people, their digital stuff, and time: opportunities, challenges, and life-logging Barbie

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Code4Lib
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I visited the Internet Archive last week…


Brewster Kahle said that the Web still fits compactly in a 19'x 8' x 8' shipping container...
and that, incidentally, a Web page weighs in at around 80 micrograms

let's turn back the clock to 1995.

that so much of the stuff on the Web is personal media is a relatively new story…

i.e. little did we know 15 years ago that the exoticism of wearable computing research would be realized as life-logging Barbie

from the *New Yorker* just 15 years ago!

What exactly is a home page? In the simplest terms, it is … a place on the Net where people can find you… Although building home pages or Web sites…is *mainly a commercial enterprise*, it doesn't have to be. It's also a way to meet people. … You can link your home page to the home pages of friends or family, or to your employer's Web site, or to any other site you like, creating a kind of neighborhood for yourself. And you can furnish it with anything that can be digitized—your ideas, your voice, your causes, pictures of your scars or your pets or your ancestors.

Home on the Net, John Seabrook, 16 October 1995

born-digital assets circa 1995: for me, 29 photos of Graceland taken with an Apple Quicktake camera











today, there are more than *4.3 billion* personal photos on Flickr

2,626,042,804

Quicktake #26

Photobucket has at least 2x that (>7B)
Facebook has at least 3x that (>15B/60B)
and Image Shack has at least 4x that (>20B)

3—or perhaps 4—things to think about when we mix people, their stuff, and time

some ruminations about personal digital archiving derived from 20—or perhaps 25—years of feral ethnography and real studies


let's ruminate!

Thing 1:
people rely on
benign neglect
as a *de facto*
stewardship technique
&
collection policy

from a recent NDIIPP video

kid: "They should just save Facebook. That is our generation's scrapbook, yearbook, Guinness World Record…"

kid2: "But obviously you can't save everything"

LOC narrator: "But the truth is, digital information will survive only as long as someone takes care of it."

personal digital archiving

=/=

archiving a personal digital collection

Michael Joyce archiving his own digital stuff

=/=

Gabby Redwine archiving Michael Joyce's digital stuff

stewardship...

for everyday people, the road to digital stewardship is paved with

good intentions

It's funny though. If you look at technology, it's just one of those things. I mean, whose fault is it? Is it the user's fault for not backing up? Or is it technology's fault for not being more tolerant and failsafe? In ten years, maybe hard drives and PCs will be so invincible and the Internet will be so pervasive that the concept of backing up will be quaint.

participant in an interview study who had lost his personal and business websites in a crash

6 months later, he still doesn't back up his stuff!

"…neglect can sometimes be an artifact's best friend."

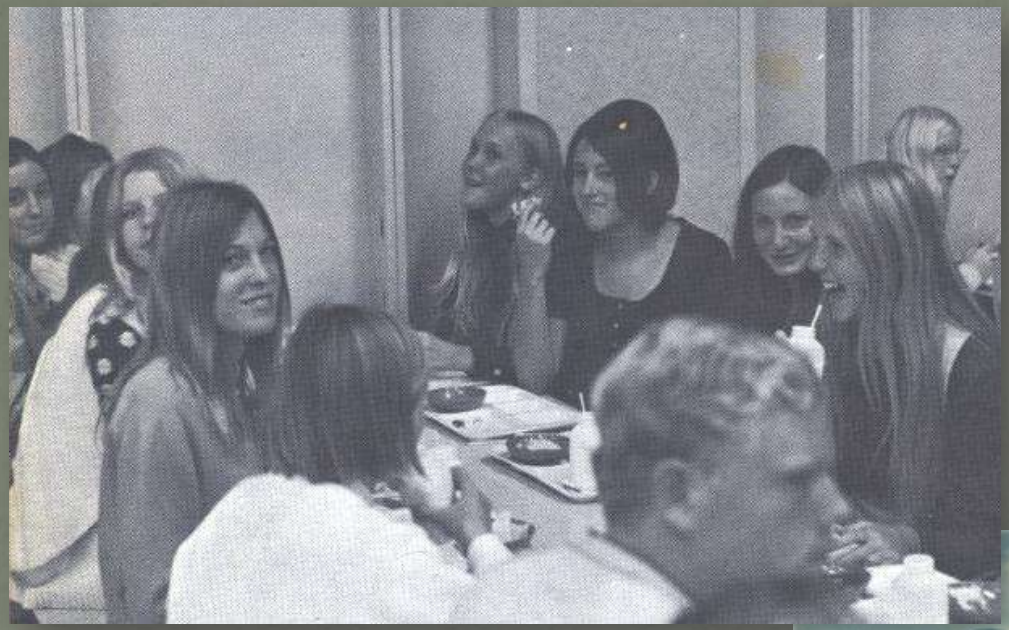
– *G. Thomas Tanselle*
"Statement on the Significance of Primary Records"

reel-to-reel tape used to archive the rare vinyl record…

Multiple copies of a rare vinyl record

the same record on Amazon today, courtesy of the 'long tail' phenomenon.


benign neglect
*yes. I could knit a complete second cat with the stray fur from the first one
as collection policy



the mean girls at their table
in the junior high cafeteria

postcard from a friend on an
archeological dig in Greece

accumulation

"[when I buy a new computer] I transfer everything. … [The computer] is the same [except] it's faster. I should take the time to clean it up at that point, but I don't."

When asked when he ever got rid of digital stuff, one person answered,

"Yes, but not in any systematic manner. … It's more like, I have things littering the desktop and at some point it becomes unnavigable…

A bunch of [the files] would get tossed out. A bunch of them would get put in some semblance of order on the hard drive. And some of them would go to various miscellaneous nooks and corners, never to be seen again."

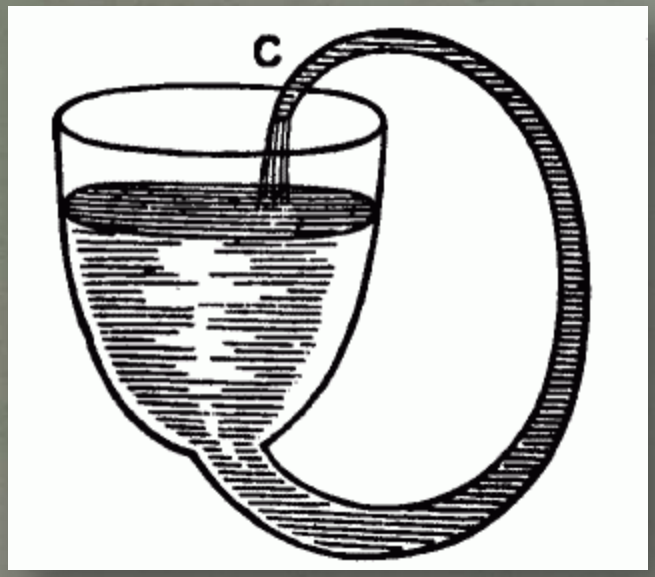
Is that really a problem? storage is cheap and getting cheaper. Why not just keep EVERYTHING?

let's take a closer look at the *keep everything* collection policy

why might you want to keep everything?

