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Web Archiving Update

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www.loc.gov/webcapture/

Agenda

- LC Web collections
 - Highlights and observations
- Some current activities of the Library
 - Process and policy issues
 - Tool development
 - Storage and transfer
 - Partnerships and collaborations
- Directions for 2007

LC Collections

- Event
 - Elections 2000, 02, 04, 06, Supreme Court nominations, Papal transition, 9/11...
- Topic/Subject
 - Iraq War, Crisis in Darfur...
- Region/Domain
 - Congressional (.gov) . . .
- Genre
 - Legal blogs, still image content ...

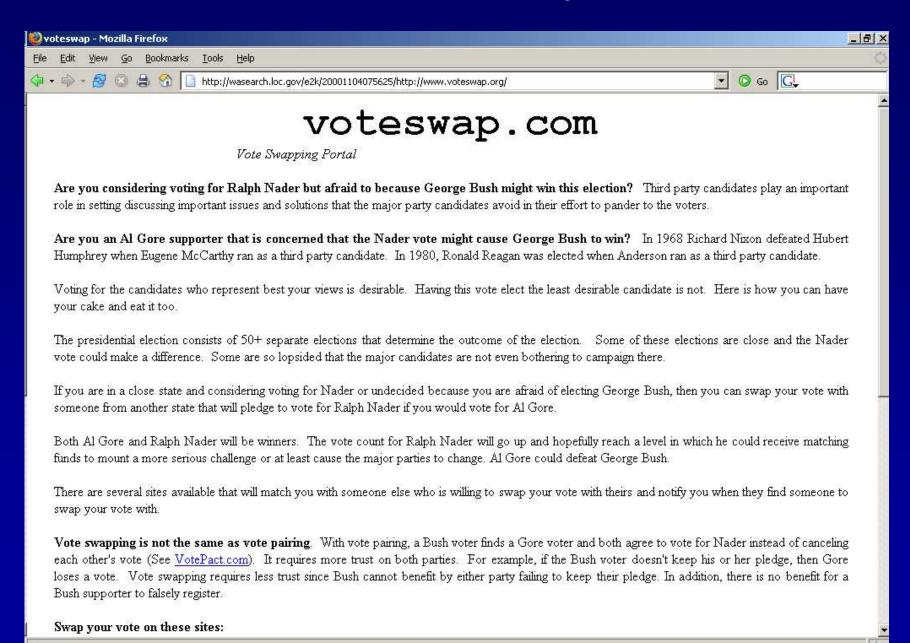
LC Collections - cont.

- Partnership collections
 - GMU/CUNY—September 11 Digital Archive
 - University of Arizona—Terrorism Web sites
 - CDL & Internet Archive--Hurricane Katrina
- Almost 60 TB of data

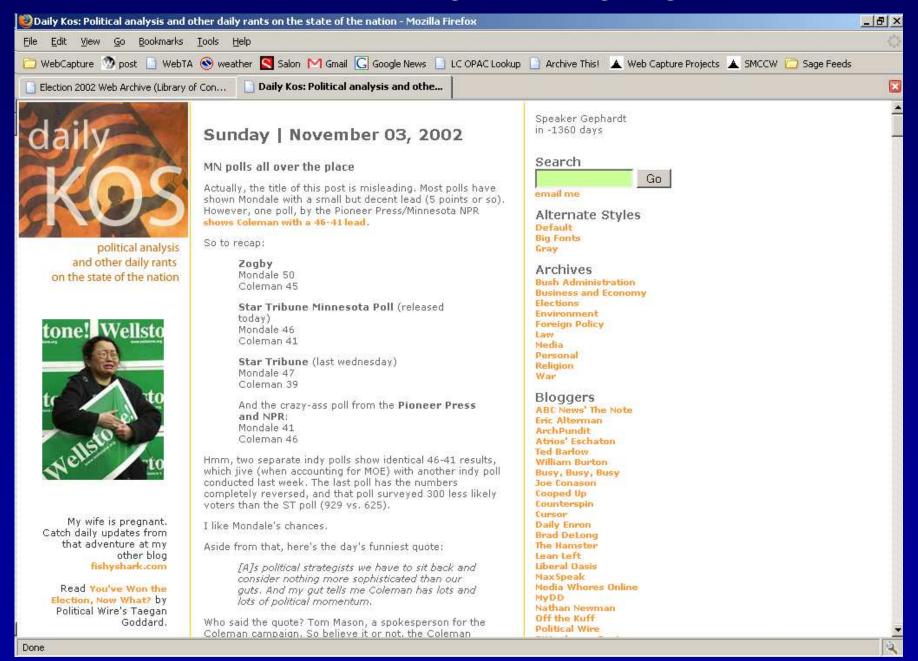
More: www.loc.gov/webcapture/projects.html



