

A Practical Approach to Web Archiving: Applying archival theory to websites and social media pages

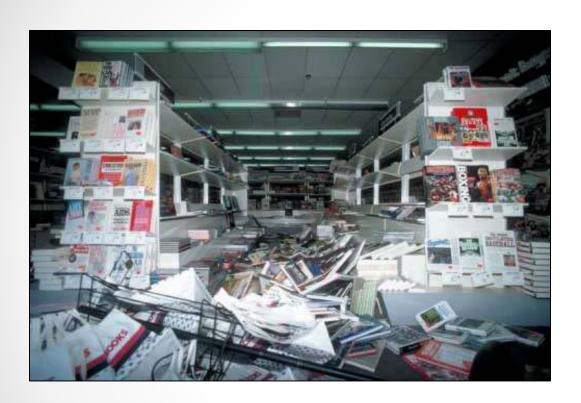
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Texas A&M University-Commerce

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How do you Archive the Web? An Overview of Web Archiving

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Credit: U.S. Geological Survey Department of the Interior/USGS U.S. Geological Survey/photo by J.K. Nakata "The Internet is the world's largest library. It's just that all the books are on the floor."

--John Allen Paulos

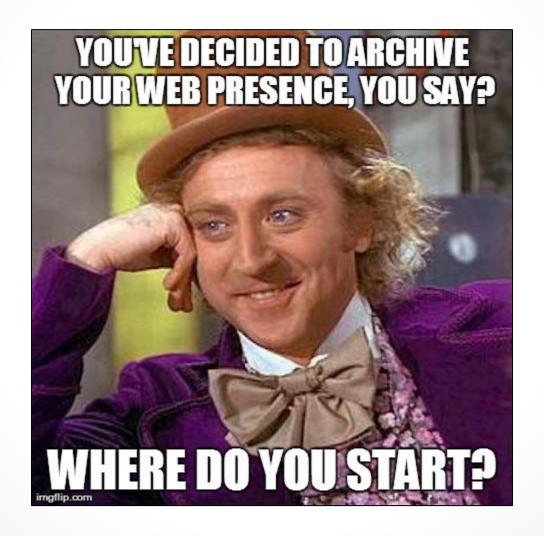
You Can't Put the Web in a Filing Cabinet



...but You Can Archive the Web



What's Next?



Two Roads to Choose



DIY: Things to Consider

- Open source (free) software
- Likely more customizable
- IT Infrastructure
- Level of available expertise
- Plan for storage and backup of archived data

Open Source Web Archiving Solutions



HTTrack

- Free software
- Installed on a local computer; not a server
- Saves captured websites to a local hard drive
- http://www.httrack.com/

Open Source Web Archiving Solutions



GNU Wget

- Free software package
- Can follow links in HTML, XHTML, CSS
- Runs on most UNIX-like operating systems as well as Microsoft Windows
- Supports WARC output
- http://www.gnu.org/software/wget/

Hosted: Things To Consider

- Higher upfront cost
- Not as customizable
- Hosted solutions provide much more infrastructure
- Usually requires less tech expertise and provides more formal training
- Hosted solutions provide all storage, backup, maintenance of data

Hosted Web Archiving Solutions



Web Harvester

- OCLC's entry into web archiving
- Uses proprietary technology
- Integrates with other OCLC tools
- Requires Subscription to OCLCs cataloging service, ContentDM license, and ContentDM hosting services
- http://www.oclc.org/webharvester/overview.en.html

Hosted Web Archiving Solutions

- California Digital Library
- Free to join for all UC departments and organizations (charged only for storage)
- Fee based subscription service for all other institutions
- Utilizes:
 - Heritrix web crawler for capture
 - Wayback for display
 - Nutchwax search engine





- 56 public archives
- 21 partners
- 4407 web sites
- 616,585,489 documents
- 32.3 TB of data

Hosted Web Archiving Solutions



- Subscription Service
- Heritrix web crawler
- Nutchwax search engine
- Wayback Machine browser
 -All developed and maintained by the Internet Archive