- It's difficult to predict an item's future worth.
- Deletion is hard, thankless work.
- Filtering and searching can readily locate the gems among the gravel.

If your archive acts as a memory prosthesis, deletion defeats the whole purpose…



It's easier to *keep* than to *cull*

value

Loss as a means of culling collections

"If [my email] were totally lost it wouldn't be the end of the world. I guess that I don't consider anything tangible, like, so important as an emotion or an experience, I guess I'm kinda of like a Buddhist."

"If my hard drive was gone, it really wouldn't bother me all that much, because it's not something I need, need. I just thought it would be nice to keep it around."

"I mean, if we would've had a fire, you just move on."[re: 13,000 email messages that participant has saved intentionally] "And they're all stored in here. On the computer… Never have [backed them up]"

[from researcher interviews] "Unfortunately I use a lot of data that is very very big, gigabytes of stuff… and it's not backed up. It's a bad situation. But what can you do?"

e.g. personal scholarly archives

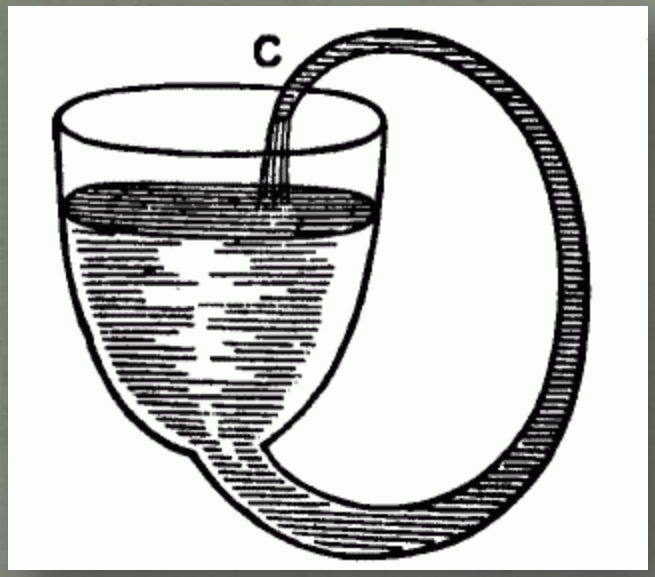
Now: “I'll probably keep [the reviews for my papers] forever. As well as my replies and things like that.”

20 years later: the archive contains

- PDFs of publications
- Some bibliographic resources

and that’s good enough…

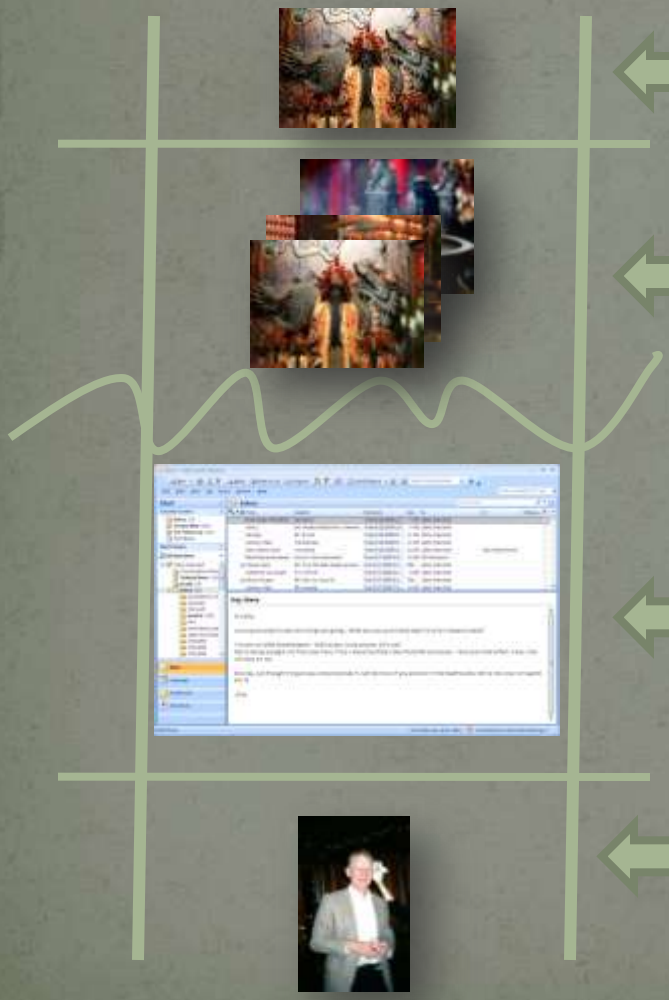
- What about the datasets? Maybe someday we’ll keep them, but we don’t do it yet



It's easier to *keep*
than to *cull*,

but it's easier to *lose*
than *maintain*.

the implication? not all long-term personal stores need to perform with the same level of reliability



known high-value stuff

medium value stuff—want some of it

Preservation through use—*the more I use these items, the more valuable they're likely to be and the better their chance of survival*

lower value stuff—ambivalent attitude

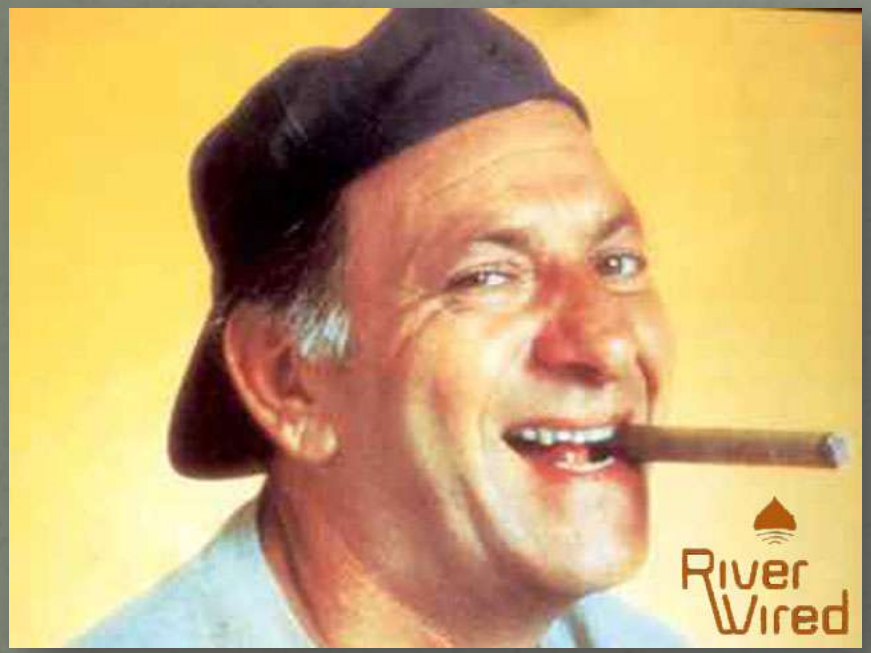
the controversial stuff—deleted? are you sure? (ensure it's forensically unrecoverable!)