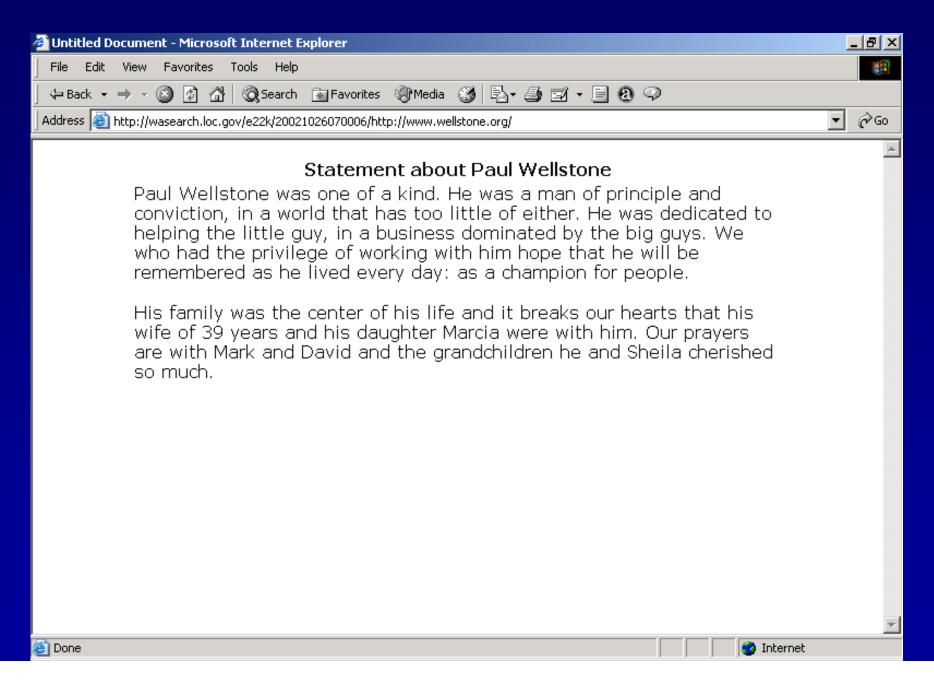
Election 2000: Vote Swap Sites



Election 2002: Blog Collecting Begins



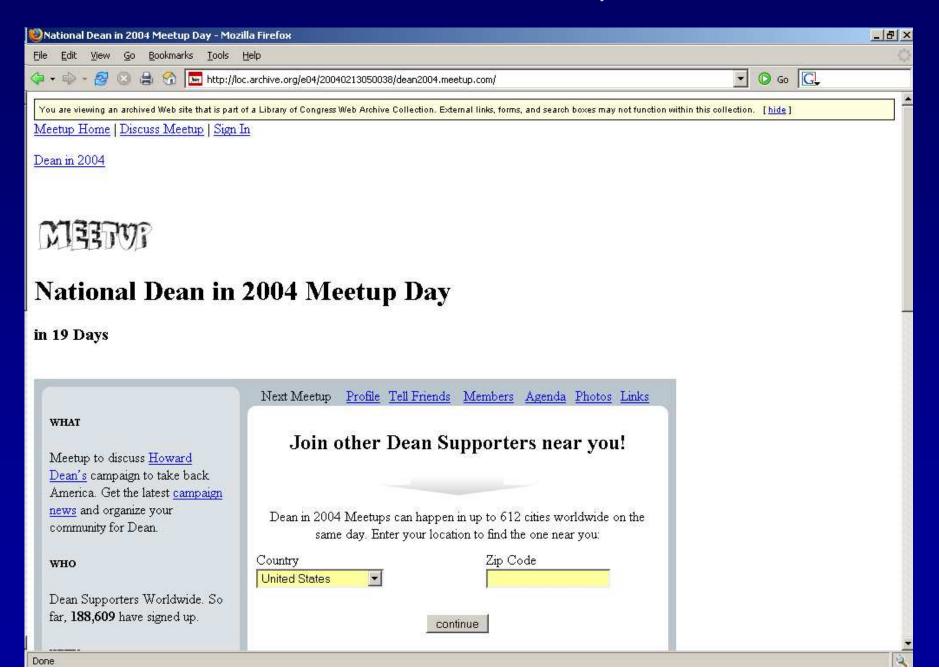
