθη ε
	προ προσωπου σου	τον ιορδανην υι
	ος κατασκευασει	ιωαννου και ευε
	την οδον σου	αναβενων εκ το
	φωνη βοωντος ε	υδατος ειδεν cx
3	τη ερημω ετοιμα	ζομενους τους
	ατε την οδον κυ	ουνοου και το π
	ευθιας ποιειτε τας	ως περιστεραν
4	τριβους αυτου και ε	ταβαινον και με
	γενετο ιωαννης	νον επ αυτον
	ο βαπτιζων εν τη	και φωνη τ εκ τ
	ερημω και κηρυς	ουνων κυ ει ο υ
	ων βαπτισμα με	μου ο αγαπητος
	ταινος εις αφει	εν οι ευδοκησα
	αμαρτιων	και ευθε το πν
5	και εξεπορευετο	τον εκβαλλει εις
	προς αυτον πασα	την ερημον και
	η ιουδαια χωρα και	ην εν τη ερημω
	οι ιεροσολυμιτε	μ ημερας πρ
	παιτες τ βαπτιζ	ουσαν ιωαννη

Supported by

DFG

Arts & Humanities Research Council

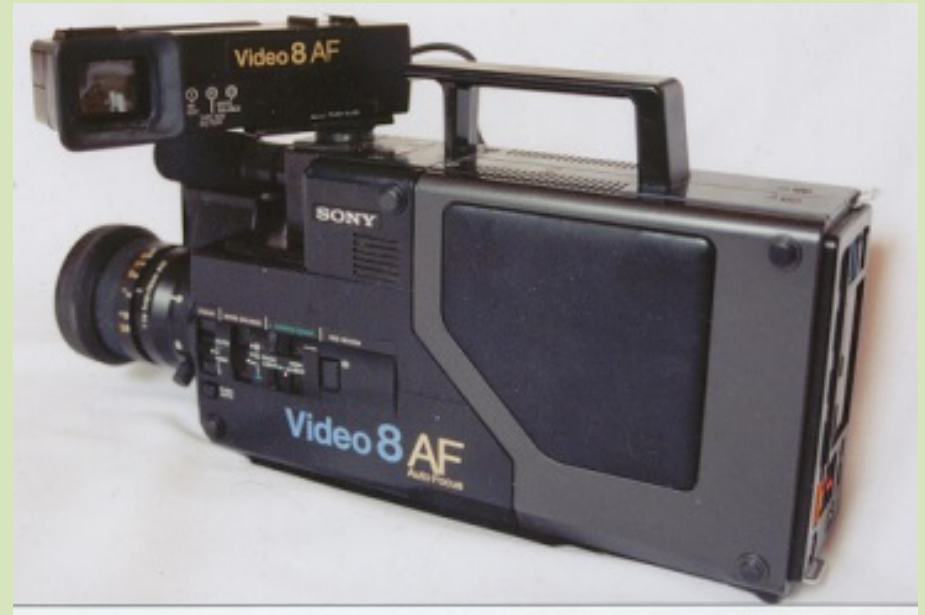
ANU

THE A.C. LEVENTIS FOUNDATION

RSS

Reasons to act

Hardware and media become obsolete



Chamber of Horrors <http://dpworkshop.org/dpm-eng/oldmedia/chamber.html>

Reasons to act, pt. 2

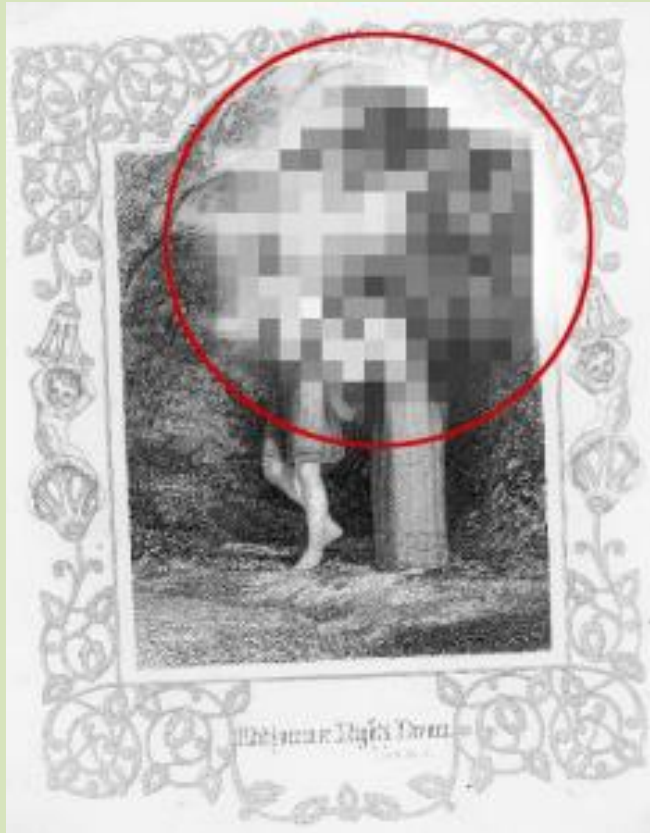
Loss of original file fidelity



“Migrant Mother” by Dorothea Lange. Courtesy of the Library of Congress. <http://tinyurl.com/lmh4g6q>

Reasons to act, pt. 3























Intentional editing



Reasons to act, pt. 4

Quantity being saved and loss of context
that gives digital objects their meaning

Channel
the NSA
...just a
little!

