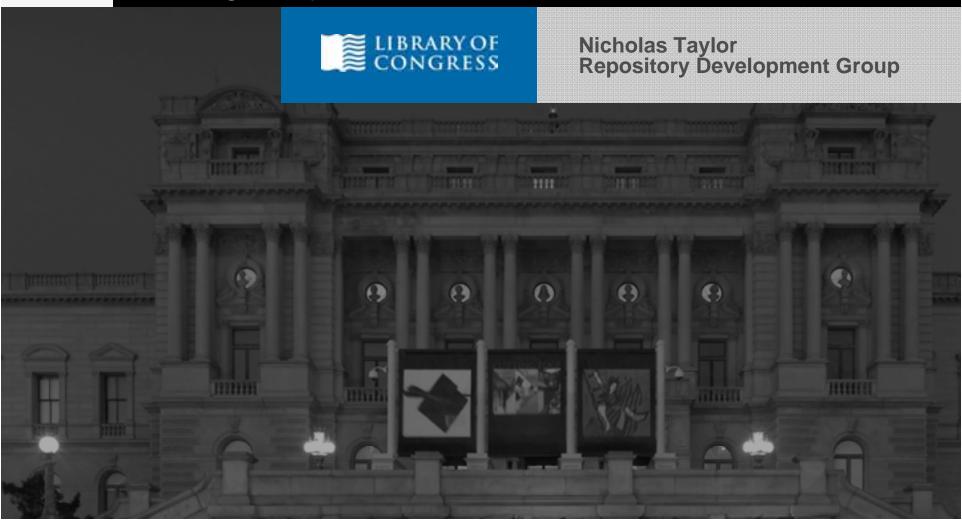
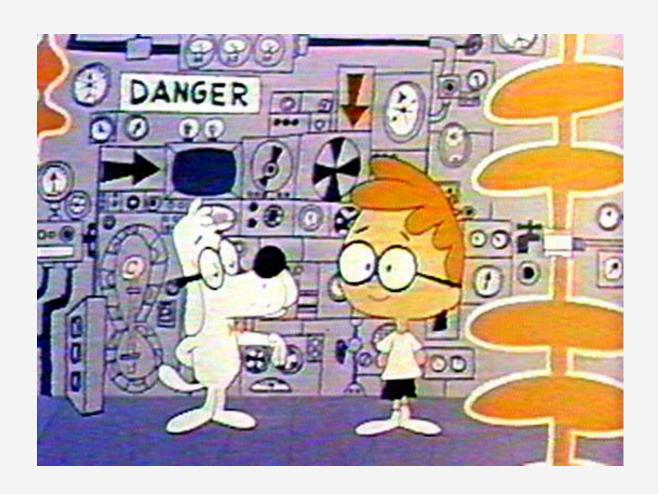
## Using Wayback Machine for Research



What Is the

## **WAYBACK MACHINE?**

#### WABAC Machine?



## Internet Archive's Wayback Machine



Take Me Back!

Advanced Search

Surf the web as it was

#### not one, but many Wayback Machines

- open source software to "replay" web archives
  - rewrites links to point to archived resources
  - allows for temporal navigation within archive
- used by many web archiving institutions
  - 33 out of 62 initiatives listed on Wikipedia

