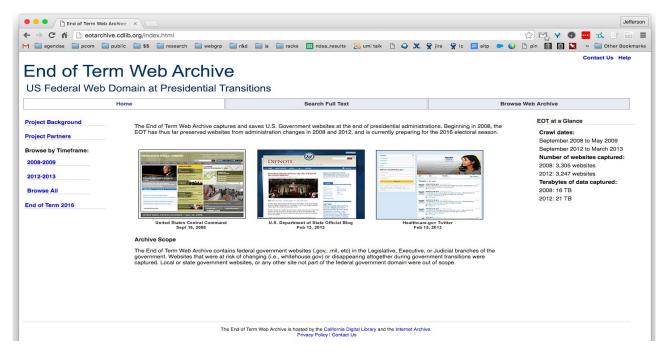
The End of Term Archive: Archiving the U.S. Government Web



Abigail Grotke, Web Archiving Team Lead, Library of Congress @agrotke | abgr@loc.gov

MLTW | Dec. 5, 2017



It all began a long, long, time ago, in a far away...



Goals of the End of Term Project



United States Central Command Sept 16, 2008



U.S. Department of State Official Blog Feb 13, 2013



Healthcare.gov Twitter Feb 15, 2013

- □ work collaboratively to preserve public U.S. Government websites
- document federal agencies' presence on the web during the end of Presidential terms
- enhance the existing research collections of the partner institutions
- □ raise awareness about the need for preservation
- engage with researchers and subject experts

Extant .gov web archiving efforts

Capture, Preservation, & Access

- LOC: legislative branch, some executive
- GPO: agency sites, often ephemeral
- NARA: congressional web harvest every 2 years
- IA: global & curated crawls
- Agency-level: NIH/NLM, DOE, DOL, HHS, CMS, others, using Archive-It or other tools
- UNT & Others: Topical .gov collecting
- Internal agency guidelines

Community Efforts

- Federal Web Archiving Group
- Research Initiatives
 - academic
 - NGO or watchdog
- Citizen Driven
 - grassroots efforts, e.g. Data refuge/rescue
- End of Term
 - focused but large-scale multi-institutional project

Original End of Term Web Archive Partners



for 2008/2012 - all IIPC & NDIIPP/NDSA partners

EOT 2016: more partners!















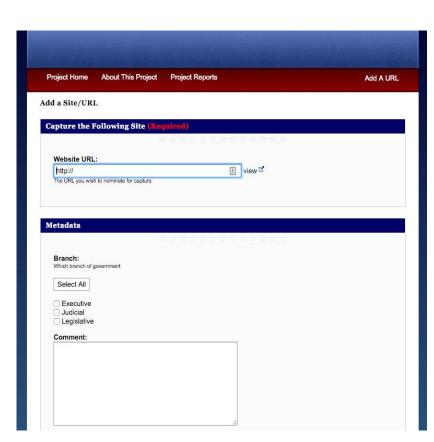
STANFORD UNIVERSITY LIBRARIES

Federal Government Web Archiving Working Group

EOT Collaborative Roles

- Project management and coordination (All, rotates)
- Nomination tool development (UNT)
- URL nomination (All + community/public)
- Crawling (IA, UNT, LC, GW)
- Preservation of full copy (IA, LC, UNT)
- Access: portal, full-text search, metadata, research & support (IA, CDL)
- Outreach, press, twitter account (primarily IA, LC, UNT, Stanford)

The 2016 project brought more partners, capacity for better, distributed crawling, and more community and researcher engagement



Defining the "government web presence"