use-based heuristics help assess value

type	value indicator	example
source	created locally	novel (.doc file)
	received via bit torrent	bootlegged music (.mp3 file)
action	edit metadata	name a photo
	view content	play a song
disposition	upload to service	share on Flickr
	remove	drag to trash

Thing 2: no single
preservation technology/
repository/
file system/
cloud store
will win the battle for your stuff…

Today, there are two standard technical solutions: (1) shove everything into a great big database in the cloud and decode it later (the Oscar Madison approach) …

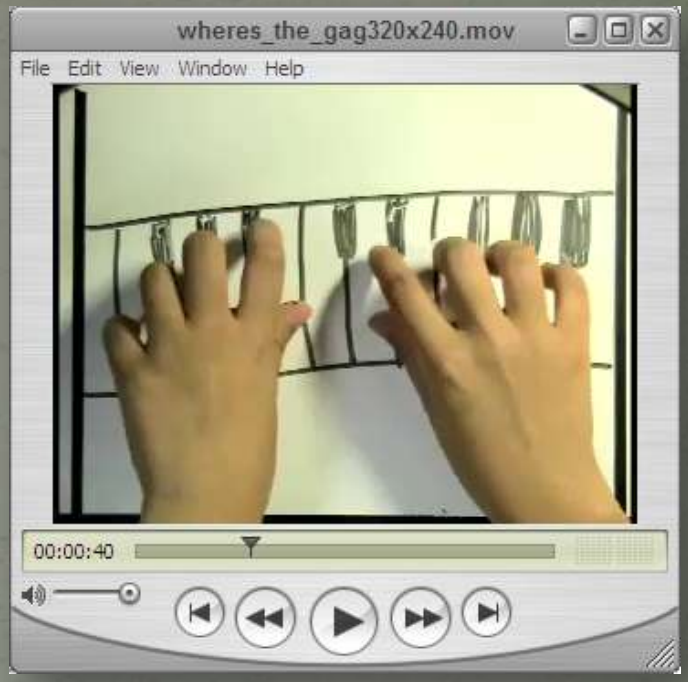


…or (2) safe storage and self-describing digital objects (the Felix Unger approach)

[11:09:24 PM] g says: [There are] 6 [online places where I store things] in all. 1.) school website, 2.) blogspot, 3.) wordpress.com (free blog host, different from wordpress.org), 4.) flickr, 5.) zooomr (for pictures, they offer free "pro" accounts for bloggers, but even for non-pros, they don't limit you to showing your most recent 200 pics only unlike flickr), 6.) archive.org

[11:10:42 PM] Cathy Marshall says: I ask just because you seem to have stuff in a lot of different places (so far two different blog sites, flickr, youtube, msnspaces, … maybe yahoo?)…

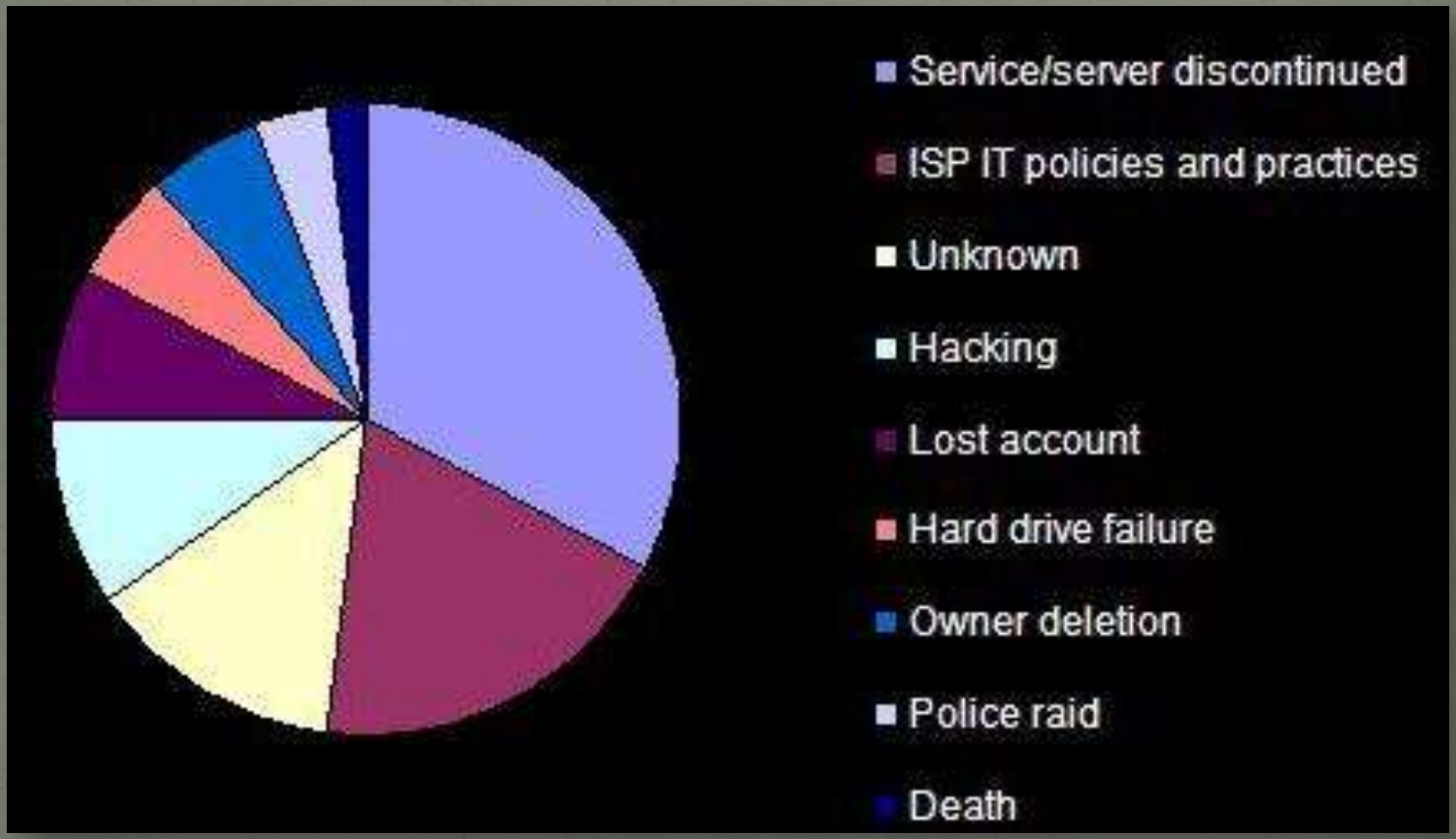
[11:11:07 PM] g says: oh right.. youtube because people always tell me that they don't feel like downloading my quicktime files from archive.org



people put copies of their stuff in different places for different reasons.

data safety is a side effect!

we attribute loss to purely technological catastrophes, but it often isn't



[Closed] My account deleted!