Election 2002: Daily Crawls Captured...



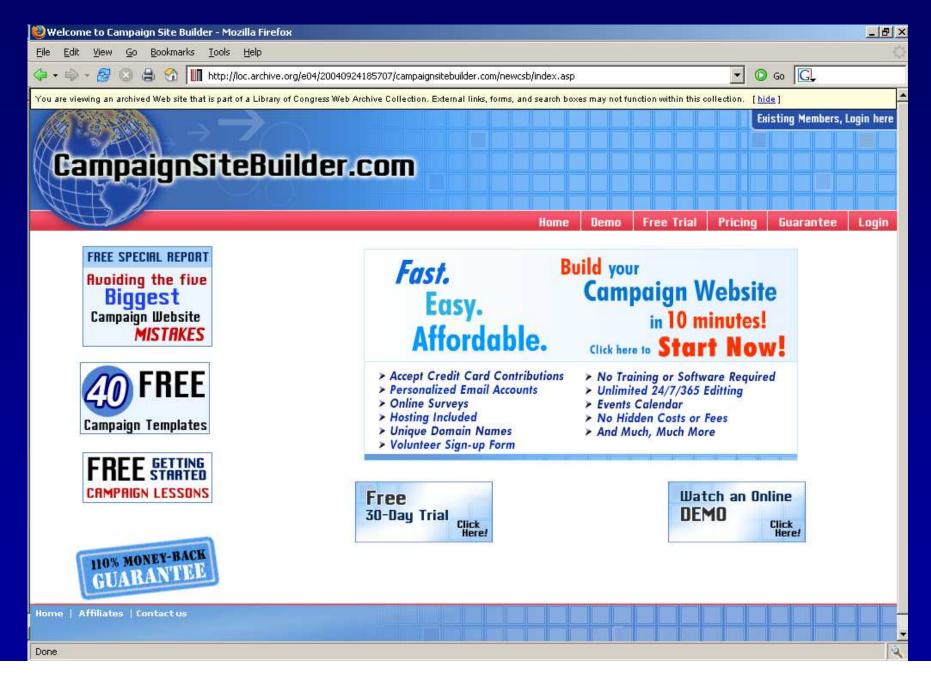
Election 2004: Blogging and Online Donations