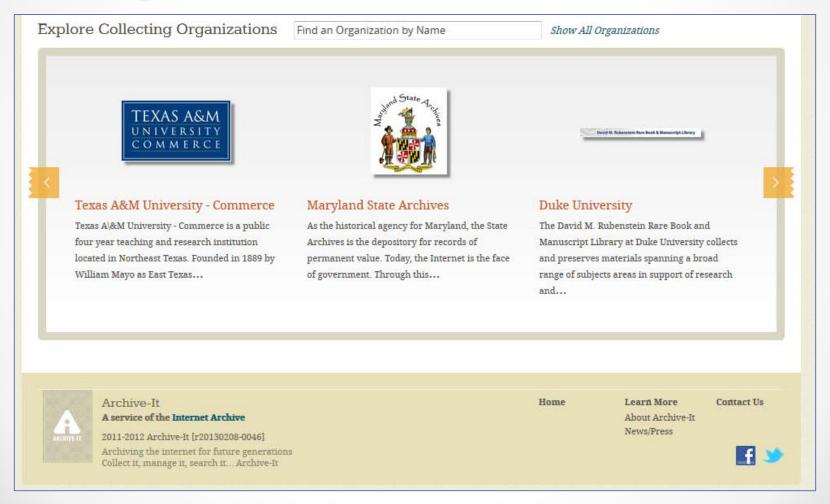


- 248 partner organizations
- 5,635,350,2081 URLs in 2,091 collections
- Partners in 45 states and 15
 countries including, university
 libraries, state archives, historical
 societies, federal institutions,
 NGOs, public libraries, and
 museums

Saving Digital Ephemera: Strategies for Preserving University Websites, Blogs, and Social Media

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Texas A&M University – Commerce partnered with Archive-It