Shéhérazade (vanished... killed by Flickr staff) says:name reply, icon reply

Flickr staff deleted my account without any reason and warning.
All my pics was taken by me and flagged as restricted
in respect of the community guidelines.
150,000 visits in six months,
22 testimonials,
200 comments for each image.
One of the most famous and respected streams
in the whole Flickr.
ALL VANISHED without reason!!!
I mailed to ask why they distroyed all my work,
and TERRENCE replied saying that
i posted photos not taken by me.
IT'S NOT TRUE AT ALL!!!
I took ALL MY PICS.

I want my account back! I paid for it!

.

Posted at 6:13PM, 25 January 2009 PST (permalink)
heather (staff) edited this topic 4 hours ago.

the social metadata is valuable to some users!

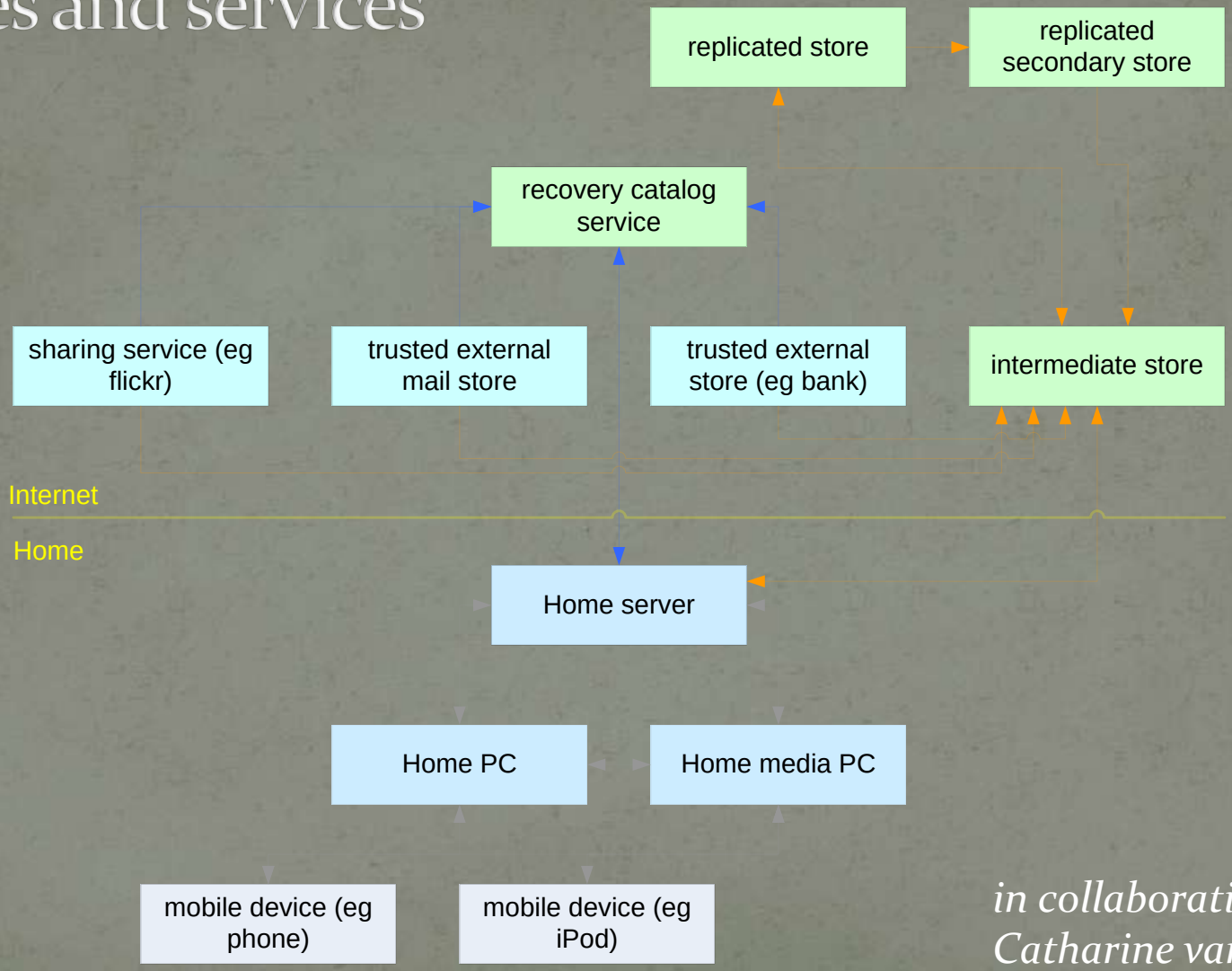
replication and loss in personal scholarly archives

- For scholars, the key vulnerability is changing organizations; it is more cataclysmic than technology failures.

- Sources of unintentional loss
  - files are misplaced in the shuffle
  - accounts evaporate more suddenly than expected
  - infrastructure changes
  - *replication schemes are re-centralized*

"When you change jobs, you typically lose a lot of things. So my life starts in 2001."

instead of centralizing, we'll be knitting together stores and services



in collaboration with Catharine van Ingen

No single archive!

- catalogs knit distributed stores together
- different levels of security
- different access patterns
- new institutions/
  new cultural expectations

Thing 3: Forget about digital originals or reference copies


Which Twin
has the Toni?

People use circular reasoning about which copy is the reference copy…

We think of the local copy as archival (and it is in the sense that it's highest fidelity)

> "The good thing about the photos is that there's always an intermediary step. I mean, like the photos go off of my camera onto my computer before they go up to Flickr. So I always have master copies on my PC. So that's why I don't care so much about Flickr evaporating."