Name	Date modified	Type	Size
 _DSC0088	12/7/2006 10:01 PM	JPEG image	1,475 KB
 _DSC0089	12/7/2006 10:01 PM	JPEG image	1,455 KB
 _DSC0090	12/7/2006 10:01 PM	JPEG image	1,787 KB
 _DSC0091	12/7/2006 10:01 PM	JPEG image	1,436 KB
 _DSC0093	12/7/2006 10:01 PM	JPEG image	1,431 KB
 _DSC0094	12/7/2006 10:02 PM	JPEG image	1,475 KB
 _DSC0095	12/7/2006 10:03 PM	JPEG image	1,464 KB
 _DSC0096	12/7/2006 10:03 PM	JPEG image	1,464 KB
 _DSC0099	12/7/2006 10:04 PM	JPEG image	1,452 KB
 _DSC0100	12/7/2006 10:04 PM	JPEG image	1,444 KB
 _DSC0102	12/7/2006 10:05 PM	JPEG image	1,468 KB
 _DSC0103	12/7/2006 10:05 PM	JPEG image	1,461 KB
 _DSC0106	12/7/2006 10:05 PM	JPEG image	1,423 KB
 _DSC0108	12/7/2006 10:06 PM	JPEG image	1,452 KB
 _DSC0109	12/7/2006 10:07 PM	JPEG image	1,456 KB
 _DSC0112	12/7/2006 10:07 PM	JPEG image	1,440 KB
 _DSC0113	12/7/2006 10:08 PM	JPEG image	1,444 KB
 _DSC0116	12/7/2006 10:08 PM	JPEG image	1,456 KB
 _DSC0117	12/7/2006 10:09 PM	JPEG image	1,465 KB
 _DSC0119	12/7/2006 10:10 PM	JPEG image	1,462 KB
 _DSC0121	12/7/2006 10:10 PM	JPEG image	1,461 KB
 _DSC0123	12/7/2006 10:11 PM	JPEG image	



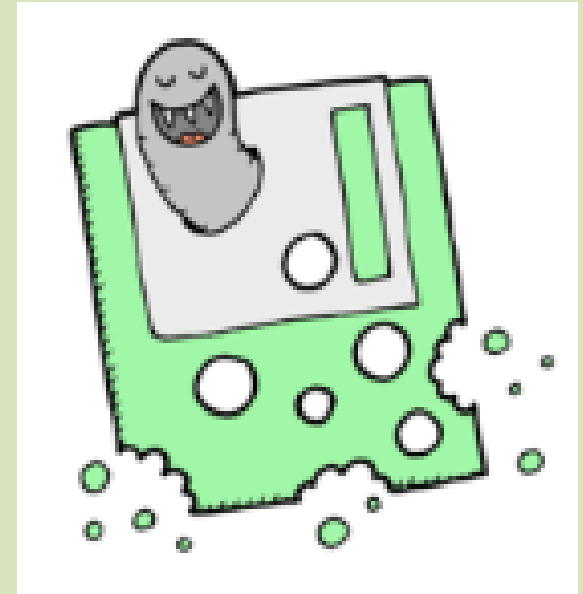
Taking a pause for a pulse & our students

“Active management” job opportunities

- **Archivists, Librarians & IT:** organize data, data mining, search/discovery processes
- **Computer scientists & Mathematicians:** digital forensics work on old media and obsolete systems, encrypting or breaking encryption
- **Lawyers:** intellectual property, contracts
- **Sociologists, anthropologists, psychologists:** hoarding as a phenomenon, coping with loss
- **Archivists:** decision making/selections, long-term planning for patron-base needs

In the beginning

- Analog media is okay alone for long periods
 - Changes are usually visible to the eye or discernible by the nose!
- My education in digital preservation (2007)
 - grant mandates, workshops
 - Bit Rot seemed of most concern; digital file degradation is not obvious until too late