#### Government of Canada Web Archive



#### Government of Canada Web Archive



#### Portuguese Web Archive



## Web Archive Singapore



## Web Archive Singapore

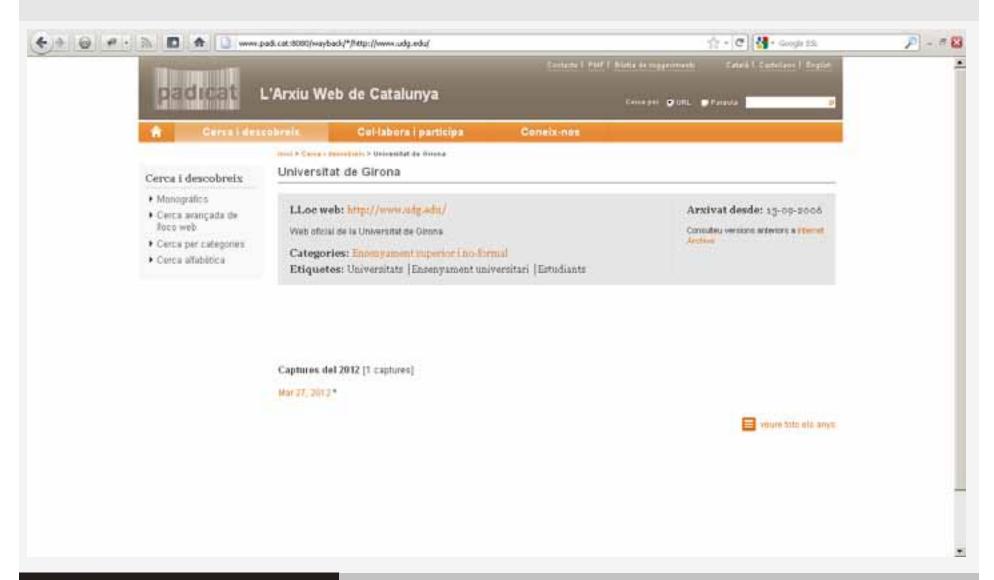


Home I Help

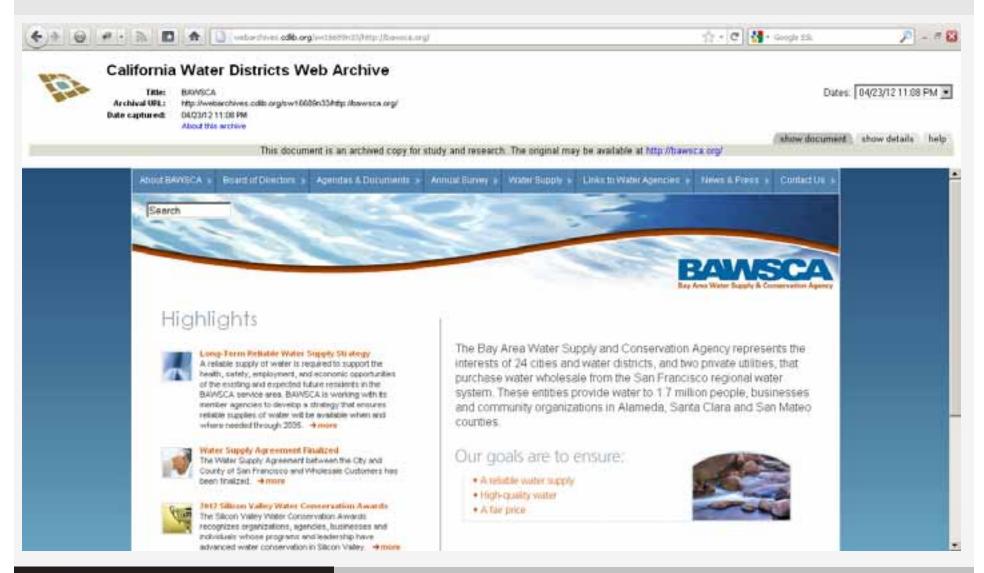
#### Catalonian Web Archive



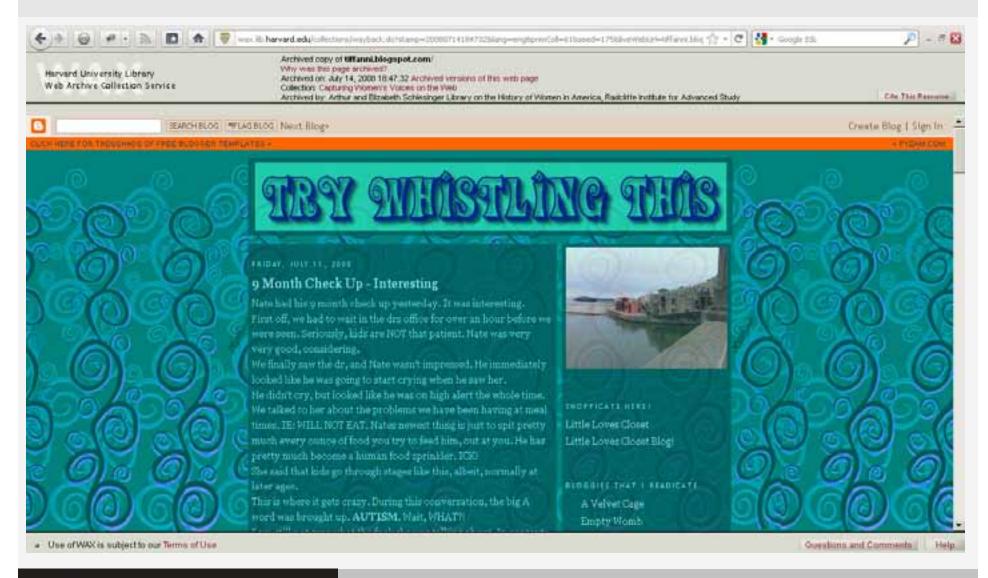
#### Catalonian Web Archive



## California Digital Library Web Archiving Service



## Harvard University Web Archive Collection Service

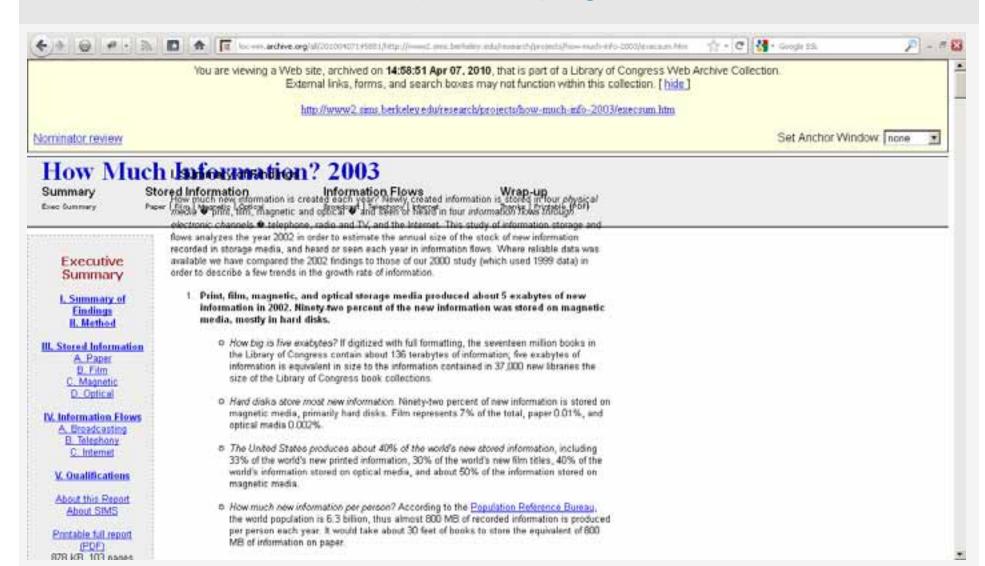


Common

# LIMITATIONS AND WORKAROUNDS



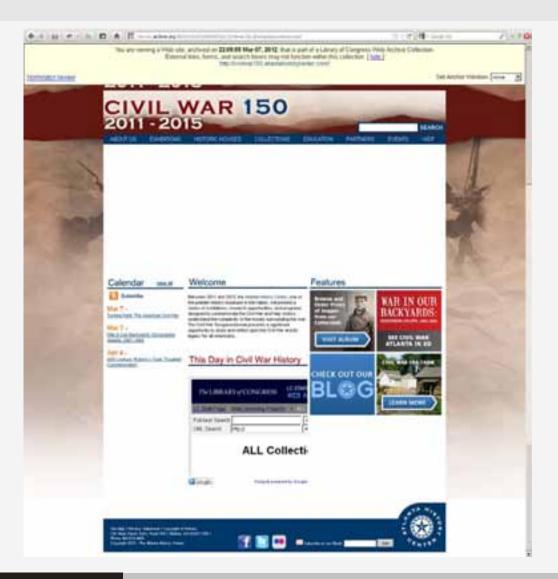
## limitation: banner displaces page elements