But… the web copies have been augmented with useful organization and metadata (e.g. tags, captions, and comments)

> "I didn't lose the pictures, but I was sorry that I had lost the collections and the organization. I'm sure I have the pictures somewhere still. But fishing them out and recreating it was not feasible."

t1: big photo shoot

t2: photo moved to desktop & edited in Photoshop

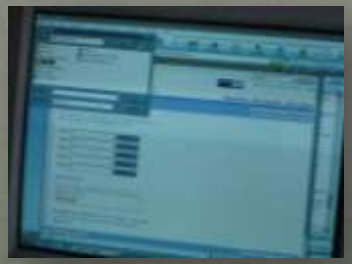
t3: photo emailed to Tim to upload to her website

t4: photo written to DVD so new drive can be installed

t5: Photo restored to new hard drive (from DVD, then from web site)

t6: photo re-edited in other app

t7: photo attached to email to use for online dating



how many copies does she have?

Original on camera flash	126-2162_IMG.jpg
File on old desktop hard drive	126-2162_IMG.jpg
File edited in photoshop	Eden20.psd
File in “sent” mail (sent to art partner)	Eden20.psd
File uploaded to web site (mediated)	Eden20.jpg
File written to DVD (mediated)	Eden20.psd & 126-2162.jpg
Files restored from DVD to new drive	Eden20.psd & 126-2162.jpg
File downloaded from website because psd files won’t open	EB.jpg
Files edited in photo-editing app	EB-4U.jpg
File in “sent” mail	EB-4U.jpg

at least 12 copies; 2 formats; 4 filenames;
6 file systems; and 3 resolutions (camera, web, email)


16 ‘identical’ photos of a really big catfish…

400 x 300
18k - jpg

400 x 300
19k - jpg

500 x 374
91k - jpg

450 x 337
123k - jpg

550 x 412
101k - jpg

413 x 309
23k - jpg

400 x 300
18k - jpg

500 x 360
63k - jpg

each has taken on a life of its own...

550 x 412
65k - jpg

400 x 300
27k - jpg

550 x 412
65k - jpg

450 x 324
43k - jpg

500 x 360
31k - jpg

500 x 344
49k - jpg

350 x 262
16k - jpg

400 x 300
19k - jpg

Vietnamese catfish

187.4 pounds Wels catfish, a breed which can get larger

“that certainly is a big fish!”

Catfish from Mississippi, just shy of 646 lbs

in rphou’s personal ftp directory

140 lb. catfish caught in Lake Texoma.

Photo of a Giant Catfish

from the Johnson Family Photo Album

each has grown its own social metadata…

A BIG Wels Catfish (187lbs) caught by Lucas Van Der Geest

it's not an American catfish

The Secrets of Catching Giant Catfish

World Record Catfish

424 pound Mekong catfish

“Two men catch catfish by sticking their hand elbow deep into the mouth of the fish.”

“Fishermen with Giant Catfish: real image”

“It's called a Wel's Catfish. They get bigger than this!!!”

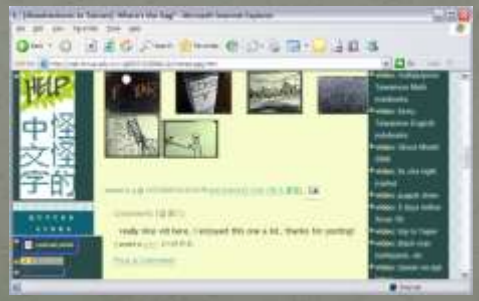
A real example: an animated music video
Each copy takes on a life of its own