Selecting Seed URLs

<u>University Websites</u>

http://www.tamuc.edu/

http://web.tamuc.edu/

http://catalog.tamuc.edu/

http://pride.tamuc.edu/

http://www.tamu-commercedining.com/

http://tamuc.orgsync.com/

http://www.lionathletics.com/

Facebook

http://www.facebook.com/tamucommerce/

http://www.facebook.com/TAMUCLibrarie

s/

http://www.facebook.com/pages/AM-

Commerce-Lion-

Athletics/242136009137926?ref=ts/

http://www.facebook.com/TAMUCspirit/

http://www.facebook.com/tamucalumni/

Twitter

http://twitter.com/TAMU_Commerce/

http://twitter.com/Lion_Athletics/

http://twitter.com/ketrradio/

http://twitter.com/TheEastTexan/

http://twitter.com/LionsAfterDark/

http://twitter.com/TAMUC_News/

http://twitter.com/LionSafety/

http://twitter.com/TAMUCalumni/

http://twitter.com/TAMUC_Mesquite/

Youtube

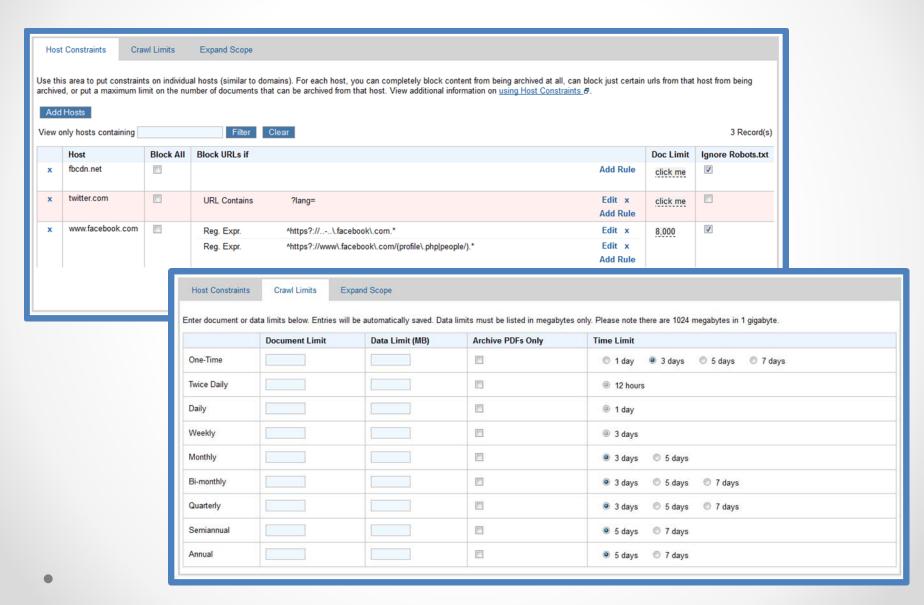
http://www.youtube.com/user/LionsMedia/

University News and Media

http://www.ketr.org/

http://TheEastTexanOnline.com

Managing Scope and Frequency of Crawls

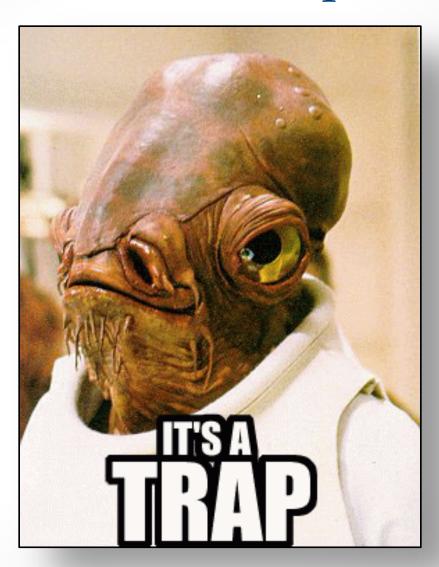


robots.txt



"Robots- Electro and Sparko" 1940. still image. *Computer History Museum* < http://www.computerhistory.org/collections/accession/102693536>

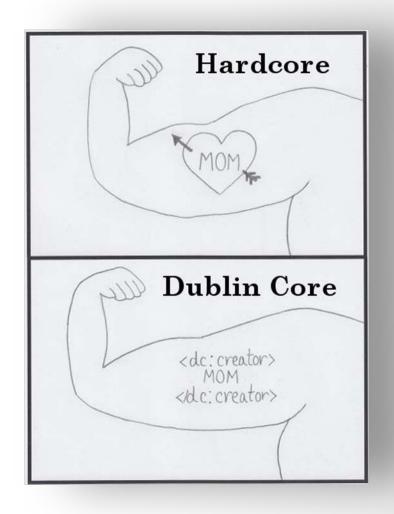
Crawler Traps



"It's A Trap" 2010. Know Your Meme http://knowyourmeme.com/memes/its-a-trap

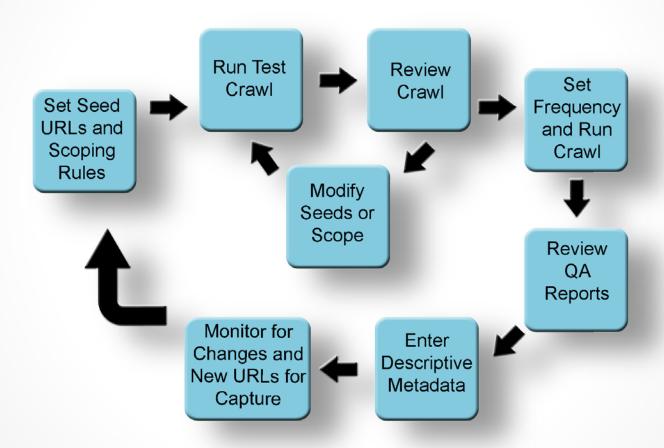
Adding Descriptive Metadata





Rebecca Goldman. 2009. "Core Values." *Derangement and Description*. http://derangementanddescription.wordpress.com/2009/07/13/core-values/

Establishing a Workflow



The Wayback Machine ☆ ▼ C S + Google wayback.archive-it.org/3139/*/http://www.ketr.org/ Found 56 Captures between Sep 7, 2012 - Feb 8, 2013 2012 2013 43 pages 13 pages Sep 7, 2012 * Jan 4, 2013 * Sep 7, 2012 Jan 4, 2013 Sep 7, 2012 (ay wayback.archive-it.org/3139/20120327184713/http://web.tamu-commerce.edu/aboutUs/administrativeOffices/president/default.aspx Sep 7, 2012 * You are viewing an archived web page, collected at the request of Texas A&M University - Commerce using Archive-It. This page was captured on 18:47:13 Mar 27, 2012, and is part of the University websites and social media collection. The information on this web page may be out of date. See All versions of this archived page. Sep 7, 2012 * texas a&m CURRENT STUDENTS FACULTY/STAFF Search Sep 14, 2012 * UNIVERSITY Sep 14, 2012 COMMERG Sep 21, 2012 * A web archiving service LEARN MORE CONTACT US Sep 21, 2012 * to harvest and preserve digital collections a service of the Internet Archive Sep 28, 2012 * Office of the Sep 28, 2012 **President** Oct 5, 2012 * Explore >> Texas A&M University - Commerce Office of the President Home Oct 5, 2012 President's Biography Oct 12, 2012 * Texas A&M University - Commerce President & Staff Oct 12, 2012 Director of Athletics UNIVERSITY Oct 19, 2012 * Chief Information Officer COMMERCE Faculty Senate Oct 19, 2012 Iome > About Us > Administration > Of Budget Review and Development Council Oct 26, 2012 * Office of the President Oct 26, 2012 Addresses & Presentations Community Updates Texas Budget Request The Pride Alumni Magazine **Budget 2012 Suggestions** Narrow Your Results Sam Rayburn Series on Rural Life Sites and collections from this organization are listed below. Narrow your results at left, or enter a search query Thank you for your interest in T below to find a collection, site, specific URL or to search the text of archived webpages. Strategic Plan 120-year legacy of providing his Subject bringing together exceptional pe Enter search terms here Universities & Libraries (1) Search Page Text Collections Page 1 of 1 (1 Total Results) Sort By: Collection Name (A-Z) | Collection Name (Z-A) University websites and social media Archived since: Mar, 2012