#### workaround: hide the banner



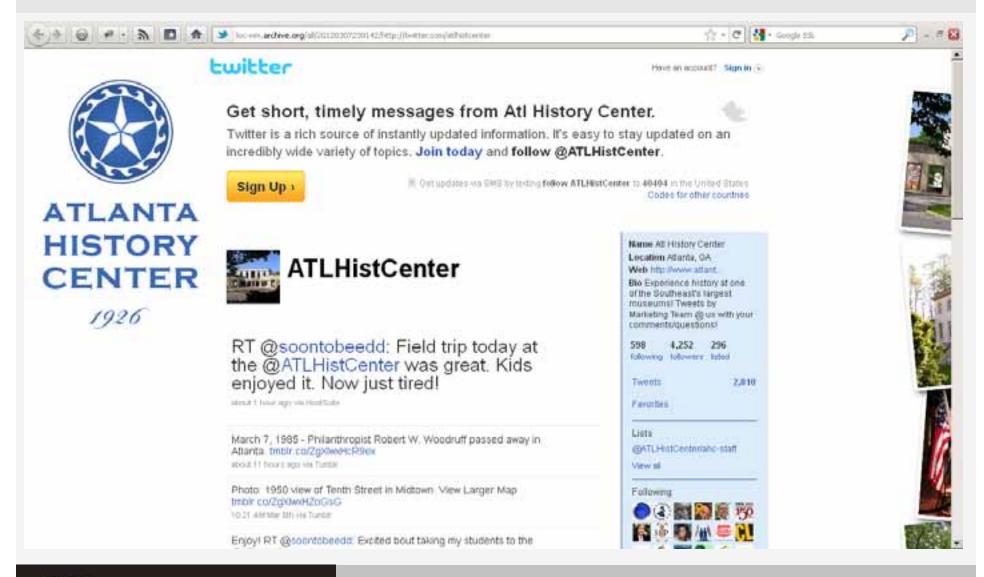
#### limitation: AJAX-enabled sites



#### limitation: AJAX-enabled sites



## workaround: disable JavaScript



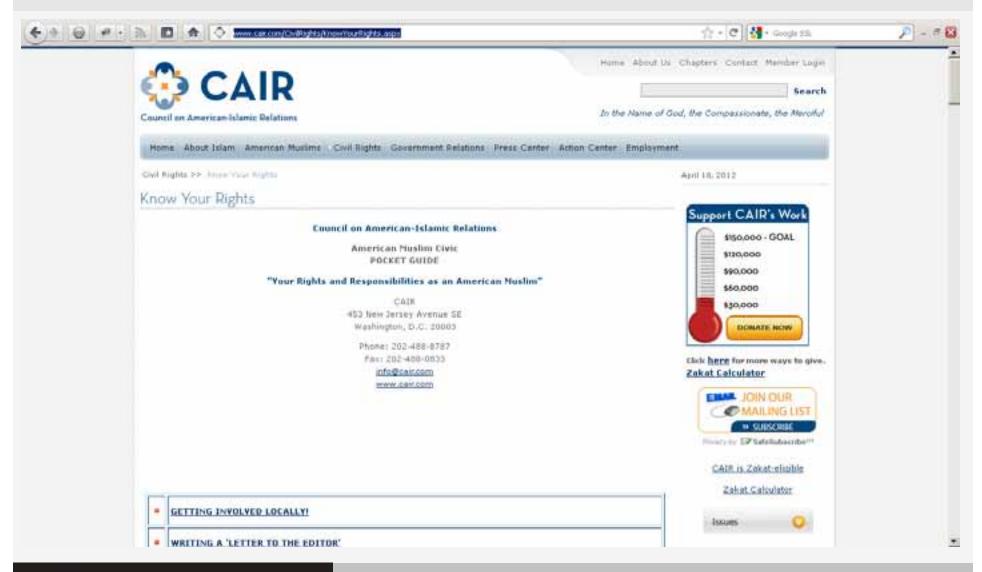
#### limitation: nav menu link errors



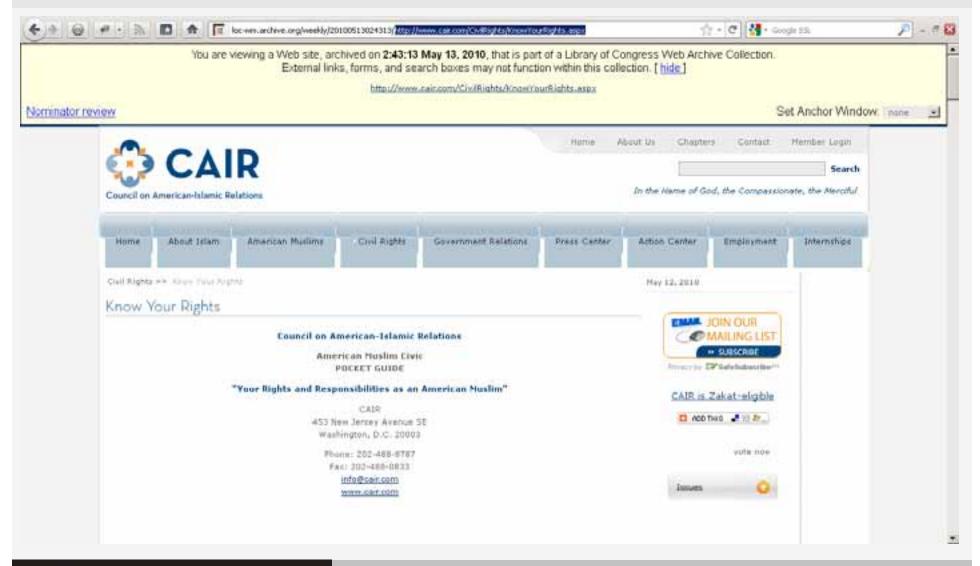
#### workaround: insert live site URL in archive