Election 2004: Meetups



Election 2004: Campaign Site Companies



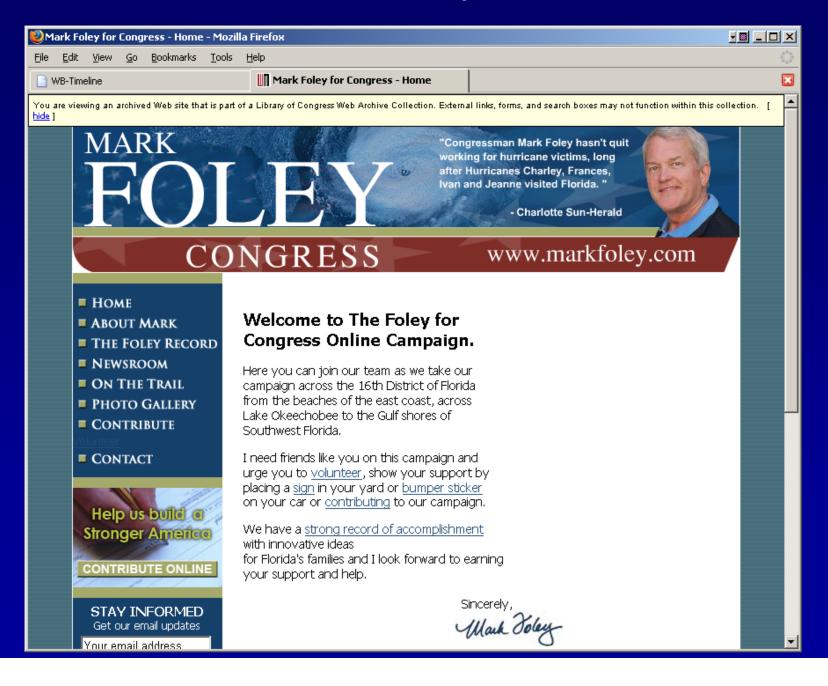
Election 2004: Jib Jab Cartoons



2006 Candidate Site Observations

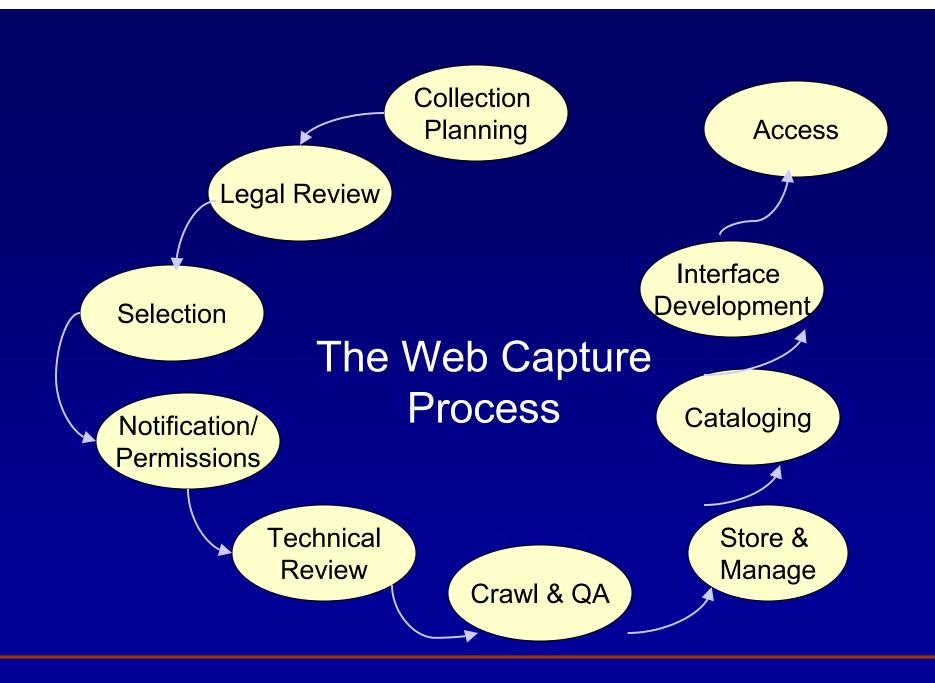
- More complex sites with more bells and whistles, some hosted on external sites:
 - Photos hosted on flickr
 - Stores
 - Myspace pages
 - Video sites
 - Blogs everywhere some as campaign sites
- More targeted companies hosting candidates sites

Election 2006: Mark Foley's Site Will Live . . .