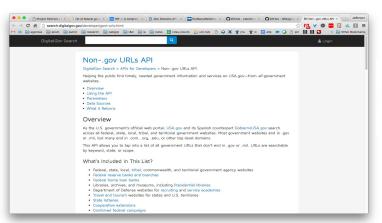






Stanford WebBase Project



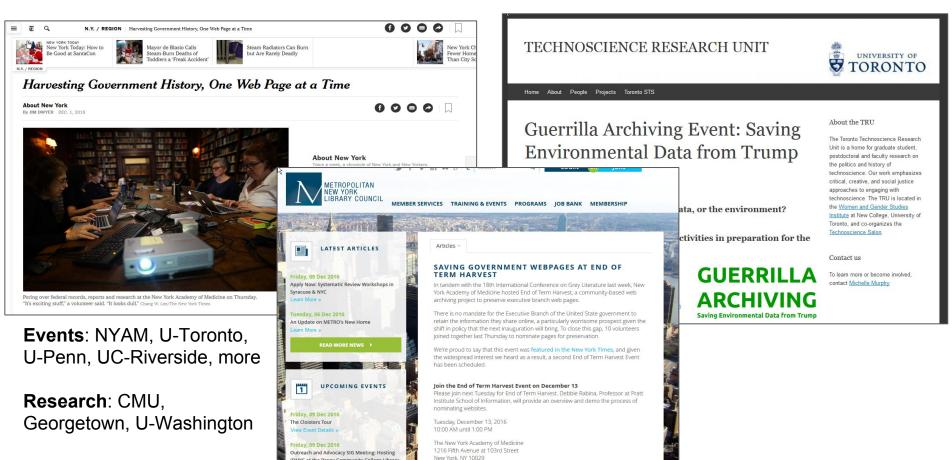








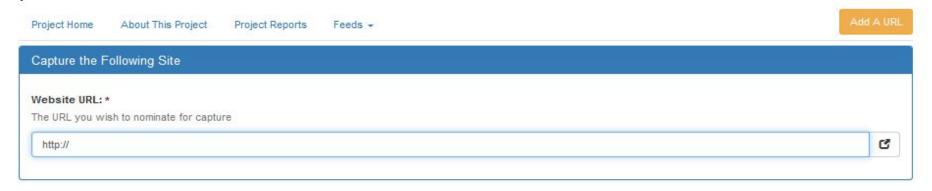
Community Engagement



Volunteer contributions

	Nominations	Volunteers
2008	457	26
2012	1476	31
2016	15,000+	400+

End of Term Presidential Harvest 2016



Plus over 150,000 from DataRescue/EDGI events/tools!

Size of Archive

	URLs	Size	Comments
2008	~160 million	17.95 TB	Multiple crawls, deduplicated
2012	~120 million	18.60 TB	More focused crawls, deduplicated. Notable for media richness, uniqueness, density.
2016	over 429 million	293.91 TB	Includes ~150 TB of FTP crawls

EOT 2016 Content

Content includes:

- 9,000+ social media accounts (scrape of gov SM registry API) 44% FB, 37% TW, 10% YT
- ~190K total domain, subdomains, gov and non-gov sites
- more crowdsourced, curatorial nominations

gov, dontserveteens) gov,dot) gov,dot,adfs) gov,dot,fastlane) gov,dot,fhwa) gov,dot,fhwa,borderplanning) gov,dot,fhwa,collaboration) gov,dot,fhwa,efl) gov,dot,fhwa,environment) gov,dot,fhwa,fhwapap04) gov,dot,fhwa,flh) gov,dot,fhwa,international) gov,dot,fhwa,mutcd) gov,dot,fhwa,nhi) gov,dot,fhwa,ops) gov,dot,fhwa,safety) gov,dot,fhwa,wfl) gov,dot,fhwa,wwwcf) gov,dot,fmcsa) gov,dot,fmcsa,ai) gov,dot,fmcsa,cms) gov,dot,fmcsa,csa) gov,dot,fmcsa,csa2010) gov,dot,fmcsa,li-public) gov,dot,fmcsa,mrb) gov,dot,fmcsa,nrcme) gov,dot,fmcsa,safer) gov,dot,fra) gov,dot,fra,safetydata) gov,dot,fta) gov,dot,fta,transit-safety) gov,dot,isddc) gov,dot,its) gov,dot,its,benefitcost) gov,dot,its,pcb) gov,dot,its,standards) gov,dot,marad) gov,dot,nhtsa) gov,dot,nhtsa,www-esv) gov,dot,nhtsa,www-fars) gov,dot,nhtsa,www-nrd) gov,dot,nhtsa,www-odi) gov,dot,oig) gov,dot,ost,airconsumer) gov,dot,ost,dotcr) gov,dot,ost,dothr) gov,dot,ost,testimony) gov,dot,phmsa) gov,dot,phmsa,npms) gov,dot,phmsa,opsweb) gov,dot,phmsa,primis)

