HAIpoints
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Taking Timelines Beyond Two Dimensions

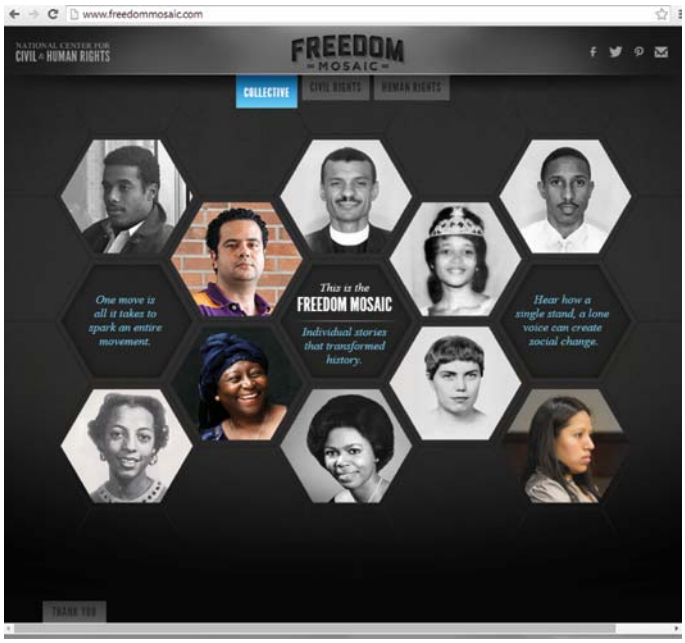
By Carly Swaim

Museum exhibits have long used timelines to communicate events and trends. Sprawling across museum walls, these time-tested graphics pack in details and provide context to a general audience.

However, history is not two-dimensional. As demand for online history increases, new and innovative virtual exhibits have become available. These more engaging experiences take advantage of Web technologies and ultimately appeal to a wider audience. Like history, timelines are now multidimensional.

Content can be layered with tiers of facts and themes. Drop-down or expanding content allows users to choose their own level of immersion for a less static experience. Digital platforms can seamlessly weave in images, audio recordings, videos, and interactive maps. The result is a more engaging, more educational, and ultimately more memorable display.

This more interactive presentation has become increasingly expected for an online presence. It can engage visitors for a longer period of time, provide a gateway to additional information on a website, and inspire repeat visitors. Various open source and proprietary timeline generators can facilitate a display tailored to an organization, museum, or subject. Yet no matter how interactive or customized a site may be, an invariable truth is that the actual content of the timeline must be appealing, accessible, and accurate.



Innovative example of an interactive timeline done for the National Center for Civil and Human Rights (http://www.freedommosaic.com/)

There is an art to creating a timeline that draws an audience and provides a coherent story. If you are creating a timeline, here are some thoughts to consider:

Choose milestones to highlight

Think of a timeline as if it were the outline to a story. The milestones you include should help tie together the narrative. If you start with a unifying theme or story line, you may find it easier to determine what events you should emphasize.

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Preventing Data Loss: Steps Toward Long-Term Digital Preservation

By Mark Evans

Will you be able to access your important digital documents twenty years from now?

Data from NASA's Viking missions to Mars in the 1970s was nearly lost to history. It was stored on magnetic tape that began to dry out and crack. Realizing the problem, NASA completed the painstaking task of transferring this data onto CDs in the '90s.

Unfortunately, the software used to view the images was created especially for the mission and is no longer supported; meaning that the carefully restored information on the CDs contained data and imagery that could not be readily accessed. Recovering just 3,000 of more than 56,000 images took two years.

As NASA's extreme example illustrates, digital information is remarkably fragile and is susceptible to software and hardware obsolescence, file corruption, or storage media degradation.

Not everything needs to be—or should be—saved in perpetuity. A formal digital archive should be distinguished from files that are backed up on a server or an external hard drive. In this context, a digital archive contains only the files that specifically require ongoing preservation and access.

"Memory institutions" like archival repositories, libraries, and government agencies have been struggling with digital preservation issues for many years. As a result, a number of standards, tools, and procedures are being developed and archivists at History Associates have been involved in some of these activities.

We recently conducted a pilot program with the Robert C. Byrd Center for Legislative Studies (Byrd CLS) at Shepherd University to develop an organized approach to assessing digital files and make recommendations for preserving and organizing the material. Like many congressional papers repositories, the Byrd CLS received terabytes of digital material along with paper records. Much of this data resided on CDs and on hard drives from office computers and it was not further organized or processed.