downloaded 387 times

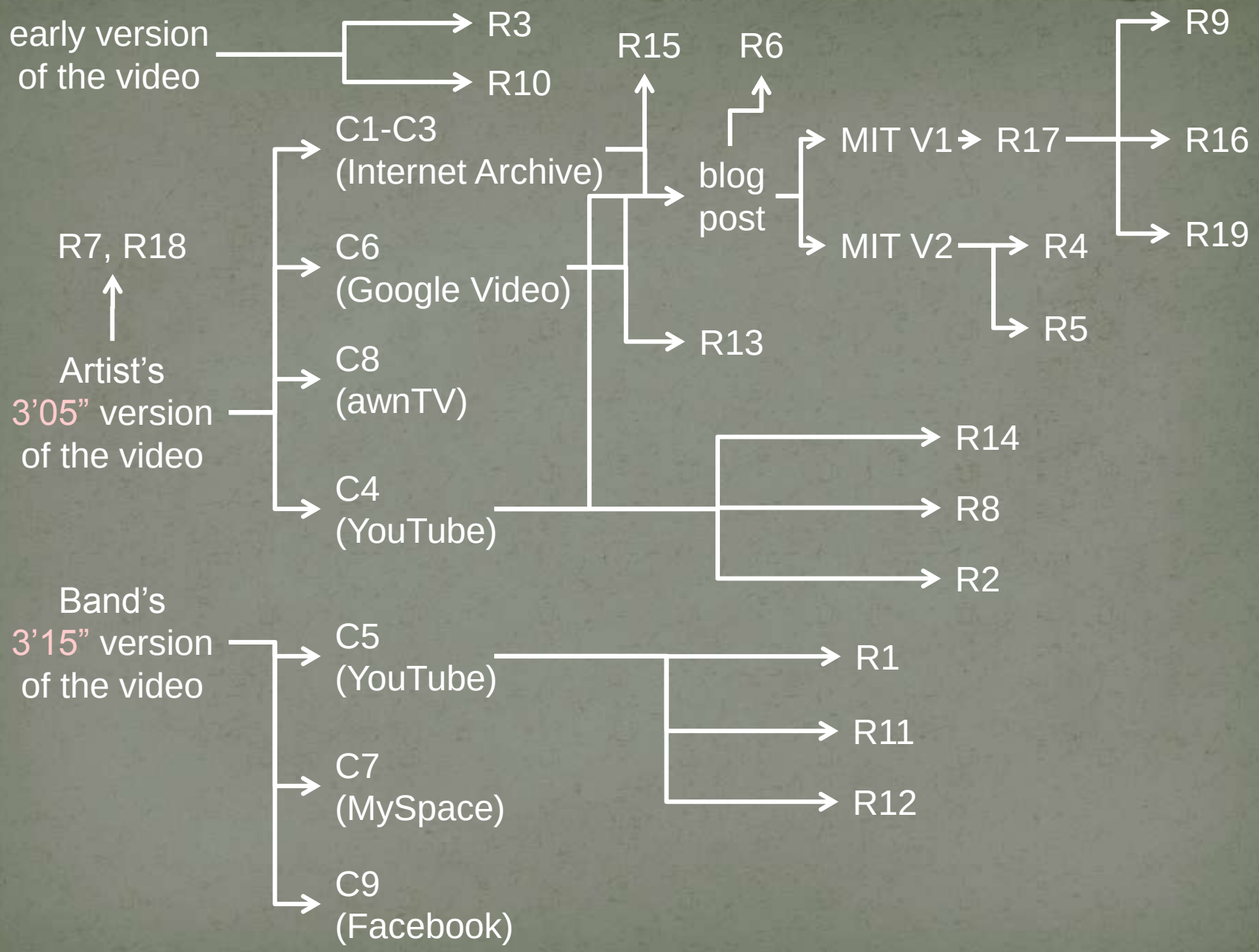
3,869 views, ★ ★ ★ ★ ★

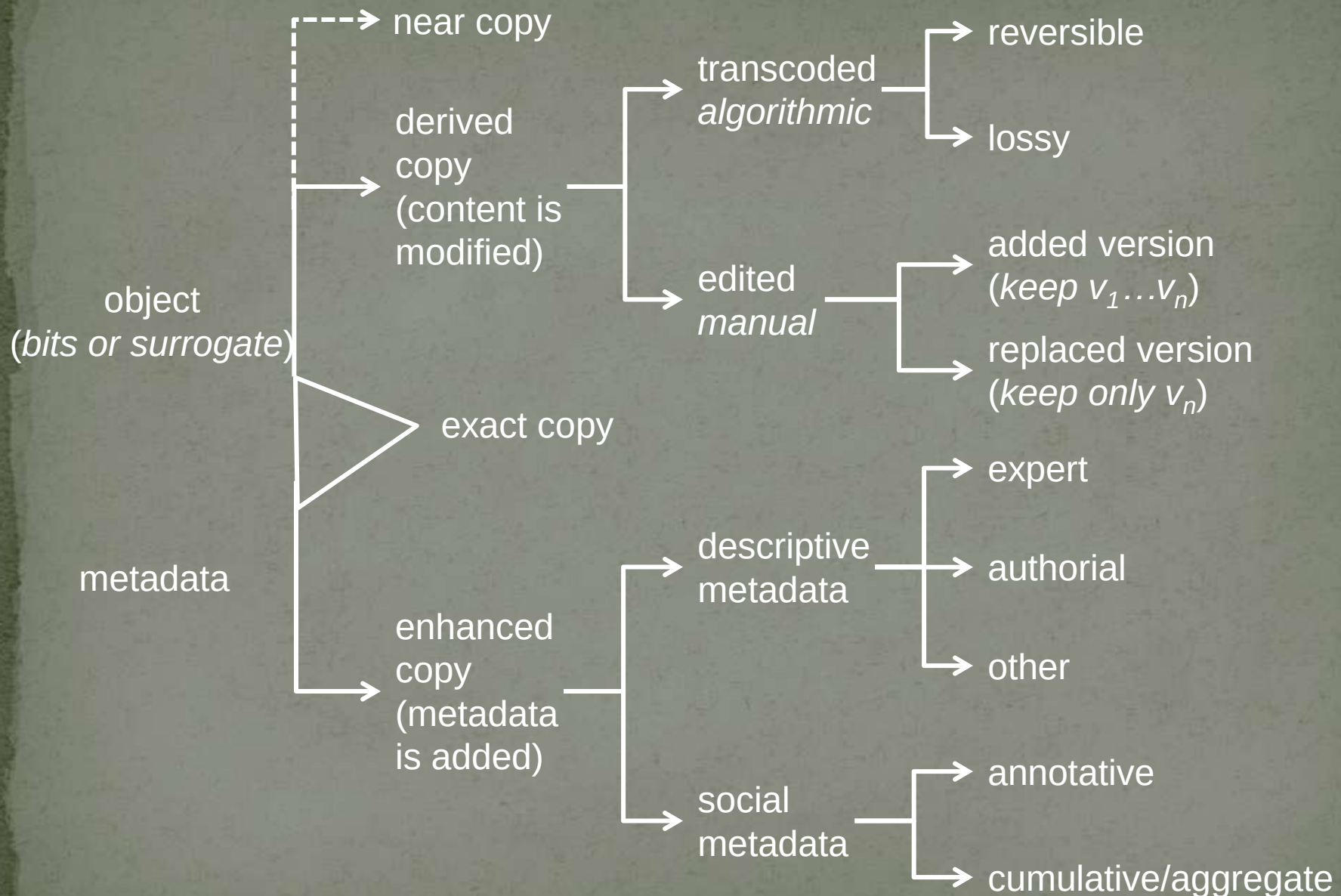
45 views, no “likes”

viewed 245 times



“really nice vid here, i enjoyed this one a lot.”


early version of the video
R3
R10
R15
R6
R9
C1-C3 (Internet Archive)
MIT V1
R17
R16
blog post
R7, R18
C6 (Google Video)
MIT V2
R4
R19
R13
R5
Artist's 3'05" version of the video
C8 (awnTV)
R14
C4 (YouTube)
R8
R2
Band's 3'15" version of the video
C5 (YouTube)
R1
R11
C7 (MySpace)
R12
C9 (Facebook)


near copy
derived copy (content is modified)
transcoded *algorithmic*
reversible
lossy
edited *manual*
added version (*keep* $v_1 \ldots v_n$)
replaced version (*keep only* v_n)
object (*bits or surrogate*)
exact copy
metadata
enhanced copy (metadata is added)
descriptive metadata
expert
authorial
other
social metadata
annotative
cumulative/aggregate

where are the tools that'll let me harvest the metadata the copies have grown?

where's the search tool for gathering the copies (rather than just de-duping them)?

Speaking of search…

Thing 4: Given things 1-3, there will be some interesting opportunities to take a fresh look at searching and browsing


we're pretty blasé about search...

why searching distributed personal archives is different…

we might have forgotten it altogether: re-encounter

we've got some context and a rough idea of what we want: faceted browsing

we know *exactly* what we want: visualizations and desktop search

and there's the whoops factor…

re-encounter: access to *forgotten* stuff


ART BUCHWALD

Passing the Baby, the Boy, the Buck


memo

Re-encounter is probably more effective if the item is either in-context (i.e. IQ-based) or high-value (browser-based).

techniques for re-encounter

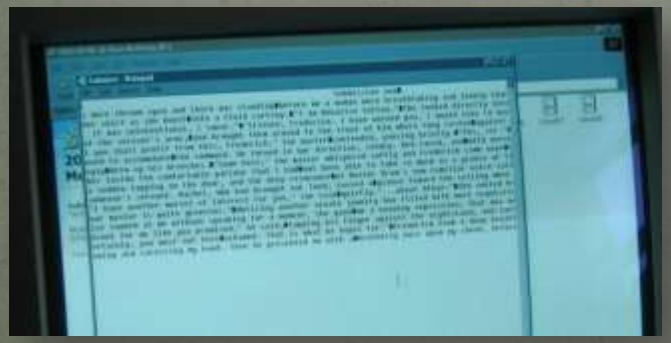
stable personal geography
- differentiated places

value-based organization
- re-encounter of high-value items

better presentation of item surrogates
- develop good reduced representations of media types other than photos!