Digital preservation solved

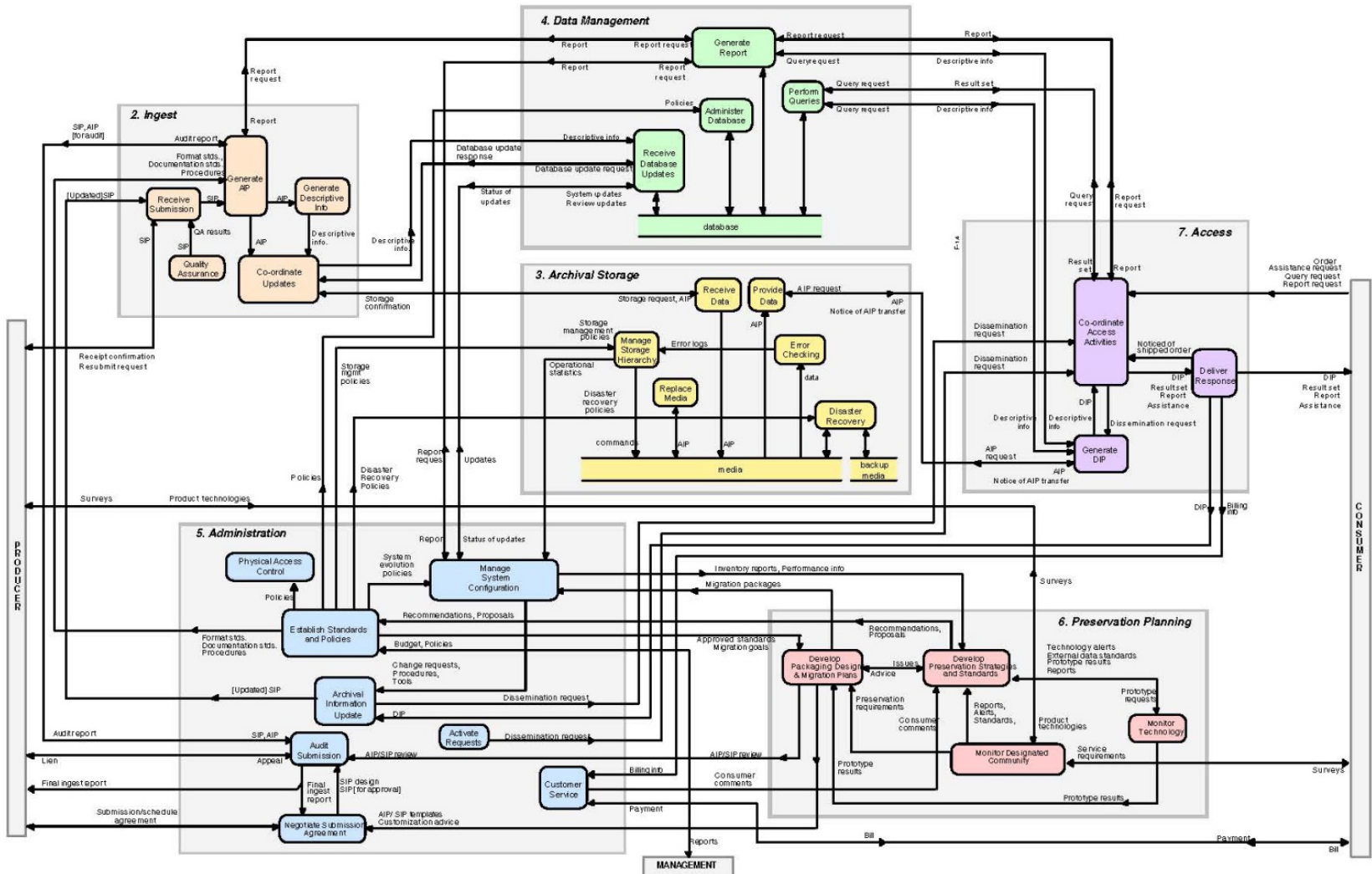