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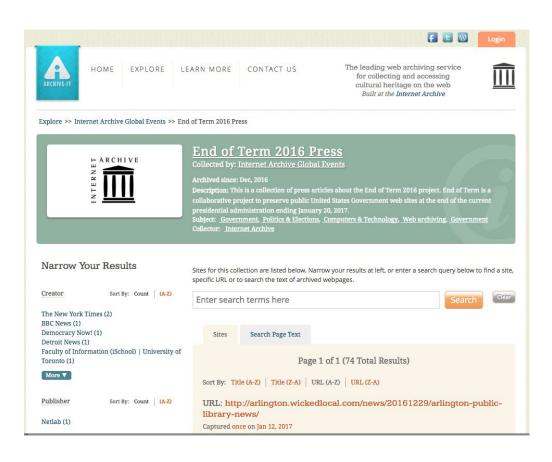
EOT 2016 Press ++

Press

Dozens of articles and interviews

Collaborations

- Data Refuge
- EDGI
- GSA / 18F
- data.gov



EOT Challenges

Typical web archiving challenges

- complexity of content
- volume & proliferation
- "you get what you get" w/ little cataloging or QA

Distribution of work

- more partners = more project/partner mgmt
- contributed seed lists

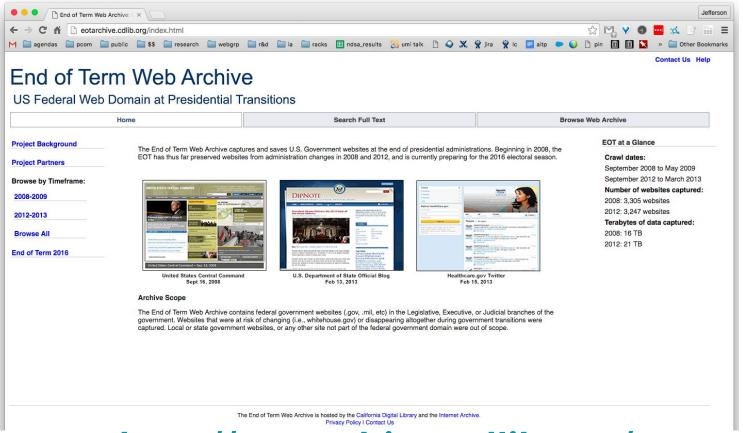
Resource constraints

- the "it isn't anyone's actual job" problem
- tech, time limitations & scale of data
- funding = (there is none)



Using the EOT Archive

End of Term Web Archive

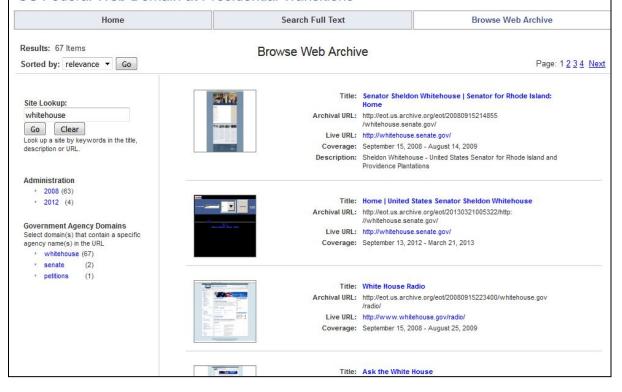


http://eotarchive.cdlib.org/

Contact Us | Help

End of Term Web Archive

US Federal Web Domain at Presidential Transitions



Site Lookup:

Look up a site by keywords in the title, description or URL.

Administration

- 2008 (3305)
- 2012 (3247)

Government Agency Domains

Select domain(s) that contain a specific agency name(s) in the URL

	house	(1056)
*.	паѕа	(310)
	senate	(271)
	facebook	(257)
	uscourts	(257)
*:	supremecourt	(156)
•	twitter	(155)
	noaa	(151)
*.	usgs	(139)
•	nih	(123)
	gsfc	(98)