Facebook

Capture

- Ignore robots.txt for host and stylesheets
- Set Document limit
 ~2000
- Expand scope SURT rule +http://(net,fbcdn,
- Language page duplicates
- Public Personal Pages

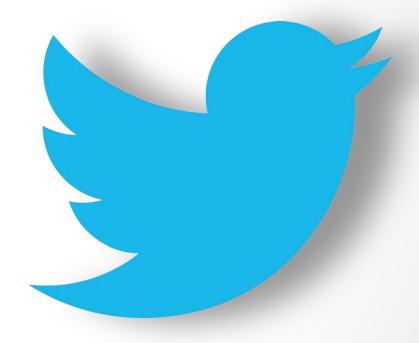


Display

- Infinite reloading loop, try disabling Javascript
- More comments, Older Posts
- Timeline View
- Uploaded Media

Twitter

- Must be a public twitter feed (default)
- Expand scope SURT rule: +http://(com,twitter,)/i/profil es/show/
- Add rule "contains the following text"?lang= to avoid duplicates
- Expand Scope rule for urls that contain: http://t.co/ captures links which utilize url shorteners



YouTube

Capture

- Channel as News/RSS Feed
- Crawling a Channel using a Document Limit
- Crawling Channel Videos
 Using an Uploaded
 Document RSS Feed



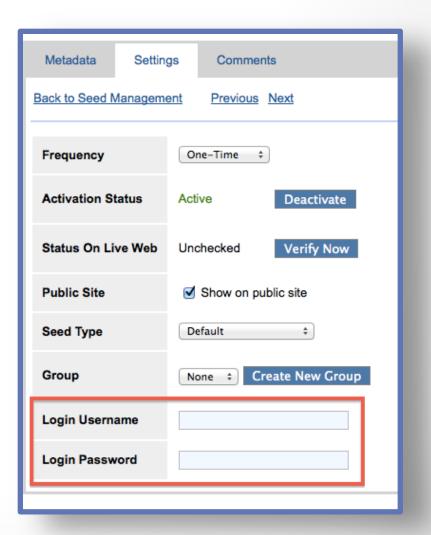
Display

- Video from Wayback page
- Video from specific crawl in Archive-it crawl report
- Video from the linked Video page

Capturing password protected content

Added to Archive-it 4.8 (May 2013)

Only in Alpha release



Zombie URI's

Captured Javascript reaching out to the live web = zombies in the web archive



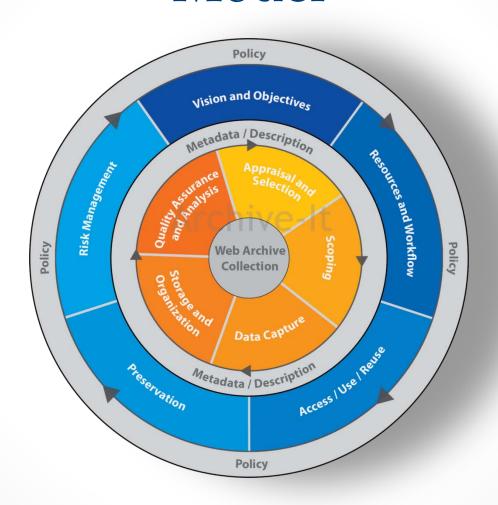
Example from Justin F. Brunelle, Web Science and Digital Libraries Research Group at Old Dominion University http://ws-dl.blogspot.com/2012/10/2012-10-10-zombies-in-archives.html

Web Archiving and the Ship of Theseus Paradox



Dodd, Robert. 1813. "This view of his majesty's ship Shannon" aquatint with engraving, hand-colored from Library of Congress Print and Photographs Online Catalog http://www.loc.gov/pictures/item/98519184/>