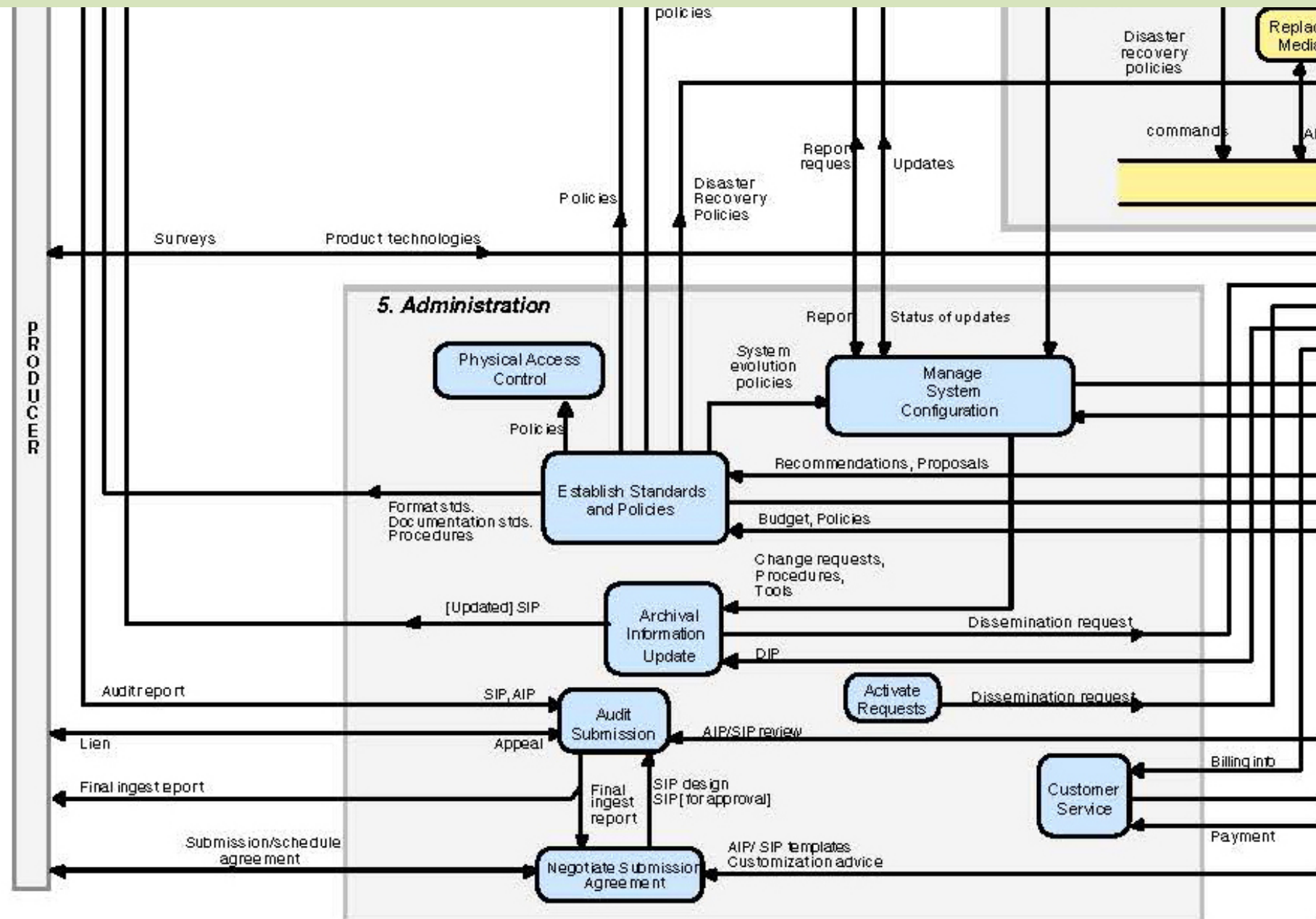
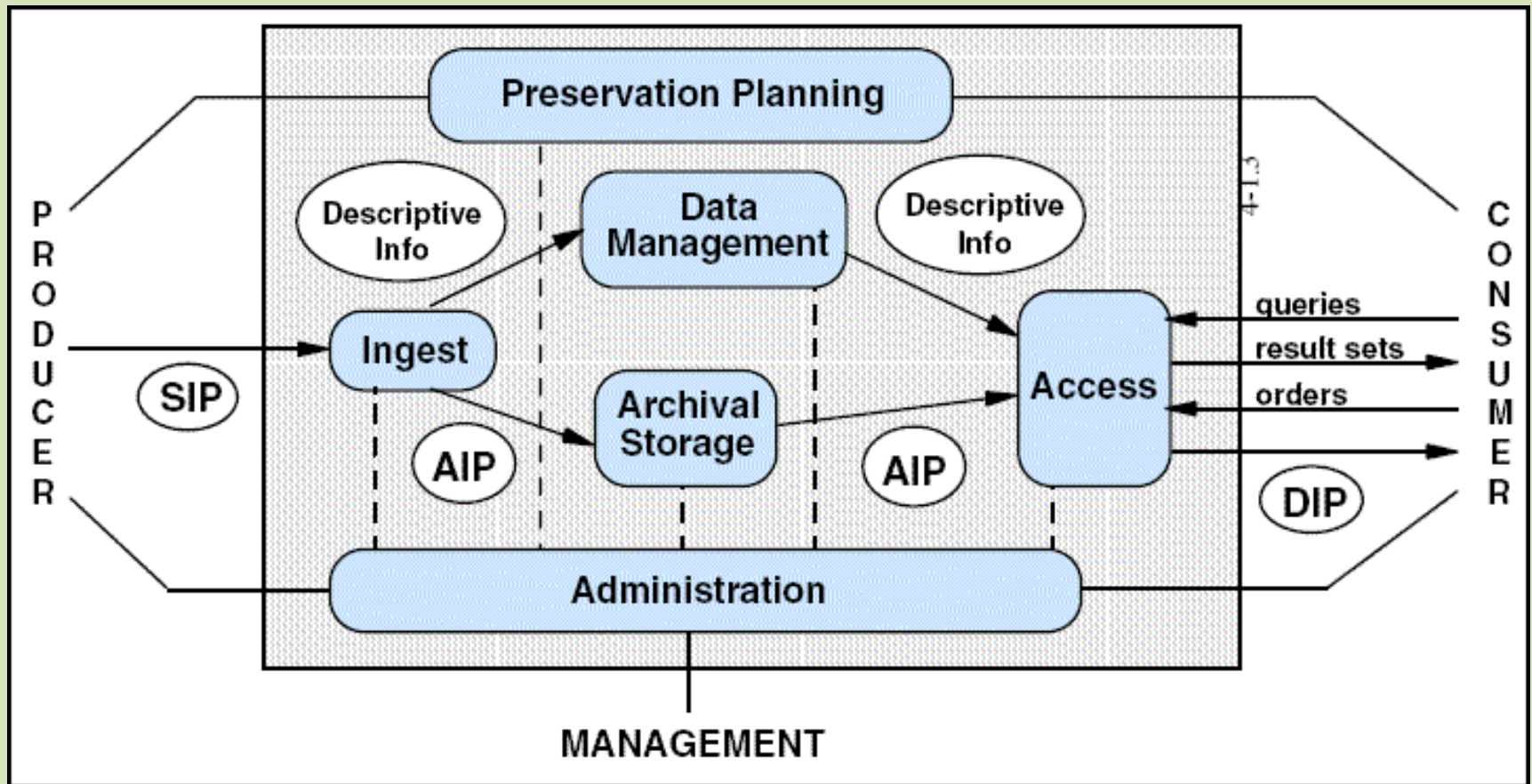