more

youtube

usda

army

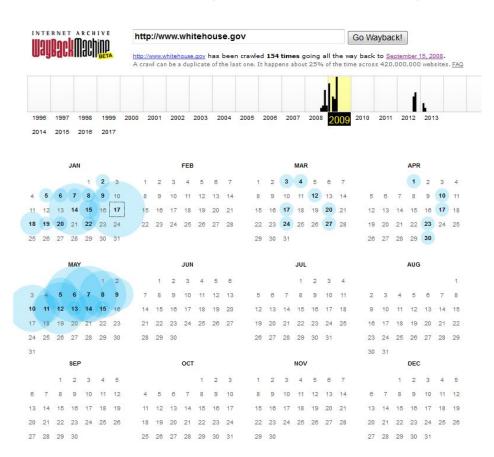
whitehouse

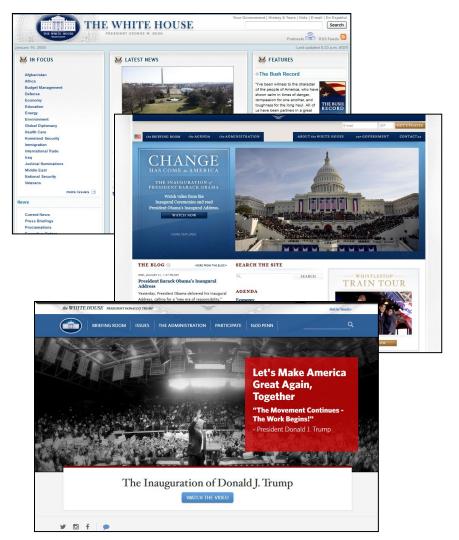
(94)

(82) (76)

(67)

http://eot.us.archive.org/eot/*/www.whitehouse.gov





Plans for release of 2016 - 2017

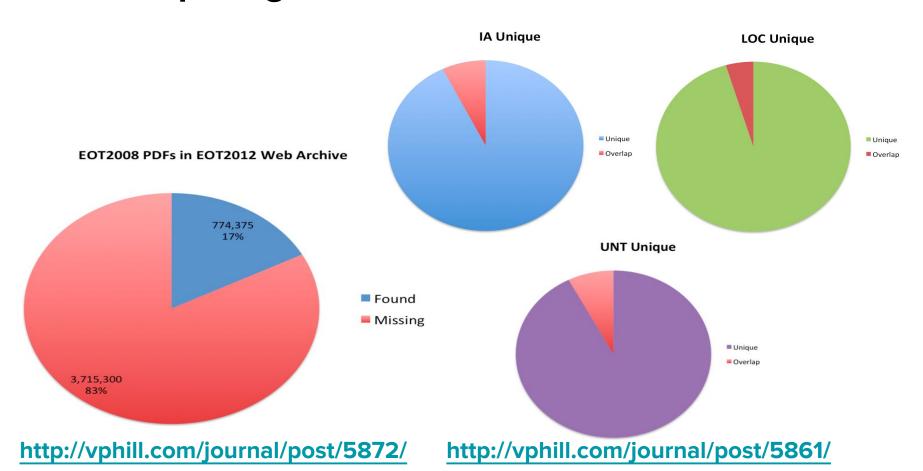
- All web crawl data from IA, LC, UNT has been ingested at IA.
- Derivative datasets for all the data (WATs, WANEs, extracted page text) have been generated.
- Components to integrate new content into portal are being worked on (metadata, search, thumbnails, Wayback indexes). Once finalized, CDL will begin process to update the portal.
- We have a number of researchers interested in the data (IA working with them)

analysis by project team members

HOME ABOUT		
SEARCH RESULTS FOR: EOT	eot	
Comparing Web Archives: EOT2008 and EOT2012 – Curator	RECENT POSTS	
ntent	Metadata Quality Interfaces: Cluster	
	Dashboard (OpenRefine Clustering	
This is another post in a series that I've been doing to compare the End of Term Web Archives	Baked Right In)	
from 2008 and 2012. If you look back a few posts in this blog you will see some other analysis	Metadata Interfaces: Search Dashboard	
that I've done with the datasets so far. One thing that I am interested in understanding []	Metadata Quality Interfaces: Element	
	Count Dashboard	
This entry was posted in <u>thinking outloud</u> on <u>June 20, 2016</u> .	Metadata Quality Interfaces: Facet Dash	
	board	
	Updating Metadata Interfaces: Item	
	<u>Views</u>	
Carragain - Wala Anakinasa FOT2000 and FOT2012 Milest dia		
Comparing Web Archives: EOT2008 and EOT2012 – What disappeared	ARCHIVES	
This is the fourth post in a series that looks at the End of Term Web Archives captured in 2008	September 2017	