Election 2006: The Wave of the Future...





Project with Library Services Staff

- Define roles and responsibilities for life cycle management of archived web content
- Work on clear and consistent intellectual property protocols for crawling
- Explore how technical aspects of Web sites affect selection criteria
- What content should we now be collecting?
 How long should we collect it?

Project with Library Services Staff, cont.

- Document staff resource requirements, time and workflow
- Expand staff participation
- Train larger group of LS staff
- Learn by doing
- Inform and educate other Library staff

Tool Challenges

- Tools to select, acquire and display are not available off-the-shelf
 - Small community of users
- Tools will always be playing catch-up to current Web standards, file formats
 - Continuum for what can be captured
- Tool suite: selection, permissions, crawling, quality review, storage and preservation, access and display

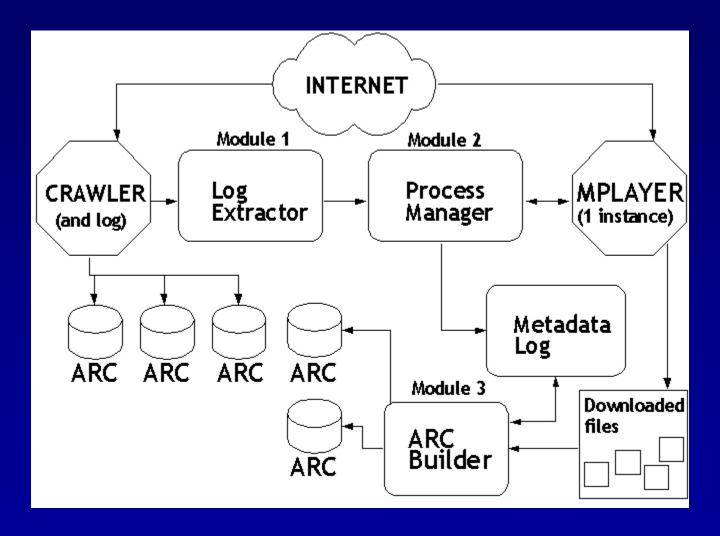
Selection and Permissions: Web Collection Management System

- Module 1 will support:
 - Web site selection and nomination for multiple collections
 - Site review and limited metadata collection
 - Permissions gathering process
 - Technical review prior to crawling
 - Setting crawl parameters
 - Creating crawl specification and submitting a "work order" to crawler.

Capturing Streaming Media

- Plug-in for the post crawl process
- Phase 1
 - Review Heritrix's activity and errors logs
 - Extract URLs we assume will lead to video files
- Phase 2
 - Download the video files and bundle them into ARCs
 - Add metadata gleaned from Heritrix and open source application MPlayer
- Phase 3
 - Store the ARCs in relation to the other ARCs in the collection

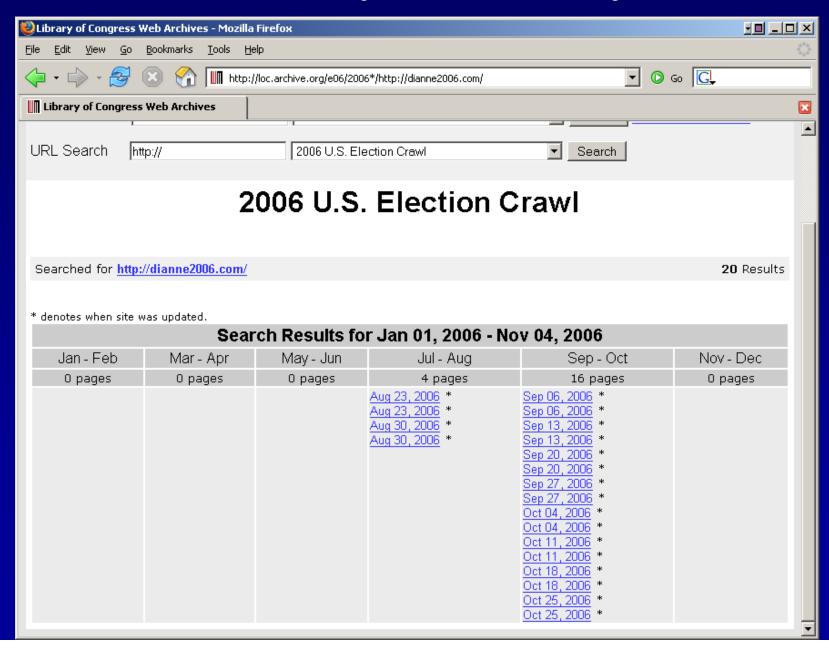
Capturing Streaming Media, cont.