Archive-It Web Archiving Life Cycle Model



Bragg, Molly, Kristine Hanna, et al. 2013 *THE WEB ARCHIVING LIFE CYCLE MODEL*. http://archive-it.org/static/files/archiveit_life_cycle_model.pdf

Curating the Web: Using web archiving to supplement traditional collections

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Topical web archives

- Web archiving gives us the opportunity to capture webbased content that fits within our collection development policy
- Gives us the capability to capture websites related to spontaneous events that effect our campus or region
- Proves that web archiving is not only for colleges, universities, and governmental offices

Archive-It Partners

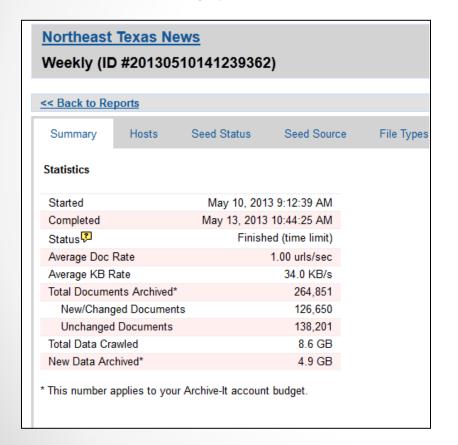
- Colleges and universities
- Museums
- Local/state governments
- K-12 schools
- Organizations (governmental and non-governmental)
- Public libraries
- Politicians
- Individuals

@ A&M-Commerce

- Our main CDP includes a broad statement related to materials pertaining to Northeast Texas
- Added a web component in April 2012 to collect regional news websites
- Many longstanding newspapers in our region are moving to web-only
- New web-based news websites are increasing in popularity

A look at the data...

Weekly Northeast Texas News crawl



Quarterly University website crawl

< Back to Re	<u>ports</u>			
Summary	Hosts	Seed Status	Seed Source	File Types
tatistics				
Started		May 3, 2013 9	9:21:51 AM	
Completed	May 4, 2013 8:16:44 AM			
Status 🖓			Finished	
Average Doc Rate		1.	00 urls/sec	
Average KB Rate			108.0 KB/s	
Total Documents Archived*			82,436	
New/Changed Documents			54,514	
Unchanged Documents			27,922	
Total Data Crawled			8.6 GB	
New Data Archived*			3.1 GB	



Northeast Texas News

Collected by: Texas A&M University - Commerce

Archived since: May, 2013

Description: A collection of newspaper websites in the Northeast Texas region.

Subject: Spontaneous Events, Electronic newspapers

Creator: Texas A&M University - Commerce, University Archives and Special Collections

Type: <u>Interactive resource</u>

Collector: Texas A&M University-Commerce

Rights: Texas A&M University-Commerce does not claim copyright to any of the materials within this

web collection

Narrow Your Results

Creator Sort By: Count (A-Z)

Mount Vernon Optic-Herald (1)

North Texas e-News (1)

The Herald Banner (1)

The Sulphur Springs News-Telegram (1)

eParis Extra! (1)

Publisher Sort By: Count (A-Z)

Mount Vernon Optic-Herald (1)

North Texas e-News (1)

The Herald Banner (1)

The Sulphur Springs News-Telegram (1)

eParis Extra! (1)

Sites for this collection are listed below. Narrow your results at left, or enter a search query below to find a site, specific URL or to search the text of archived webpages.

Enter search terms here

Search

Clear

Sites

Search Page Text

Page 1 of 1 (6 Total Results)

Sort By: Title (A-Z) | Title (Z-A) | URL (A-Z) | URL (Z-A)

Title: The Herald Banner, Greenville, TX

URL: http://heraldbanner.com/

Captured 2 times between May 3, 2013 and May 10, 2013

Creator: The Herald Banner
Publisher: The Herald Banner

Rights: © Community Newspaper Holdings, Inc

URL: http://www.clarksvillenews.net/

No Captures were found for this URL

Title: eParis Extra!

URL: http://www.eparisextra.com/

Captured 2 times between May 3, 2013 and May 10, 2013

Creator: eParis Extra!
Publisher: eParis Extra!