http://vphill.com/journal/?s=eot

Comparing PDFs in EOT from 2008 to 2012



.gov & .mil biggest change

Domain	EOT2008	EOT2012	Change	% Change
house.gov	13,694,187	35,894,356	22,200,169	162%
senate.gov	5,043,974	9,924,917	4,880,943	97%
gpo.gov	8,705,511	3,888,645	-4,816,866	-55%
nih.gov	5,276,262	1,267,764	-4,008,498	-76%
nasa.gov	6,693,542	3,063,382	-3,630,160	-54%
navy.mil	94,081	3,611,722	3,517,641	3,739%

Top 15 .gov & .mil domains present in 2008 but

women-21.gov

missing in 2012		new i	n 2012
Domain	URLS	Domain	URLS
geodata.gov	812,524	militaryonesource.mil	
nifl.gov	504,910	consumerfinance.gov	
stat-usa.gov	398,961	nrd.gov	
tradestatsexpress.gov	243,729	wh.gov	
arnet.gov	174,057	pnnl.gov	
acqnet.gov	171,493	eia.gov	
dccourts.gov	161,289	transparency.gov	
web-services.gov	137,202	nationalguard.mil	
metrokc.gov	132,210	acus.gov	
sdi.gov	91,887	404.gov	
davie-fl.gov	88,123	savingsbondwizard.gov	
belmont.gov	87,332	treasuryhunt.gov	
aftac.gov	84,507	fedshirevets.gov	
careervoyages.gov	57,192	onrr.gov	

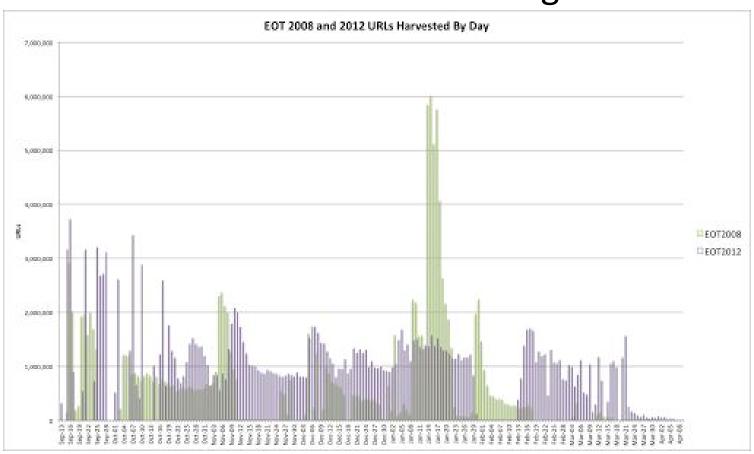
veterans.gov

56,255

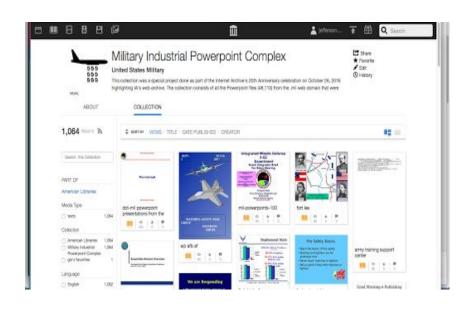
Top 15 .gov & .mil domains

75,350

EOT2008 and EOT2012 Crawling Schedule



Extracted Special Web Collections







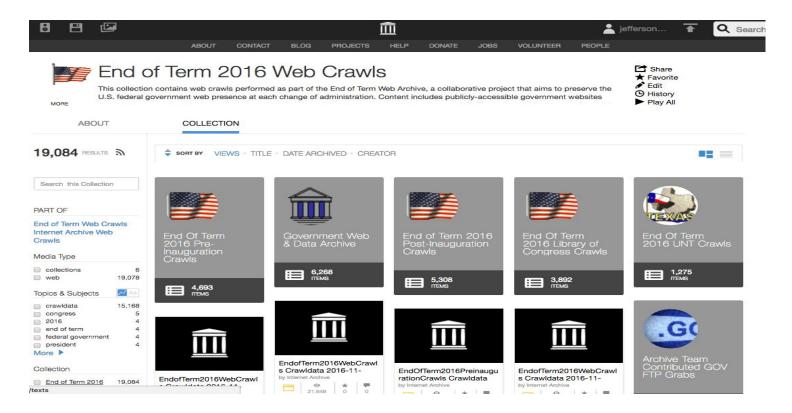
https://archive.org/details/MilitaryIndustrialPowerpointComplex