Figure F-1: Composite of Functional Entities



Digital Preservation at a Glance



The IMLS Grant

- No consortium (CARLI) or Big 10 help available.
- Do what librarians do best: collaborate!
- *National Leadership Grant* from federal agency awarded Fall 2011.



“Advises the President and Congress on plans, policies, and activities to sustain and increase public access to information and ideas.”



Preserving (Digital) **O**bjects **W**ith **R**estricted **R**esources



INSTITUTE of
Museum and Library
SERVICES



ILLINOIS STATE
UNIVERSITY
Illinois' first public university



ILLINOIS WESLEYAN
UNIVERSITY



Northern Illinois
University

CHICAGO
STATE
UNIVERSITY



WESTERN
ILLINOIS
UNIVERSITY



Objective

Investigate, evaluate and recommend scalable, sustainable digital preservation solutions for libraries with smaller amounts of data and/or fewer resources.

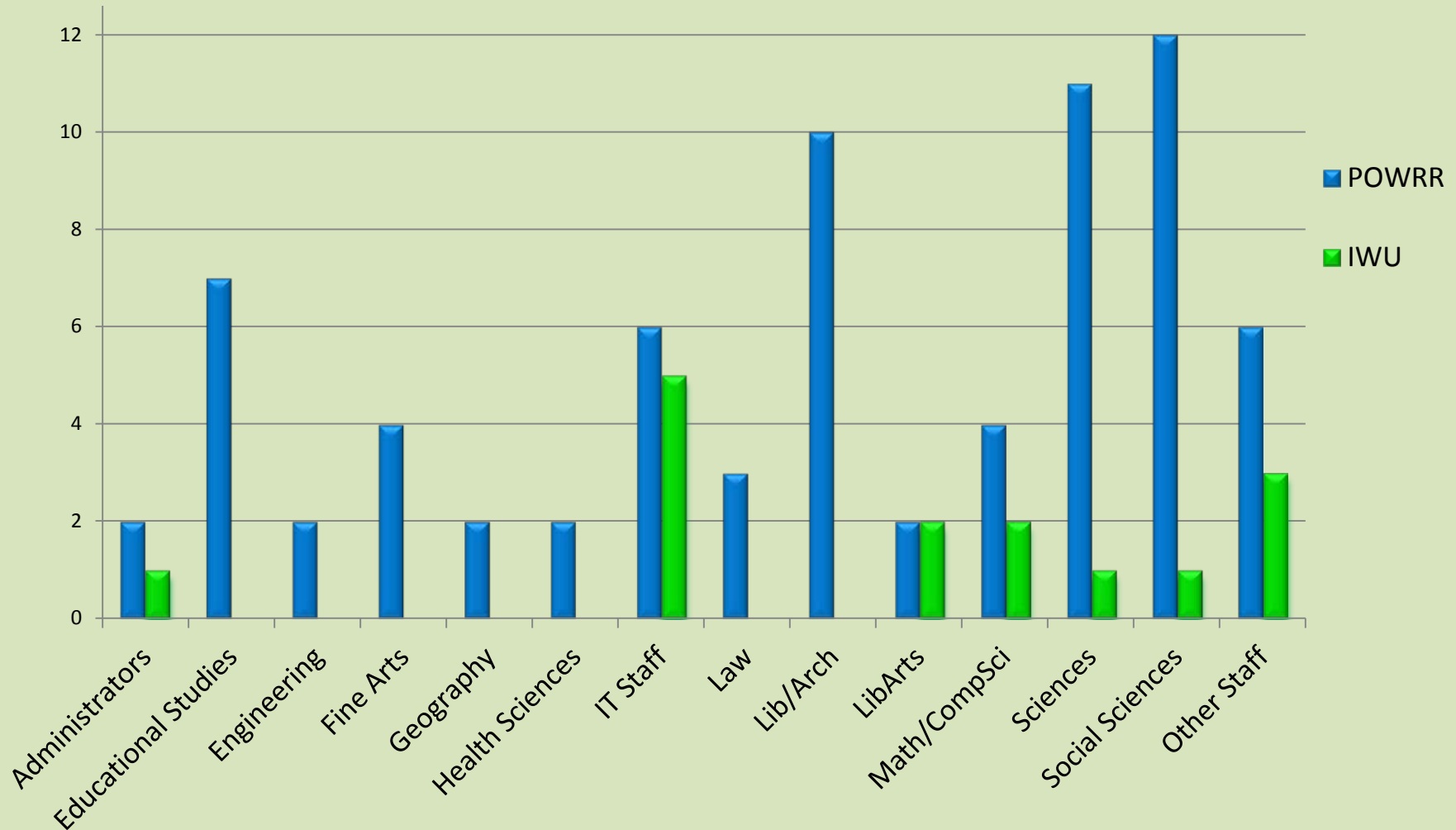
Projected outcomes

Reports! This is for a government agency, after all. (Final due May 2014)

- Case Studies
 - Interviews with faculty, staff, administrators.
 - Explore personal and institutional data management practices.
 - Compare results across institution types.

Interviewees

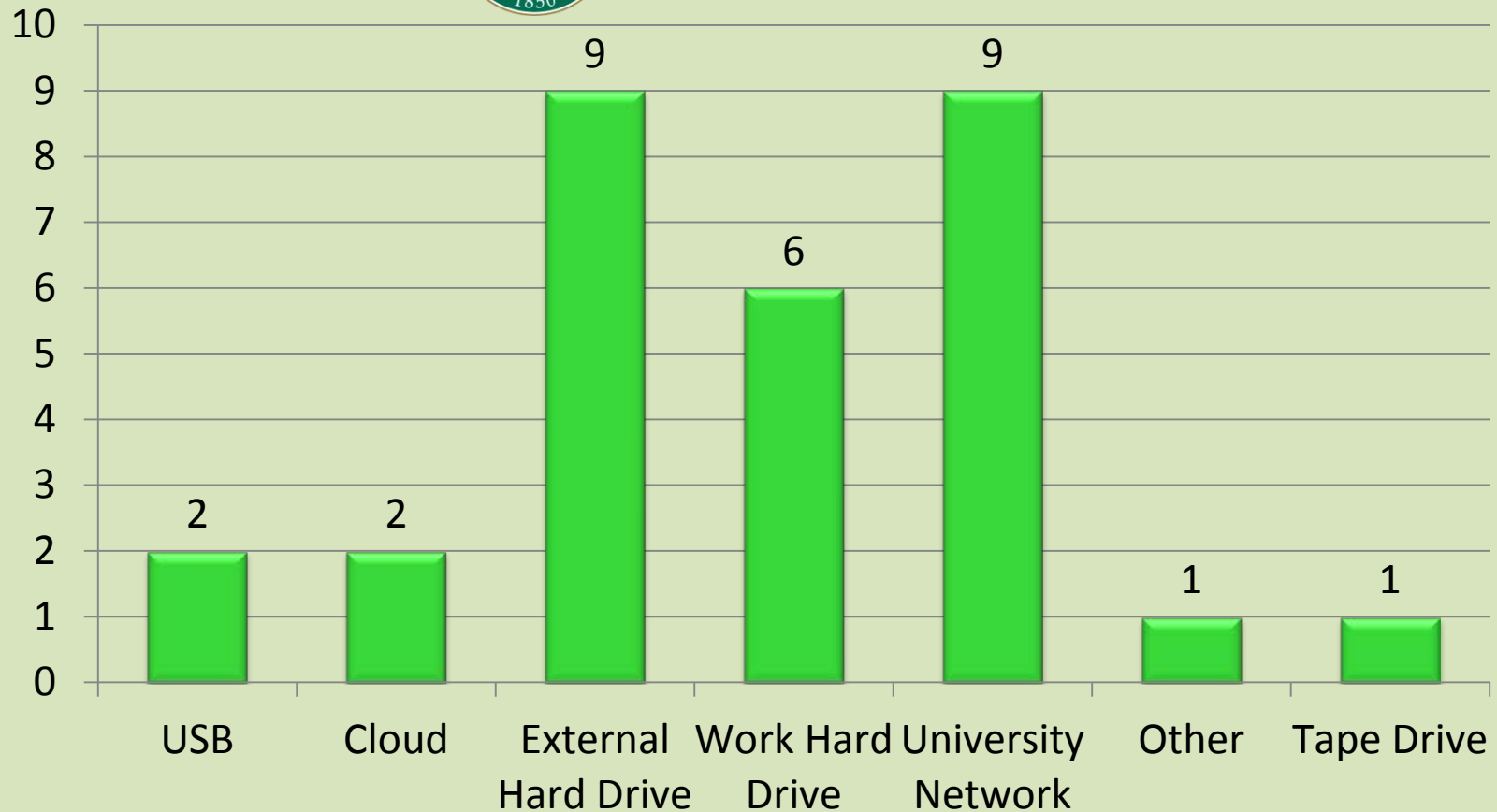
POWRR = 76 ; IWU = 15



Where do people keep their data?