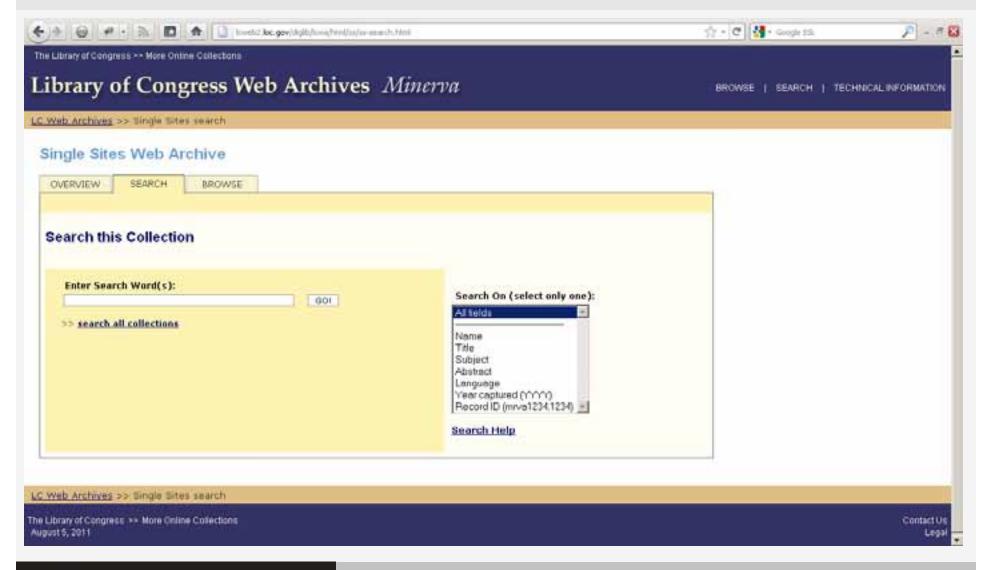
#### workaround: insert live site URL in archive



#### workaround: insert live site URL in archive



#### limitation: no full-text search



## workaround: none yet, but R&D ongoing



Basic

# **MECHANICS**

## structure of a Wayback Machine URL

http://webarchiveqr.loc.gov/loc\_sites/20120131201510/http://www.loc.gov/index.html

Wayback Machine URL collection date/timestamp URL of archived (YYYYMMDDHHMMSS) resource