(implicit query)

But re-encountering techniques must be approached with care…



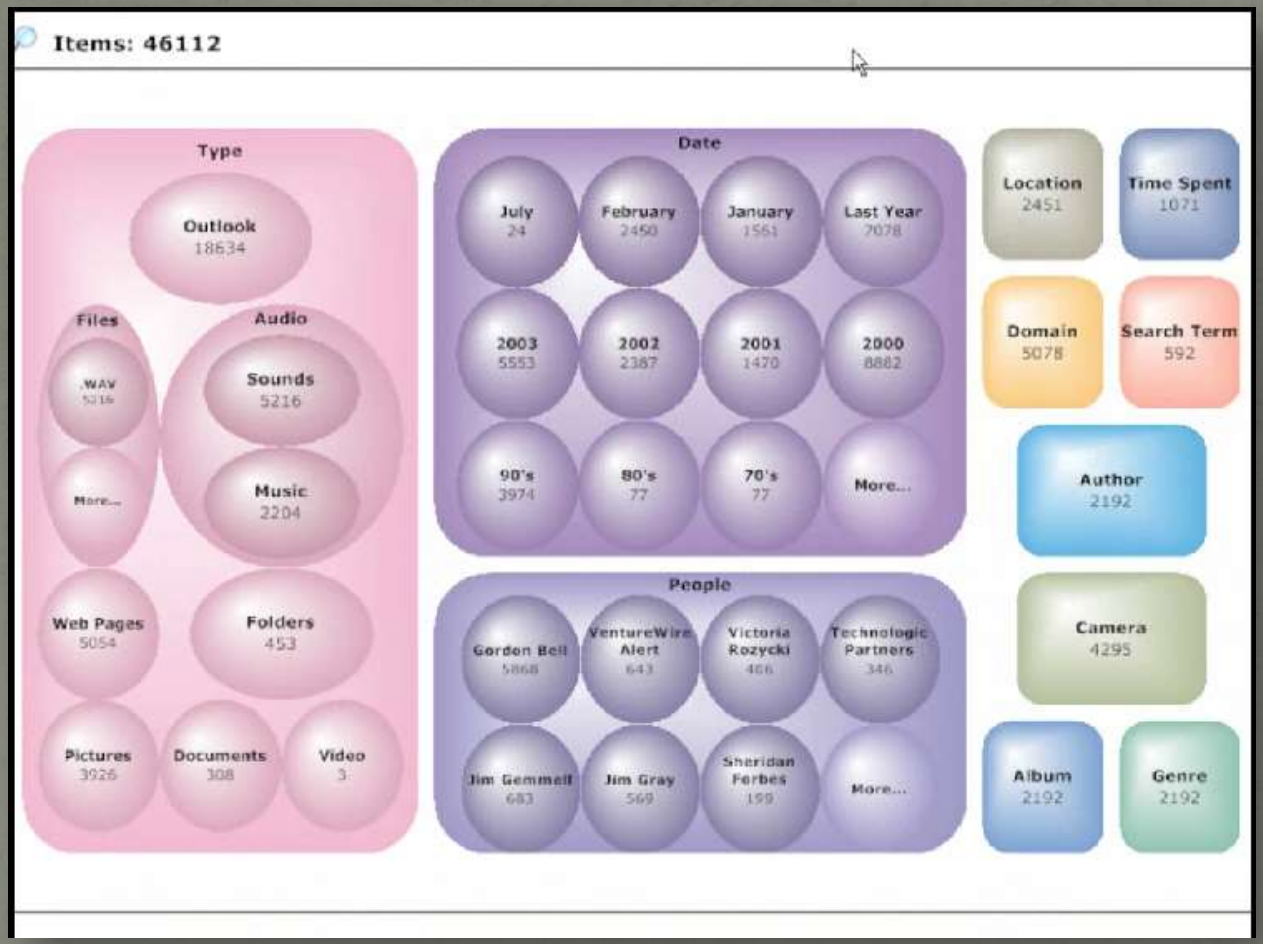
"Oh, it's looking at all the hard disk. … [Clicks on a photo.] Ooops! Sorry! I'm ready to commit suicide."

"I had a lot of other pictures of me similar to the one that you saw …not pornographic but a little bit kinda, you know. Pictures like that."

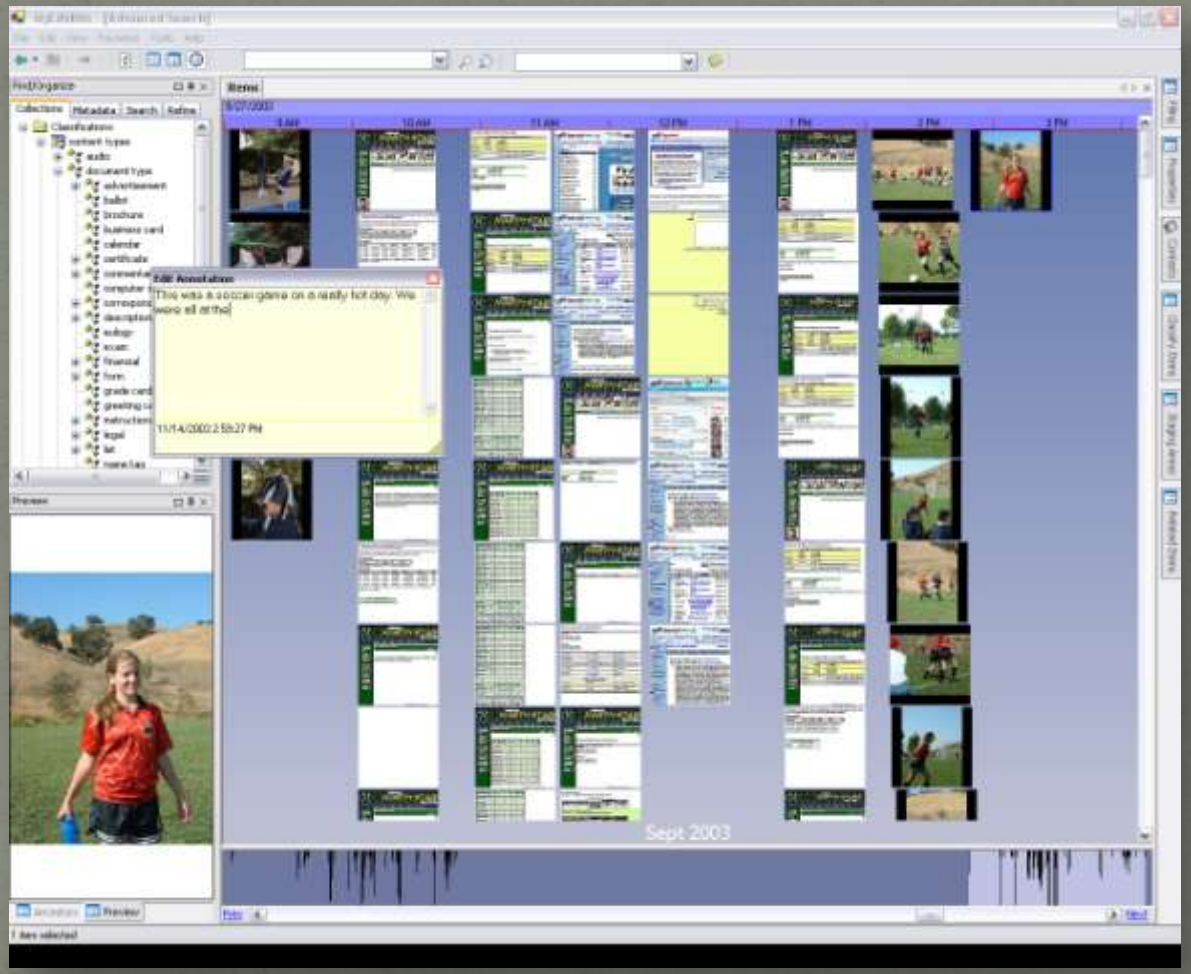
"I have, umm, erotic photos which every man downloads."