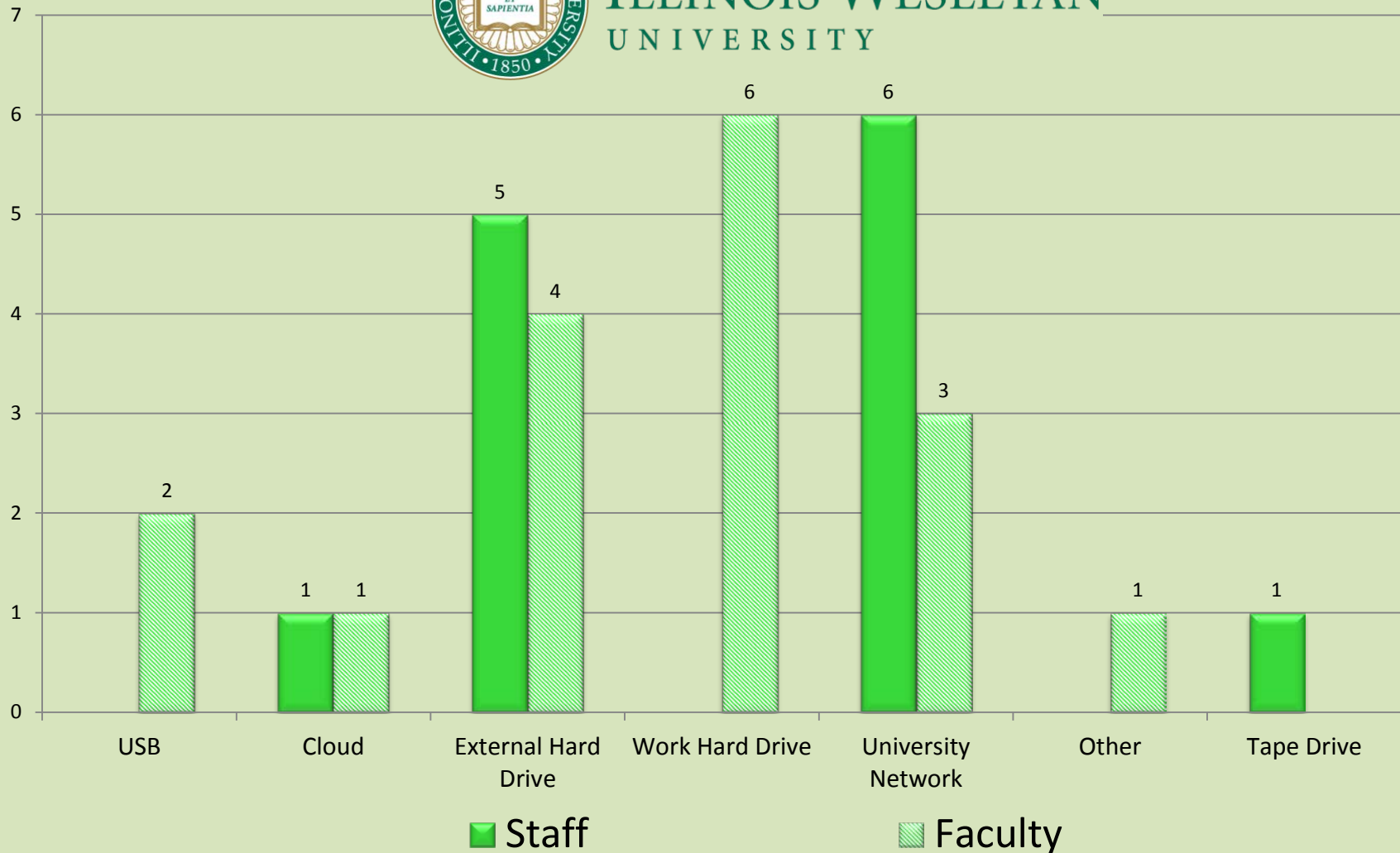
ILLINOIS WESLEYAN
UNIVERSITY



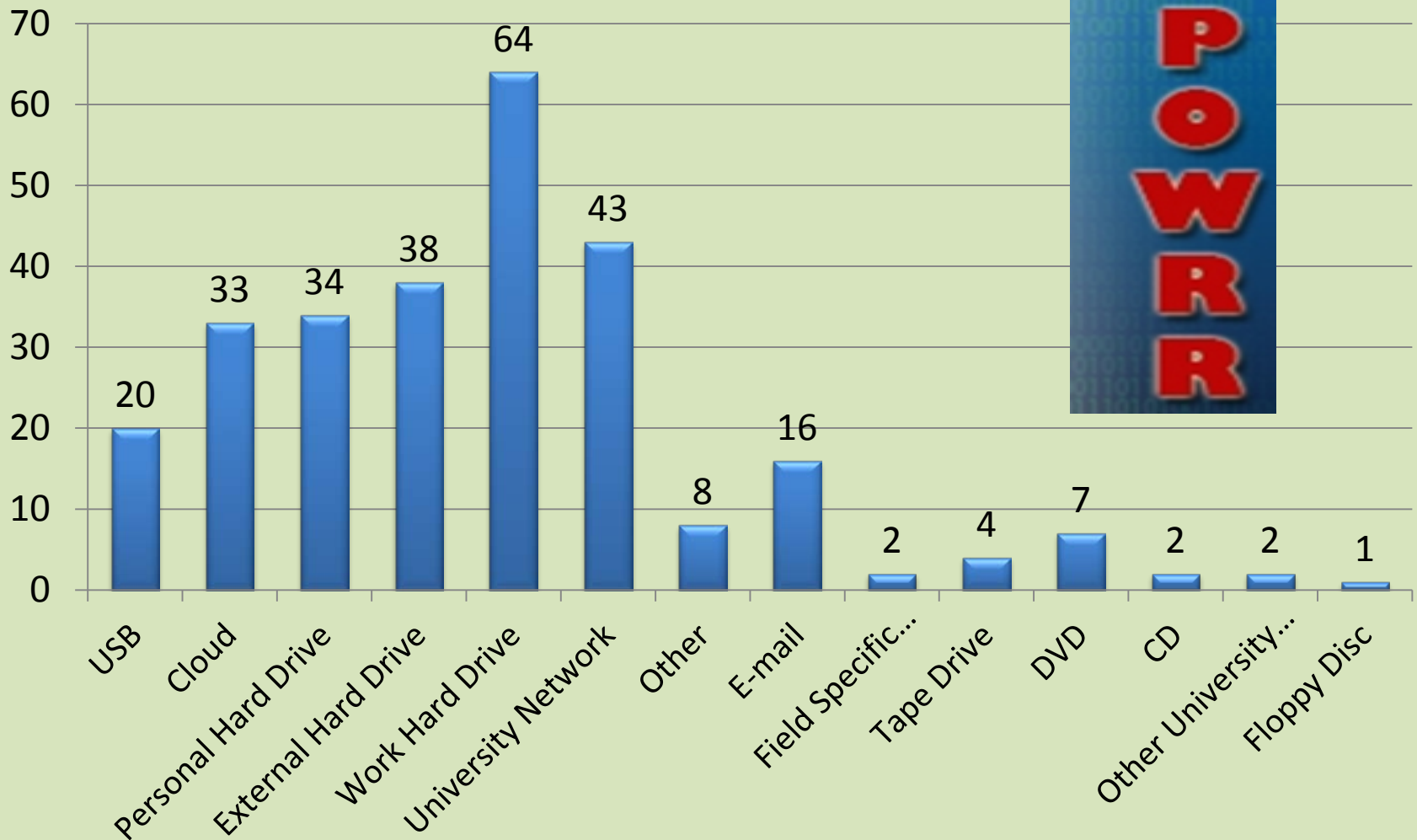
Where do people keep their data?



ILLINOIS WESLEYAN
UNIVERSITY



Where do people keep their data?



Projected outcomes

Reports! This is for a government agency, after all. (Final due May 2014)

- Case Studies
- Analysis of digital preservation products and services
 - Ease of use, availability of support, costs
 - Two parts: Tool Grid and in-depth testing

Projected outcomes

Evaluating tools and services available today

<http://digitalpowrr.niu.edu/tool-grid/>

Digital POWRR Tool Evaluation Grid	Ingest				Processing						Access		Storage				Maintenance			Other				
	Copy	Fixity Check	Virus Scan	File Dedupe	Auto Unique ID	Auto Metadata Creation	Auto Metadata Harvest	Manual Metadata	Rights Management	Package Metadata	Auto SIP Creation	Public Interface	Auto DIP Creation	Auto AIP Creation	Reliable, Long-Term Bit Preservation	Redundancy	Geographically Dispersed Data Storage Model	Exit Strategy	Migration	Monitoring	Auto Recovery	Open Source	Clear Documentation	Cost
ACE (Audit Control Environment)		x																		x		x		Free
AFF Open Source Computer Forensics Software							x															x		Free
Amazon Cloud	x																	x					x	Varies
Archive-It	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x		x		x	x	Varies
Archivematica		x	x		x	x	x	x	x	x	x	x	x	x	x					x		x	x	Free
BagIt Library		x			x	x				x				x				x						
BagIt Transfer Utilities																								Free
BWF MetaEdit		x						x	x													x		free
Carbonite	x	x										x			x	x		x		x	x			\$149 – \$599
Chronopolis	x	x		x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x		x	\$1,500 – \$2,200

Projected outcomes

Testing five tools/services in-depth