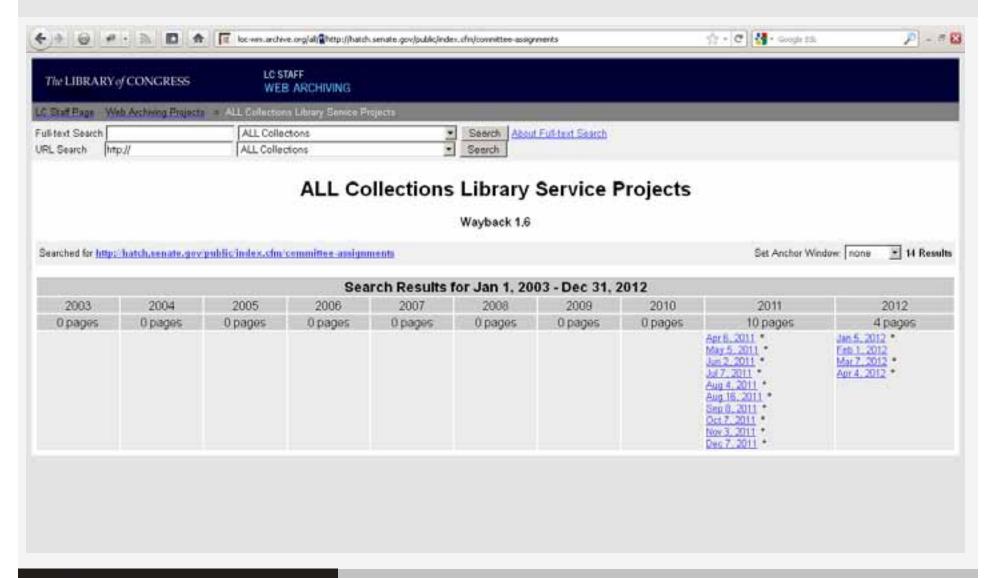
#### **URL-based access**



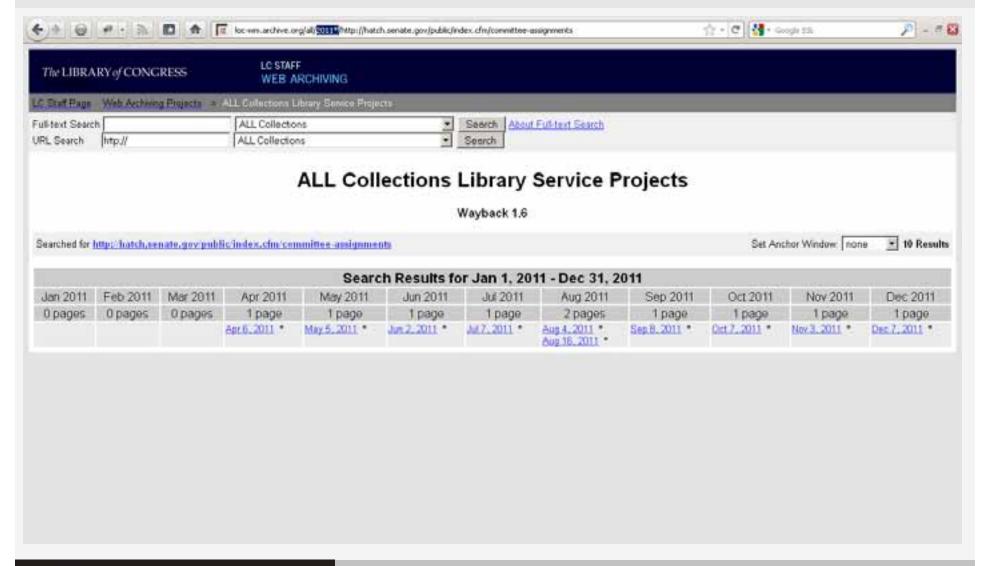
#### **URL-based access**



## date wildcarding



## date wildcarding

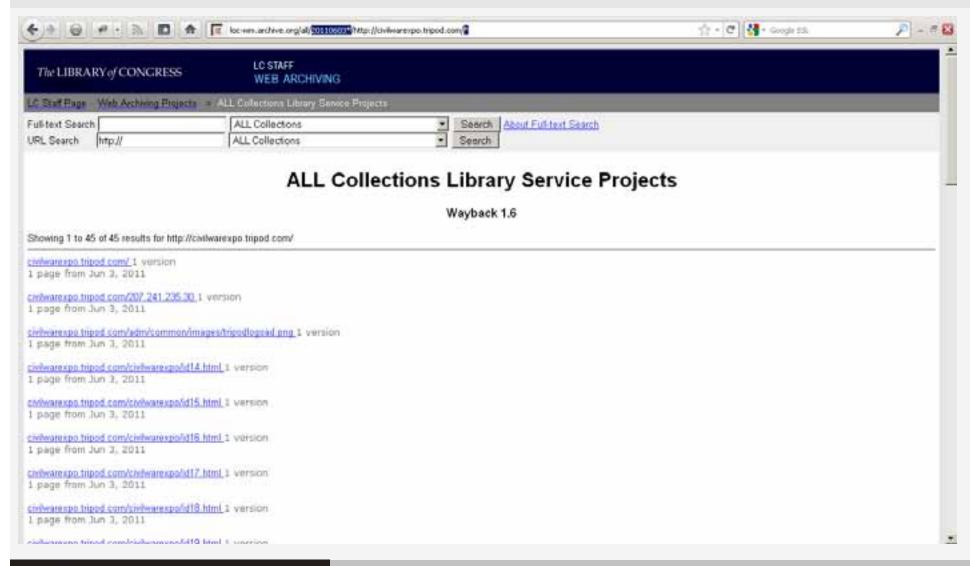


#### document wildcarding

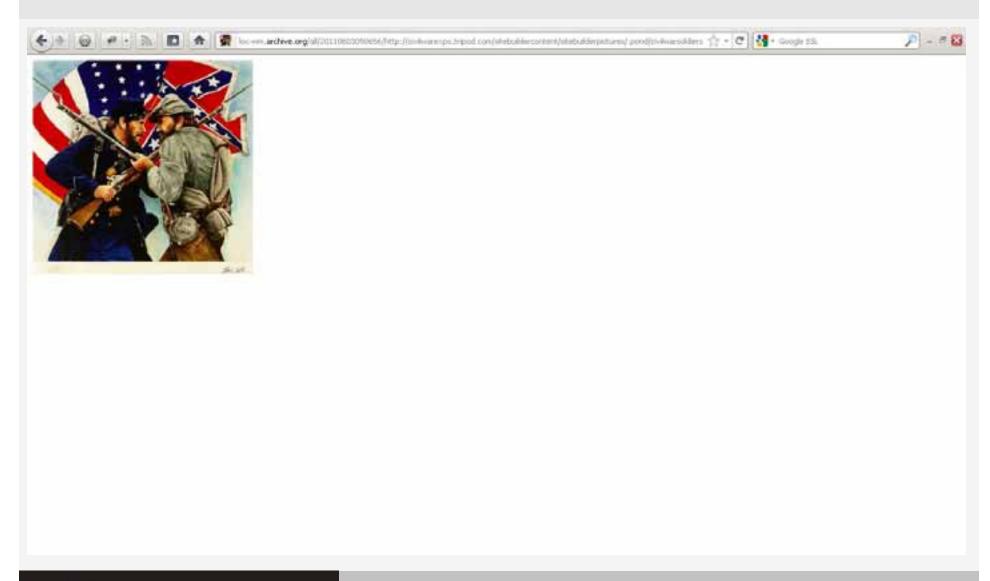




## document wildcarding



## document wildcarding



Strategies for

# FINDING MISSING RESOURCES



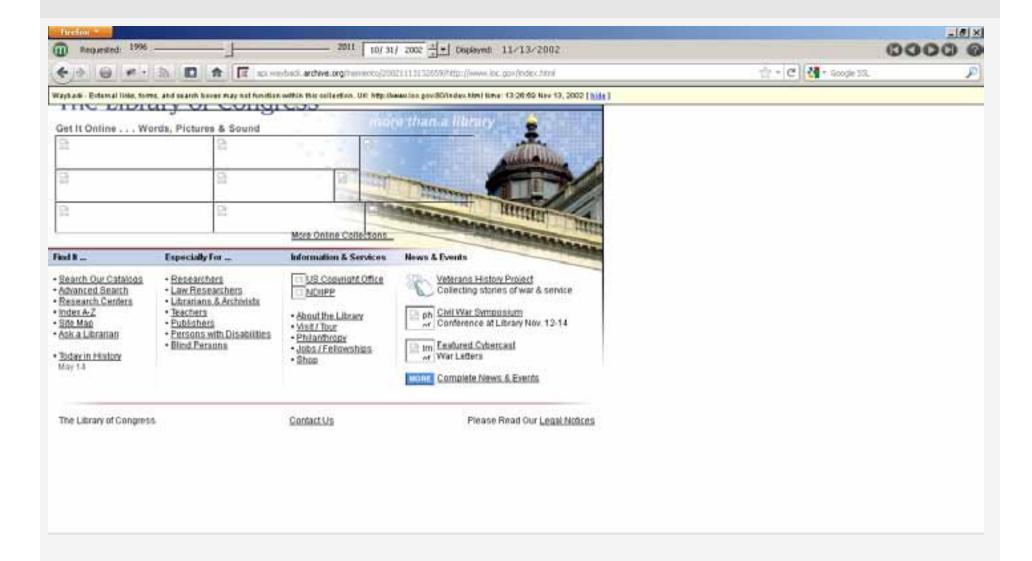