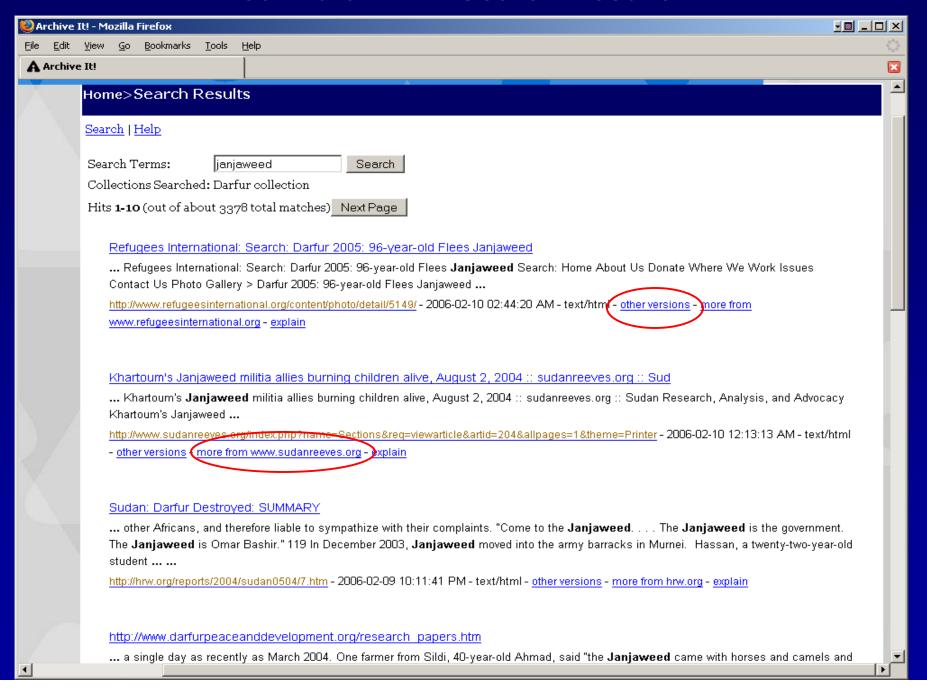
Access and Display

- Access tools necessary so crawled content is viewable
 - Multi-dimensional nature of archived web sites
 - Fixing links in content to point back into the archive rather than out to the live Internet
- Current tools do the basics, but more work needed
 - LC public collections use IA/Alexa Wayback Machine, under restricted license, with no search features
 - IIPC working on NutchWAX: integrates Nutch/Lucene search tools with Web Archive EXtension
 - IA rewriting Wayback Machine as open-source