Curator's Workbench (UNC)



The logo for archivematica features a stylized orange "a" followed by the word "archivematica" in a blue, sans-serif font.



- File management costs depend on total file size (in TBs)
 - Remember: two copies of everything = minimum
 - Six copies of everything = optimum

Projected outcomes

Reports! This is for a government agency, after all.
(Final due May 2014)

- Case Studies
- Analysis of digital preservation products and services
- National and local dissemination (throughout 2014)
 - Conferences and workshops
 - Web-based presentations
 - Meetings like this...thank you!

Unanticipated outcomes

POWRR and collaboration

- UK-based Project **SPRUCE** (**S**ustainable **P**reservation **U**sing **C**ommunity **E**ngagement): creating a community-owned tool registry that will feed into the POWRR Grid.
- MetaArchive: Piloting technology to support small-scale models.
- NDSA (Library of Congress): Co-planning regional events for NDSA membership drives and POWRR workshops.



Observations

Local decisions are the most important first steps.

- We will not have an enduring historical record if we rely on <http://www.iwu.edu> or social media sites.
 - Lack of control/ownership, quality of file types and inconsistent metadata.
 - We must separate promotion from permanence.
As of now, they must be two distinct things from a digital preservation perspective.

Observations

- Durability of digital objects is a factor of preserving the context with the file.
 - Metadata: significance of a digital object cannot be understood without it.
- We should not try to keep everything.
 - Some records do not need to remain digital.
 - Cultural/personal habits are against us here!
 - Records creators must be involved but your archivist can help!