http://archive.org/~vinay/20th-century-gov-headshots.html

http://archive.org/~vinay/20th-century-gov-groupshots.html

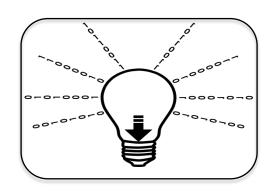


eot 2016 "raw" content



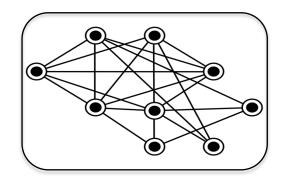
https://archive.org/details/EndOfTerm2016WebCrawls

researcher access to .gov



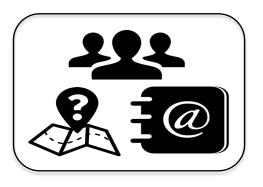
WAT Datasets

(Web Archive Transformation) Key Metadata from Every Resource



LGA Datasets

(Longitudinal Graph Analysis) What Links to What over Time



WANE Datasets

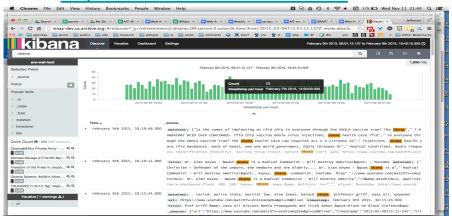
(Web Archive Named Entities) Names of People, Places, Organizations

Web Archive Datasets (via platform, disk, APIs, etc.)

researcher access to .gov



http://archivesunleashed.com/





http://www.websci16.org/hackathon



https://github.com/vinaygoel/ars-workshop

http://webarchives.ca/

web preservation for content creators

What can website creators do to help?

- Create preservation-friendly websites
- Understand the nature of your organization's website to determine the extent needed to preserve it:
 - What are the domains, subdomains?
 - What content is being hosted by third-party companies, for instance social media?
 - Is your content changing frequently?
- Archive your own content, using open source or subscription-based tools. Or at least make sure it is being preserved by someone else (check web.archive.org)
- Participate in our next End of Term 2020!

Creating Preservable Websites

√	Follow web standards and accessibility guidelines	√	Consider using a Creative Commons license
1	Be careful with robots.txt exclusions	✓	Use sustainable data formats
✓	Use a site map, transparent links, and contiguous navigation	✓	Embed metadata, especially the character encoding
✓	Maintain stable URIs and redirect when necessary	✓	Use archiving-friendly platform providers and content management systems.

For more details see Library of Congress Guide to Creating Preservable Websites http://www.loc.gov/webarchiving/preservable.html

More Guidance for Website Creators

•International Internet Preservation Consortium Tools and Software

https://netpreserve.org/web-archiving/tools-and-software/

Recommended Formats Statement for Websites

https://www.loc.gov/preservation/resources/rfs/websites.html

Stanford University's Archivability Guidelines

http://library.stanford.edu/projects/web-archiving/archivability

•Columbia University's Guidelines for Preservable Websites

https://library.columbia.edu/bts/web resources collection/guidelines for preservable websites.html

•Princeton University's Guidelines for Designing Preservation-Friendly Websites https://rbsc.princeton.edu/policies/guidelines-designing-preservation-friendly-websites

•Archive Ready, a free website archivability evaluation tool http://www.archiveready.com/

EOT Going Forward

- **Processing the 2016 archive:** Full-text search, build index, make derivatives, simple extractions like domains, comparisons against 2012/2008
- **Providing access:** Updating the EOT portal, exploring media search, new access interfaces, sharing derivative data sets with researchers
- **Preservation copies:** Transferring to Library of Congress this year.
- And of course ... End of Term 2020!

Follow us on Twitter for updates: https://twitter.com/eotarchive

Questions?

<u>abgr@loc.gov</u> <u>eot-info@archive.org</u>