Rights: (c) Hometown Web Media, LLC

Looking to the future

- Develop a web archiving collection development policy
- Create a web archiving FAQ
- Develop a means for campus entities and local news agencies to either opt-in or opt-out of the web collection
- Increase the number of seeds

What others are doing

- University of Texas San Antonio
 - o 19 total collections, three university collections
 - Topical web archive collections include bilingual education, Texas-related LGBTQ websites, renewable energy in Texas, San Antonio HIV/AIDS-related websites, San Antonio restaurants and organizations
- Primary Special Collections website includes an extensive FAQ and guidelines
- http://www.archive-it.org/organizations/318

UTSA LIBRARIES

HOME

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Library Home > Find Information > Special Collections > Collections

COLLECTIONS

Search Special Collections

University Archives

Manuscripts

Rare Books

Photograph Collections

Web Collections

Digital Collections

ABOUT SPECIAL COLLECTIONS

Hours and Locations

Contact Information

History and Purpose

Gifts and Donations to Special Collections

PLANNING A VISIT

Web Collection Development Guidelines



Purpose:

The University of Texas at San Antonio Special Collections Department began partnering with the Internet Archive's **Archive-It Program** in September of 2009 to preserve web content that is of enduring value to both South Texas and the University of Texas at San Antonio. The Archive-It Program allows UTSA's Special Collection Department to capture relevant web content and ensure its long-term access through the Internet Archive's website. The Archive-It Program selectively crawls either web domains or individual web pages, taking a snapshot of the page, and storing a copy in the Internet Archive. The web page is then made publicly accessible on both the University of Texas at San Antonio Special Collections' homepage and at the Archive-It partner page.

Method:

The University of Texas at San Antonio Special Collections Department identifies either a web domain (e.g. http://www.utsa.edu) or a particular website (e.g. http://www.utsa.edu) to archive, and then periodically makes a copy of the web site to ensure long-term access to the web site's content. Depending upon the frequency in which the web content changes over time, the web crawler may be set to crawl a particular web site either twice daily, daily, weekly, monthly, quarterly, semi-annually, annually, or a single time. Since most web sites either self-archive a majority their content, or only change their content periodically, UTSA only crawls most web sites on either a semi-annual or annual basis. After the web site or web domain is crawled by Archive-IT, the web content is described and indexed by Special Collections staff and made available on the Archive-IT web site.

http://lib.utsa.edu/collections/web-collection-development-guidelines/

UTSA (cont.)

ASK Special Collections

Request Access to a Collection

Photocopy and Reproduction Services

University Archives Forms and Handouts

Reference Services

Request Instruction Session

Types of Web Content Collected:

- Official University of Texas at San Antonio web sites
- University-affiliated web sites (student organization web sites, Facebook, Twitter, Flickr pages created by organizations at the University of Texas at San Antonio)
- Web sites relevant to Texas and the Southwest (Border Studies, Gender Studies, South Texas and San Antonio History)
- Web pages (HTML), photographs (jpegs and tiffs), embedded video (mpegs), embedded audio (wav., mp3), and PDFs
- Publicly available web content that is not password protected

Types of Web Content Not Collected:

- · Web sites created by individual students
- · Password protected sites
- Databases
- Calendars
- JavaScripting
- · Streaming audio/video
- YouTube videos
- Web sites that have robots.txt exclusion requests

Copyright:

UTSA does not claim copyright to any of the materials within the archive. It is the sole responsibility of the user to determine the copyright status of archival collections before publishing materials.

Frequently Asked Questions (FAQs)