In the pilot program, we used a number of available tools to assess a 255 GB sample of electronic records. We determined file

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Preventing Data Loss: Steps Toward Long-Term Digital Preservation

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formats, identified potential duplicates, extracted metadata, and assigned a "fixity" value to each record. A fixity value is calculated from the file's sequence of binary code and can validate the integrity of a file over time. We provided the Byrd CLS with an Archival Information Package (AIP), which contained both the content files and metadata generated throughout the assessment, along with our recommendations for processing the material.

As an indicator of how rapidly technology has changed, the records we assessed were created between 1990 and 2010 and were comprised of 124 unique file formats.

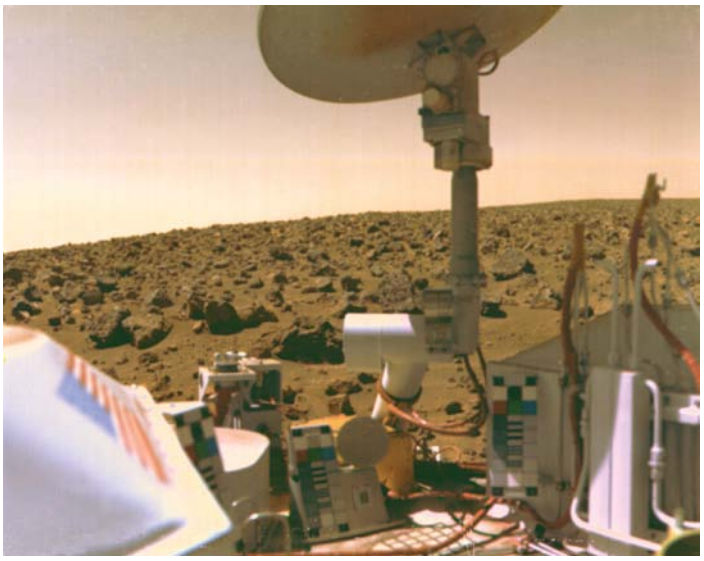

Photo of the surface of Mars looking across the Viking 2 Lander from the 1976 mission. Data from the Viking missions was almost lost due to technology obsolescence. Photo Courtesy NASA.

Also, roughly 14,000 files were in indeterminate formats—we could not identify them by either embedded format signature or file extension (for more detailed information on our Byrd CLS project, please read our blog series).

Recommendations

Not all organizations will need to arrange and preserve entire contents of a computer hard drive, but once the material to be archived has been identified, we recommended some basic preservation activities to the Byrd CLS that can apply to any digital archive.

We based our recommendations on the Levels of Digital Preservation guidelines developed over the past several years by the National Digital Stewardship Alliance (NDSA). These recommendations were designed to help organizations start or enhance their digital archives:

- Archive your files in a reliable storage system such as a server or cloud-based service that does not rely on removable media like CDs or USB flash drives. In the Byrd CLS case, much of the archival material was saved onto portable hard drives, which run the risk of becoming inaccessible over time. Multiple copies, stored in separate geographical locations should also be created, to guard against total data loss as a result of a natural disaster.
- Migrate files in "at-risk" formats into a more stable and open format.

It is beneficial to constrain the number of file formats you'll need to support. Some file types, like WordPerfect and RealAudio, are declining in popularity and may eventually become obsolete. Review the materials you need to archive and develop a policy for preferred file formats for each content type. A number of guiding examples exist, including the Library of Congress Sustainability of Digital Formats and the U.S. National Archives and Records Administration format guidance for the transfer of electronic records. In Senator Byrd's example, we recommended file formats to use in order to reduce the current 124 file formats to a more manageable number.

- Assign a "fixity" value to the files early in the process.

Determining authenticity of an electronic record is difficult, but tools like Exactfile can calculate a "fixity" value—a unique identifier based on the file's sequence of binary code. If the file is changed in any way, the calculated fixity value would change, hence it provides a mechanism for detecting change through either corruption, media degradation/errors, or by malicious means. We provided the Byrd CLS with fixity information for each individual file so that they can use it to periodically review the files to confirm that they have not been altered.

Preserving digital content is an ongoing challenge that is not likely to be solved any time soon. However, these simple steps can help to prevent data loss through inevitable technology changes. Of course if you need assistance to assess or process your digital materials, our digital archivists are on hand to help.