Observations

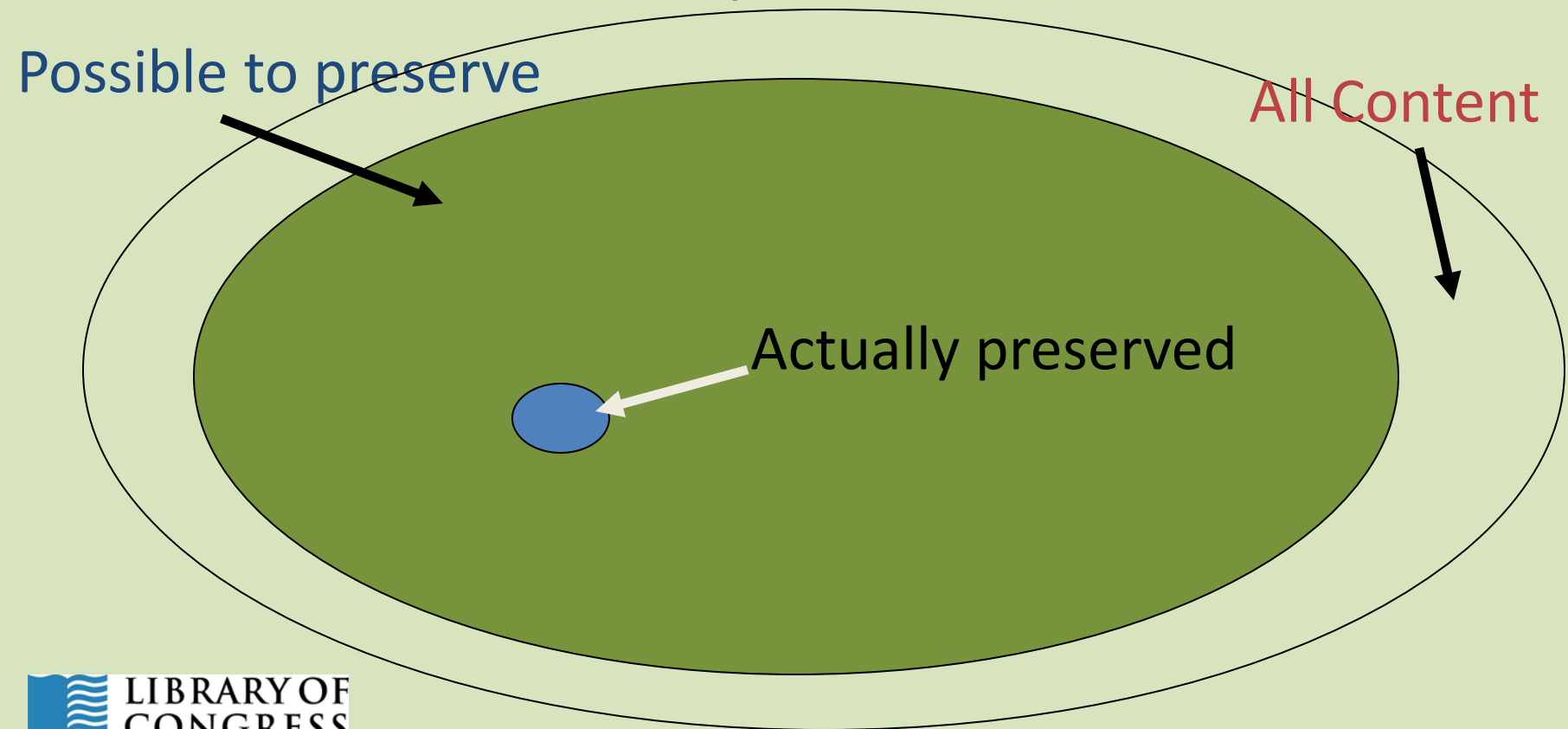
Once we know what is important to keep and for how long, make decisions about

- what types of storage locations the digital objects need, who has access, who is responsible for maintaining.
- what type of long-term preservation system will work.



Decision making visualized

Good preservation decisions are based on a deep *understanding* of the **possible** content to be preserved



Recommendations for office and at home

- If you use specialized software, make sure to check old files in new versions that come out and save them as new.
 - Save a backup copy in a “standardized” format or one that you can migrate.
 - “Normalizing” to a known medium may still be the best hope for survival.
 - Your archivist is ready to help with decisions and format recommendations!

The best laid plans



For long-term preservation

Deciding which digital objects need to be saved,
describing them,
backing up in geographically distant places, *and*
monitoring the digital files for deterioration.

4 Ds and 1 M

**Decision making + Description +
Duplication + Distance + Monitoring =
Digital Preservation**



Institutional Recommendations

What we can do in the short term:

- Create a record? Copy your archivist!
- Start a new group? Tell your archivist.
- Want to preserve student activities? Me, too!
Let's talk.
- Not sure how to start? Consult your archivist.

Institutional Recommendations

Harder questions

- What responsibilities should we take for content that is not on IWU servers?
- What about faculty data?
 - Consider investment in PAT cycle.
 - Consider external pressures like NSF & NEH grant rules for Data Management Plans.
- Solo system implementation not recommended.
Who will we partner with?
 - How can responsibilities (staffing & systems) be shared—both on campus and with others?

Final Quiz

Digital Preservation is...

- A. More than scanning and cloud storage.
- B. Decision making that begins at the moment of creation.
- C. A series of actions that will help secure personal and cultural heritage.
- D. A shared responsibility for our institutional legacy.
- E. All of the above.

Why should you care?



Geek & Poke, posted December 12, 2007. Available at <http://geek-and-poke.com/2007/12/how-to-save-dig.html>

Thank You!

mminer@iwu.edu
x1538

Visit our project Web site
<http://digitalpowrr.niu.edu>



And see the Library of Congress's suggestions about saving your own digital heritage...future archivists will thank you!

<http://digitalpreservation.gov/personalarchiving>