"Now I have my 18 year old son here… And I told him, 'Jack, you better—probably there are some porn sites on there—and do you want these ladies to see them?'"

we've got some context and a rough idea of what we're looking for: faceted browsing (from myLifeBits)



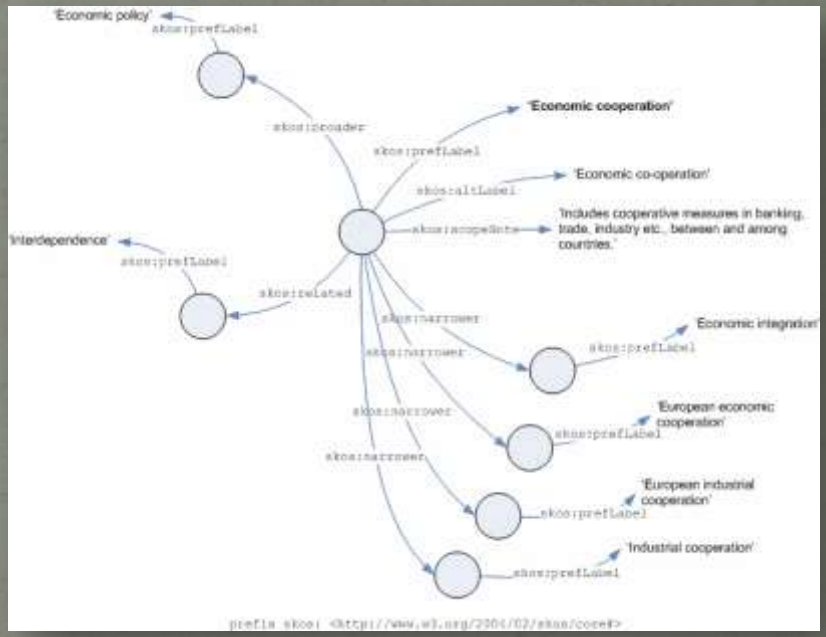
alternative presentations: annotated time line (also from myLifeBits)



whaddya trying to do here, boil the ocean?

doesn't this look like opportunity to you?

many, many bottom up efforts— collections, policies, tools, practices… personal archiving as a cottage industry



from the SALT project at Stanford

new institutions

View Post [edit] Reply to this post | Go Back

Poster:	brewster	**Date:**	January 30, 2010 09:50:10am
Forum:	announcements	**Subject:**	100 new jobs for scanning in San Francisco

SF Mayor Gavin Newsom on the Internet Archive's hiring 100 people to scan books and microfilm from the unemployment rolls leveraging a matching system using stimulus dollars.

Start at 2min 15 seconds.

http://www.youtube.com/watch?v=oaB6AURj2UM

We are gearing up under a similar program in LA. We hope other citie

-brewster

new opportunistic uses of massed data

for analysis… (the world is my dataset)

Tag word	Frequency (items w/tags)	Word category
Milan	85%	place
Italy	66%	place
Galleria (&variants)	26%	place
bull	25%	artifact
Emanuele	14%	place
Vittorio	13%	place
Europe	12%	place
200x	11%	context
travel	9%	context
luck	9%	story

for aggregate display (watch the hole develop as people spin on their heels)

last words…

the power of benign neglect

no single solution

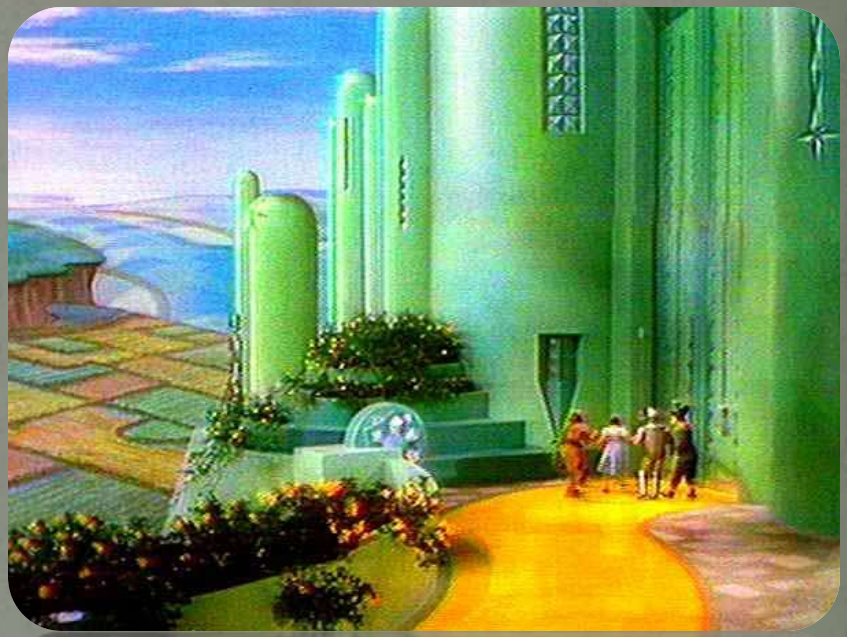
the secret lives of copies

retrieval from cold storage

new opportunities lie in the aggregation of individual archives and efforts

credits

- personal digital archiving field study collaborators: Sara Bly and Francoise Brun-Cottan
- Web site recovery study collaborators: Michael Nelson and Frank McCown (ODU)
- Catharine van Ingen, the Community Information Management project at MSR SVC (Doug Terry, Ted Wobber, Tom Roddehoffer, Rama R., and Rama Kotla)



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