## removed or moved?

- don't start with the archive
- missing resources have often just moved (<u>Klein</u>
  <u>& Nelson, 2010</u>)
- Synchronicity for Firefox helps find new location
  - scrapes archived version for "fingerprint"
    keywords; uses them to query search engines

### **MementoFox**



## **MementoFox**



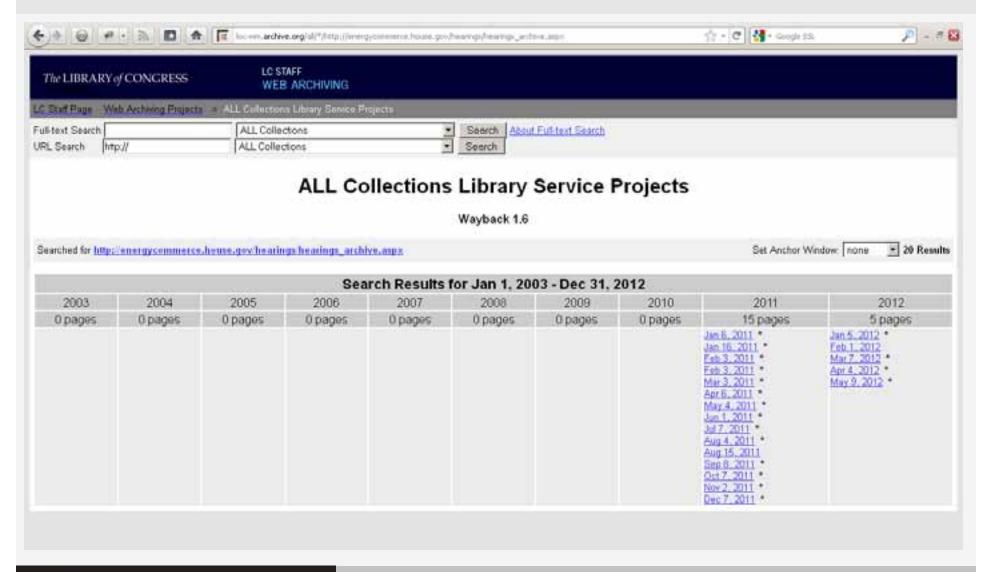
## find archived content now at a new URL