JOHN PEACE LIBRARY

Located on the Main Campus

One UTSA Circle San Antonio, TX 78249-0671

Office of the Dean: (210) 458-7506

DOWNTOWN LIBRARY

Located on the 2nd floor of the Buena Vista Building, Downtown Campus

501 W. César E. Chávez Boulevard San Antonio, Texas 78207-4415

Phone: (210) 458-2440

APPLIED ENGINEERING & TECHNOLOGY LIBRARY

Located on the 2nd floor of the AET building on the Main Campus

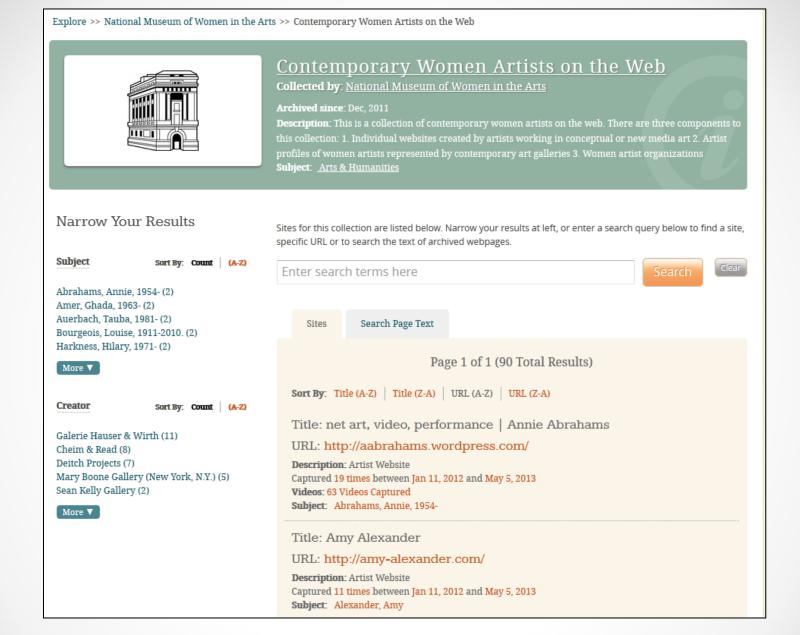
One UTSA Circle San Antonio, TX 78249-0671

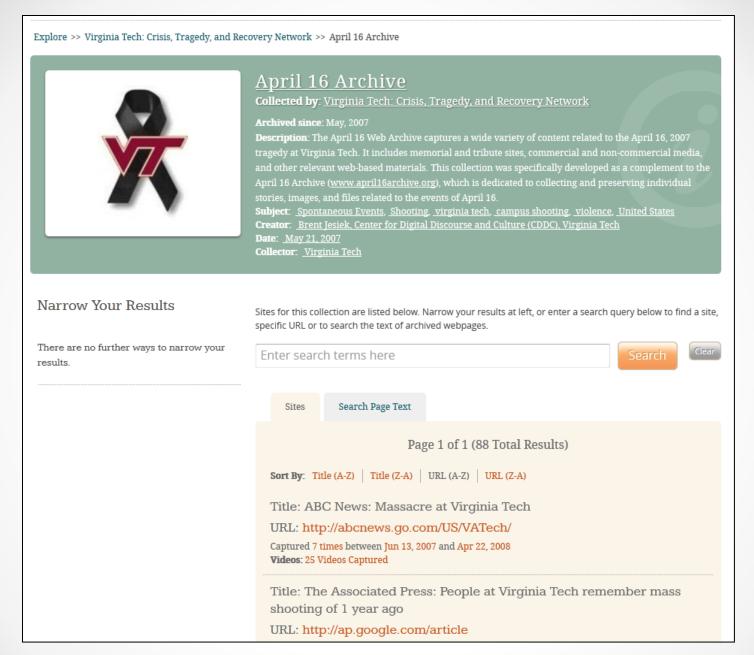
SPECIAL COLLECTIONS

Reading Rooms located on the 4th floor of the John Peace Library and HemisFair Park Campus

One UTSA Circle San Antonio, TX 78249-0671

http://lib.utsa.edu/collections/web-collection-development-guidelines/







Home About Site List Search Help Contact Us



Site list by topic: Arizona Bay Area Berkeley Boise Brazil California Canada D.F. Eugene Fresno Idaho Las Vegas Long Beach Los Angeles Mexico Nevada Oakland Olympia Oregon Pasadena Phoenix Portland Porto Alegre Reno Rio de Janeiro Sacramento Salvador San Francisco San Jose

Santa Cruz

Santa Rosa Sao Paulo

Seattle South America Vancouver

Occupy Berkeley (1) Hide Info

Latest Starting URL http://occupyberkeley.org/ (live link)

Description

Occupy Berkeley

Captured

04/29/12 08:16 AM 05/02/12 11:32 AM 05/07/12 02:33 PM 05/13/12 06:59 PM 05/20/12 08:09 AM 06/04/12 06:04 AM 07/02/12 06:42 PM 08/02/12 06:41 PM 10/04/12 04:58 PM 11/02/12 06:32 PM