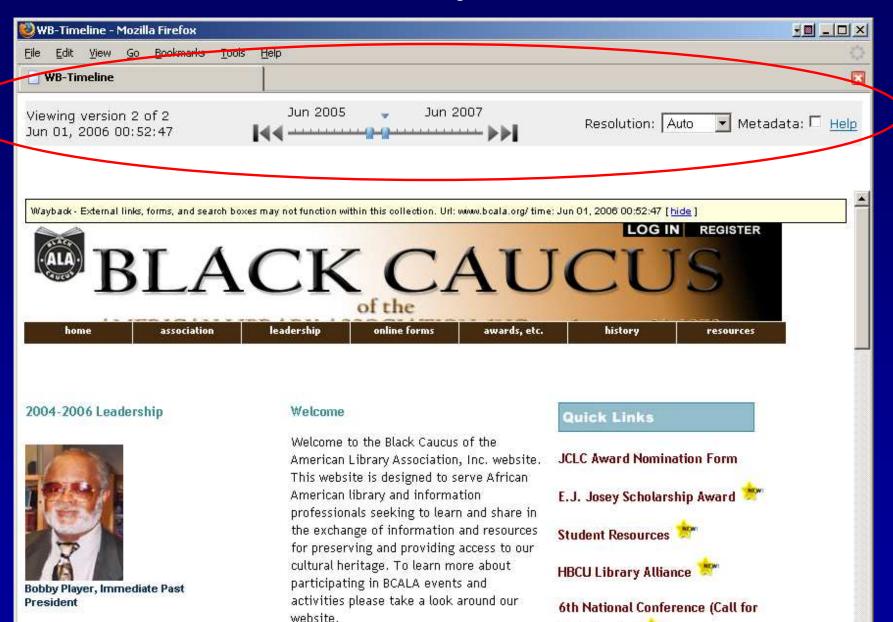
"Classic" Wayback View by URL



Test NutchWAX Search Results



New Wayback



Participation) 🎏

Election 2006 Archive Display



Storage and Transfer

- San Diego Supercomputer Center (SDSC)
 - One-year project to test a trusted third party to store large quantities of data
 - 6 TB of data transferred by shipment and over Internet 2 to SDSC
 - Testing remote management, including the ability of LC users to upload, download, delete, modify, and generate data reports
- At the Library
 - Transferring data into archival storage
 - How often are checksums, reports and inventory needed?
- Practice and policies will emerge from efforts

Partnerships and Collaborations - NDIIPP

- University of California Digital Library
 - The Web at Risk: A Distributed Approach to Preserving our Nation's Political Cultural Heritage
 - Collecting CA government information
 - Tool suite
 - Partnership building
- University of Illinois at Urbana-Champaign, OCLC
 - The ECHO DEPository how digital resources will be identified, archived and preserved
 - AZ State Library selection rationale using an archival approach
 - OCLC tool suite
 - Repository evaluation

Partnerships and Collaborations, cont.

- Internet Archive: 20th Century Archive Project
 - Further development of NutchWAX suite for indexing and searching large-scale Web collections
- San Diego Supercomputer Center
 - Testing remote management of Library's data
- Information sharing with other US government agencies
 - Government Printing Office
 - National Archives and Records Administration

International Internet Preservation Consortium (IIPC)

- Collect and preserve a rich body of Internet content from around the world
- To foster the development and use of common tools, techniques and standards
- Share experiences and best practices with libraries everywhere
- 12 members during the charter period July 2003 - July 2006

IIPC Charter Members

- National Library of France, Lead
- National Library of Italy, Florence
- Royal Library, Denmark
- Helsinki University Library, National Library of Finland
- University and National Library of Iceland
- Internet Archive, USA
- Library and Archives Canada
- National Library of Norway
- National Library of Sweden
- National Library of Australia
- British Library, UK
- Library of Congress, USA

IIPC Future

- Next consortium phase 2007-2009
- Continue sharing information and facilitating tool development
- Open to any library, archive or heritage/research organization with experience in or commitment to Web archiving

More information in early 2007: netpreserve.org

Directions for 2007

Collecting

- Should there be a core set of regularly collected events and/or sites?
- How do we build infrastructure and what are the triggers to support "spontaneous" events, such as terrorist attacks, natural disasters, etc.
- Monitor Section 108 Study Group developments

Directions for 2007, cont.

- Improving selection tool
- Full-text indexing of collections
- Survey of access needs
- Large-scale collection storage

More: www.loc.gov/webcapture