- congressional committee hearings archive
- live site URL doesn't work in archive
- find a site in the archive that would link to the desired site, then navigate to contemporaneous snapshot

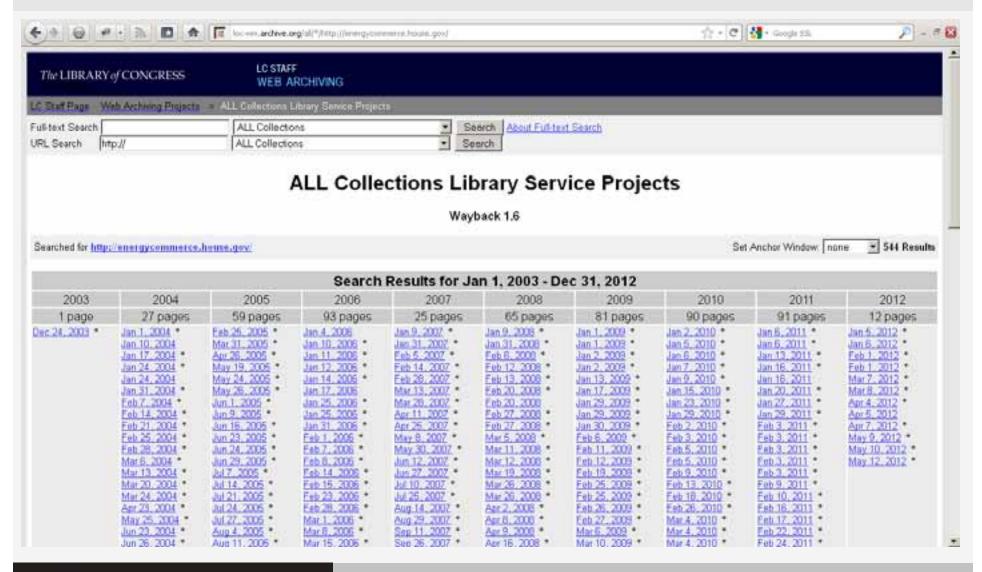
# hearings archive only spans 2001-2006



# hearings archive URL changed in 2011



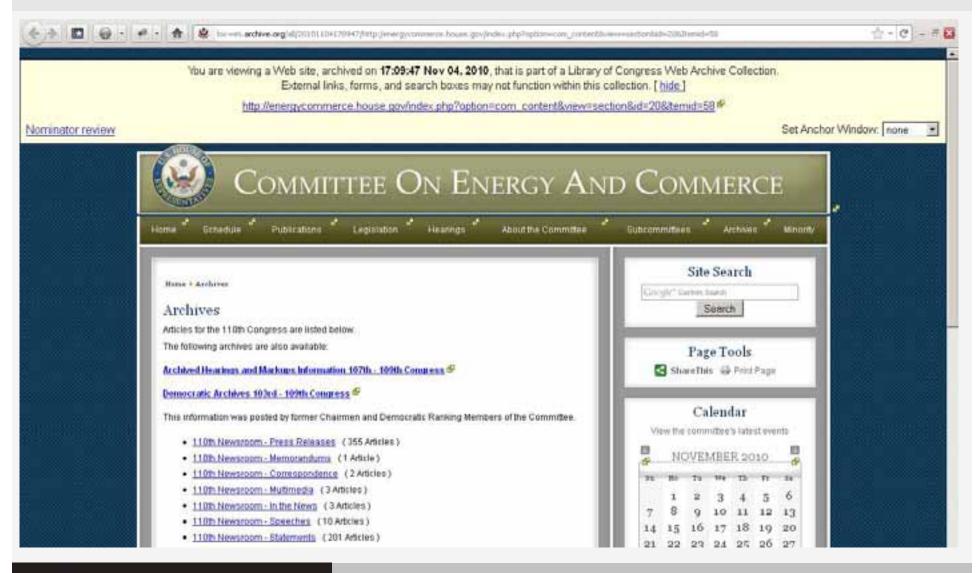
## truncate archival access URL



# snapshot from prior to site change



# navigate to appropriate section



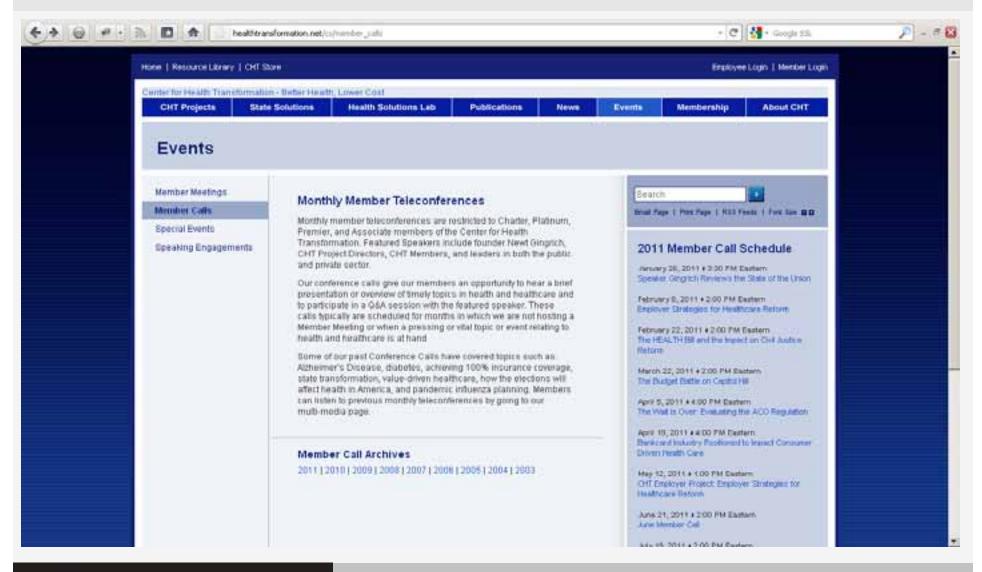
# navigate to appropriate section



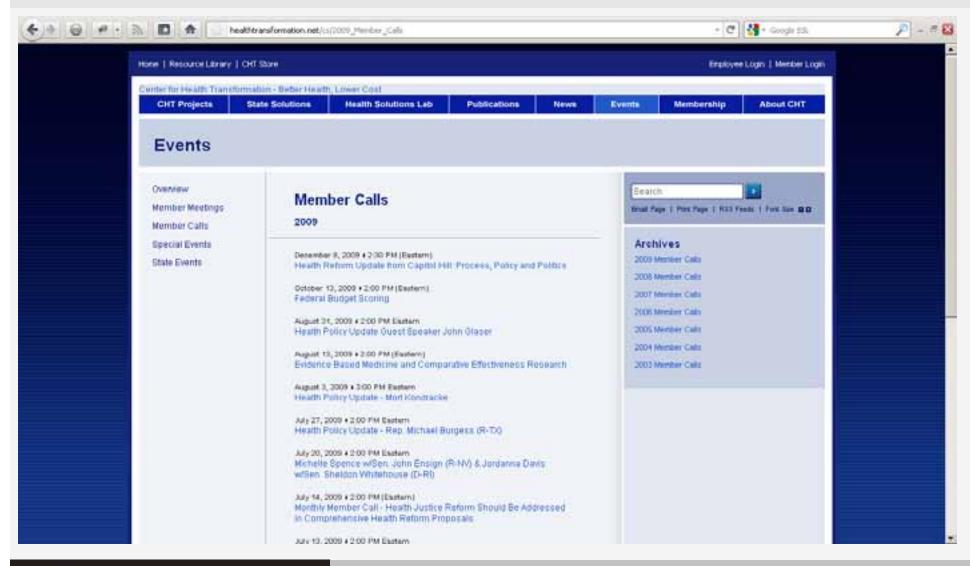
## find archived content now at a new URL

- records currently stored in password-protected part of site may have previously been publiclyaccessible
- conceptual site organization lasts longer than exact link construction
- figure out where desired resource would be on the live site, then navigate to analogous section on archived site