Occupy Boise (1) Show Info

Occupy Eugene

Show Info

Occupy Fresno (1) Show Info

Occupy Las Vegas

Show Info

Occupy Long Beach (1) Show Info

Occupy Los Angeles (1) Show Info

Occupy Oakland (1) Show Info

Occupy Olympia (1) Show Info

Occupy Pasadena (1) Show Info

Occupy Web Archive

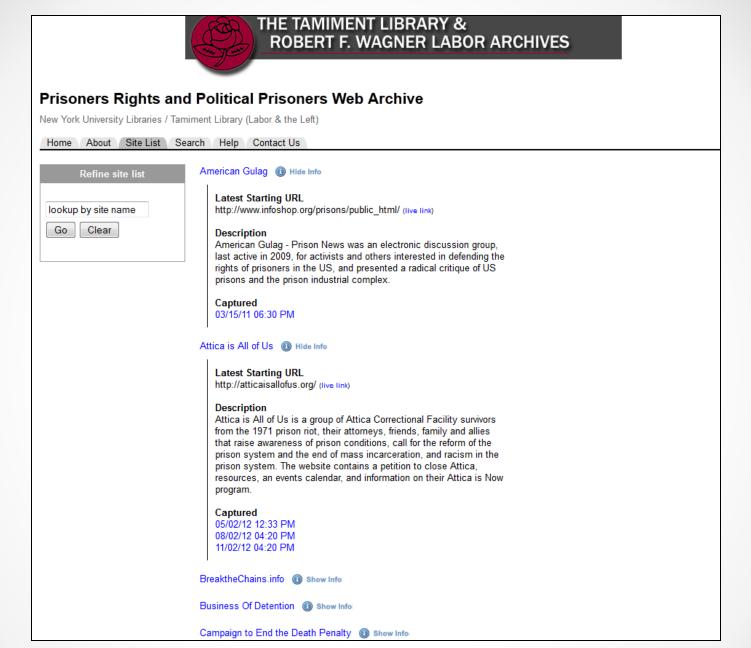
UCLA Library

About Site List Search Help Contact Us

Description

The UCLA Library Occupy Web Archive is a collection of websites documenting local Occupy movements and events on the west coast of the United States, Mexico, and Brazil. The geographic scope complements the UCLA Library's traditional print collection strengths from these regions. Extant websites are captured once a month.

http://webarchives.cdlib.org/a/occupy



Building Support

- The first step is to research, research, research!
 - o Investigate the most common service providers
 - Understand the technology:
 - What web archiving does well
 - What web archiving does poorly
 - What web archiving cannot do
- When requesting funds for a web archiving project, you want to make sure stakeholders understand the limitations of web archiving

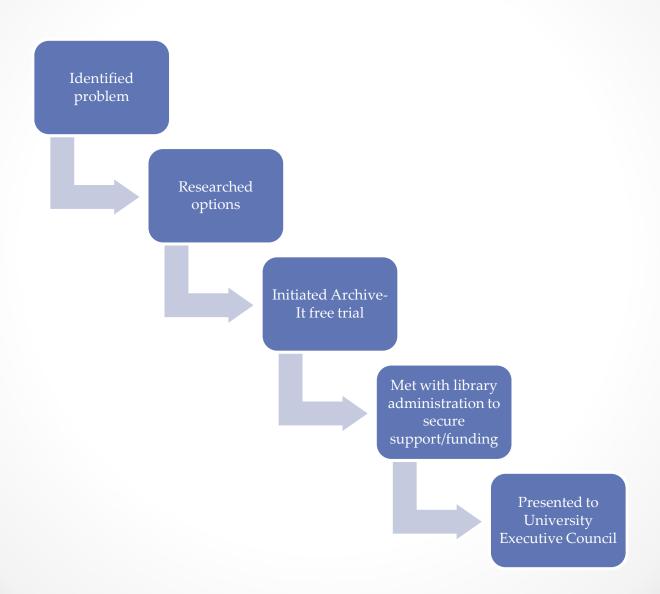
Building Support (cont.)

- Analyze your website
 - o What vital documents are published exclusively online?
 - Can paper copies be derived?
 - Are paper copies derived and delivered to archives?
 - Are the original electronic records transferred to archives?
 - o Compare what is exclusively published online to your retention schedule
 - o How pressured are you to collect or seek out these records?
 - Level of participation from external departments
 - Don't forget about electronic ephemera
- Consider participating in a free trial from Archive-It

Meet with Administration

- Emphasize that web archiving is in addition to, not instead of traditional practices
- Collect a list of institutions in your region who have adopted web archiving
- Consider gathering feedback from current users or members of the SAA Web Archiving Roundtable

Our process



Where we went wrong

Don't forget your IT Department, Webmaster, and/or CIO



Where we went wrong (cont.)

- Involving IT
 - In selecting Archive-It, we did not require any technical assistance
 - Viewed web archiving as solely the responsibility of the archives
- The problem
 - o Heritrix crawls the IT servers
 - o It could be perceived as a threat
- The courteous thing to do would be to involve the necessary IT individuals in early discussions

Questions?

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http://www.archive-it.org/organizations/615