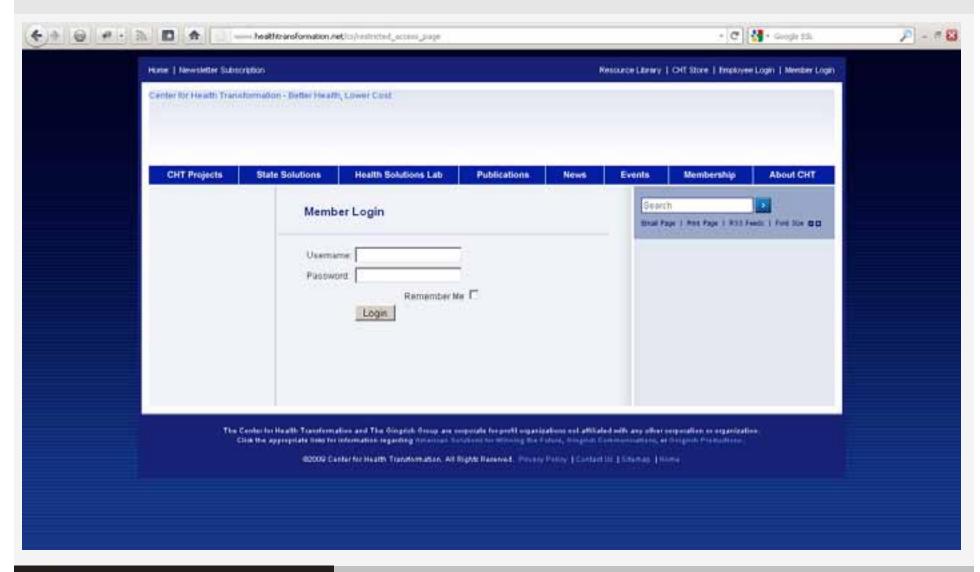
## location of resources on live site



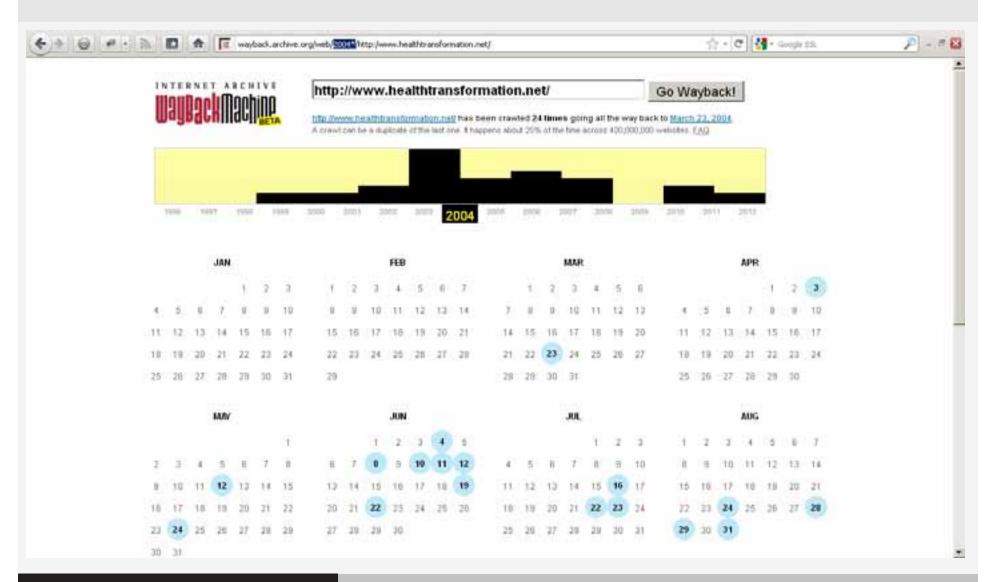
## location of resources on live site



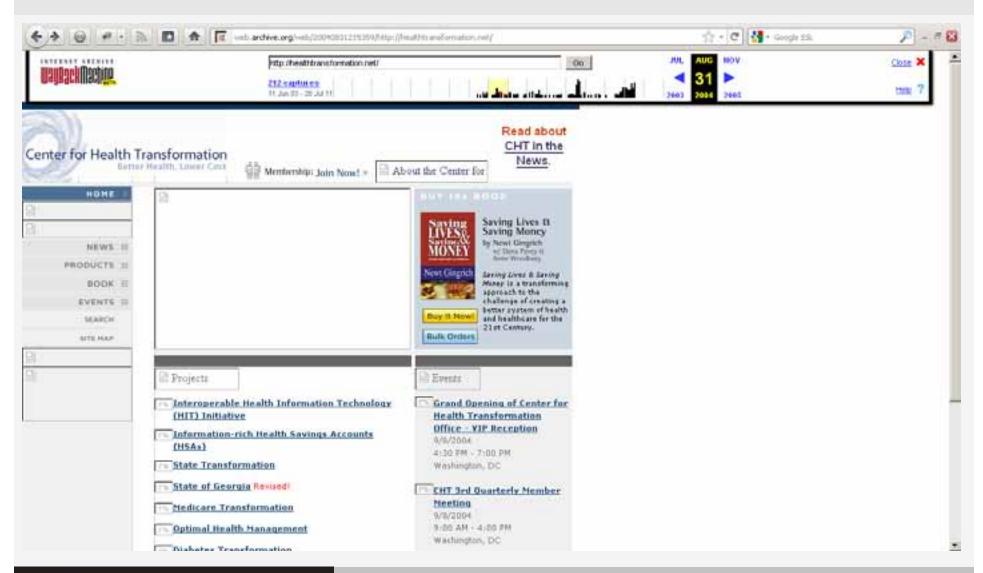
# authentication required



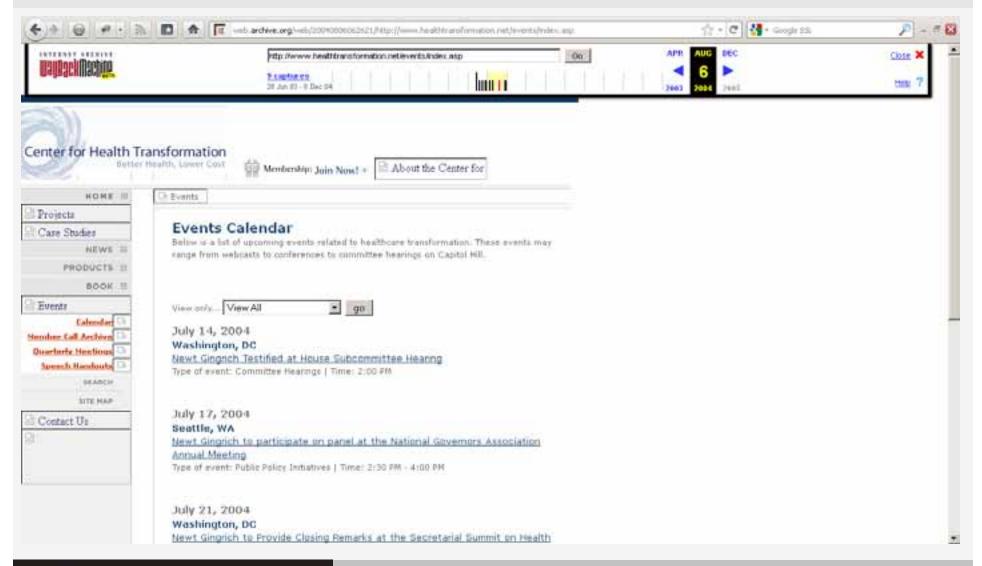
## check the site in the archive



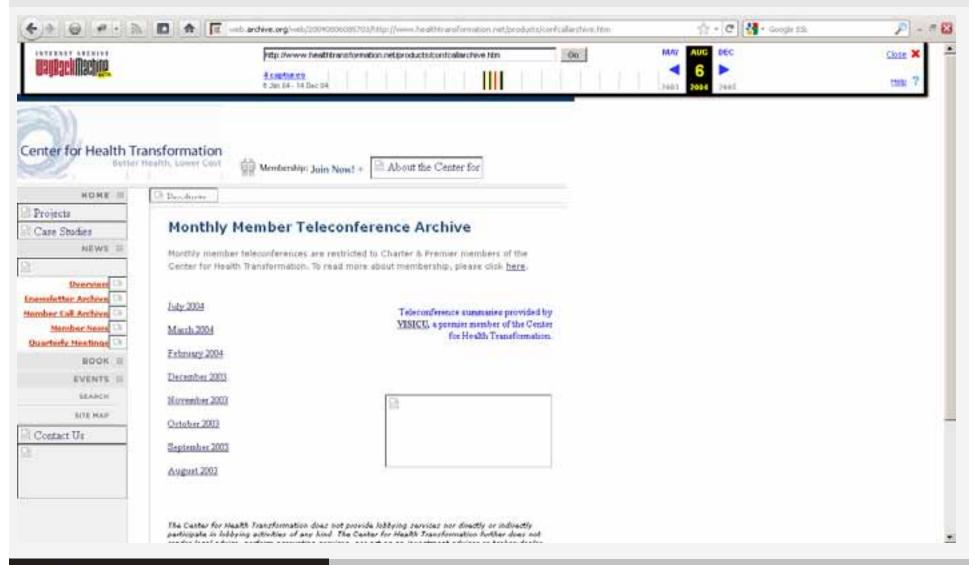
## navigate to an individual capture



# navigate to appropriate section



## navigate to appropriate section



How You Can

**GET INVOLVED** 



# help us to help you

- what websites from today would you want to be able to consult in five, ten, twenty years' time?
- have you told us what is important to capture?

### for more information

- Library of Congress Web Archiving Program: <a href="http://www.loc.gov/webarchiving/">http://www.loc.gov/webarchiving/</a>
- Library of Congress Web Archives: <a href="http://loc.gov/lcwa/">http://loc.gov/lcwa/</a>
- International Internet Preservation Consortium: <u>http://netpreserve.org/</u>
- National Digital Information Infrastructure and Preservation Program:
  - http://www.digitalpreservation.gov/

# questions?

webcapture@loc.gov