Mark Evans is a pioneer in the emerging field of digital preservation. He assists clients in managing their digital archives. Contact him at (301) 279-9697 or e-mail him at mevans@historyassociates.com.

Check out our Blog

You can read articles from past issues of HAIpoints, plus more insights and historical perspectives from our historians, archivists, and collections managers:

www.historyassociates.com/blog

Staff Highlights: Mark Evans

How does an aeronautical engineer become an expert in digital archives? For Mark Evans, it wasn't a direct route. "I've always been interested in computing and aviation," he said, noting that he learned to program in BASIC at age ten and tried to get into a pilot training program at eighteen. He pursued a degree in aeronautical engineering at Manchester University in his hometown and landed his first job with the civil aviation group at Rolls Royce after graduation. A Ph.D. program at the University of Liverpool challenged him to develop fluid dynamics software, and at his next employer, Tessella, he created software applications for science and engineering clients. Then came the fork in the road. In 2003 Tessella asked Mark to help establish an office in the United States. "I figured I'd work abroad for a year and then come back home and start a family," he laughs. He played a lead role in a groundbreaking project for the National Archives and Records Administration (NARA) to develop an electronic records archives system and he's never looked back. "I'm fascinated by the variety of digital content I come across and the range of technical challenges to preserve it and make it available so that my grandchildren can see the digital content we create today."

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Craft thematic eras

Years or decades might be an obvious unit of measurement, but don't feel constrained to segment your company history into decades. For example, if your company experienced an era of turmoil from 1972 until 1983, it might make sense to highlight this "era of turmoil" on your timeline. Periodizing time into segments is analogous to dividing a book into chapters, and it helps the reader follow your history as a coherent story rather than a series of events.

Create layered content

A major benefit of online content is that you can provide visitors with a great deal of information in a variety of formats. Since this allows readers to determine their own level of immersion, build your timeline in tiers. Make the headlines the most visible, with the option for readers to see more by rolling over or clicking on an entry. Another tip is to make the headlines fit together so they tell the story at a high level. If your company has a complex history with multiple story lines, you can consider overlapping timelines, each with different themes.

History Associates has years of experience condensing complex narratives into brief, engaging presentations. We have also grappled with issues of content and exposition in historical products ranging from Web exhibits to smartphone apps. While the vehicles for presenting information are changing in new and exciting ways, enduring questions and considerations remain about concepts and content, periodization and organization, sourcing and accuracy, and style and presentation. Ideally, virtual timelines must carefully consider content, exposition, and interactivity.

Check out these links to explore and interact with timeline content developed by History Associates:

http://www.freedommosaic.com/

http://www.sechistorical.org/museum/timeline/

Congratulations to our new Certified Archivists!

We're pleased to salute Colleen Benoit, Michael Folkerts, Laura Muskavitch, Nate Scheible, Jessica Scott, and Laura Starr—our staff archivists who recently passed the Certified Archivists exam. Completing the rigorous certification process indicates mastery of the knowledge and experience necessary for modern archival practice.

The Best Clients in History

Reliance Steel & Aluminum Co.
completed a project to research, write, and publish the company's history book.

Computer History Museum
advising and assisting the museum in the development of a corporate archives for Cisco Systems, Inc.

Levi Strauss & Co.
completed an onsite inventory system assessment and delivered a report of findings and inventory database recommendations.

National Center for Civil and Human Rights
completed content development: writing, research, and editing for select exhibits and interactives for the newly opened museum.

Litigation Research
continued to research and analyze documents in federal, state, and local records repositories in California, Connecticut, Maryland, Massachusetts, Michigan, New Jersey, New York, Pennsylvania, Rhode Island, and Washington, D.C.

For more than thirty years, clients have turned to History Associates to tell their stories, preserve and manage their records and artifacts, and answer their historical questions.

Histories
Books, websites, and oral history projects

Exhibits
Multimedia content development, image and artifact research, and scriptwriting

Interpretive Planning
Planning, research, writing, and mapping for any historic site

Historical Research
Research and analysis for litigation, regulatory compliance, and public relations

Digital Archives
Gain control of your digital materials so they remain accessible into the future

Archival Services
Appraisal, organization, description, and management of historical materials

Records Management
Records inventories, surveys, files management, and retention schedules

Collections Management
Assessment, inventory, cataloging, and management of art and artifact collections

History Associates serves clients nationwide and around the world.

Test Your Knowledge of "The Star Spangled Banner"

This year marks the 200th anniversary of the creation of our national anthem, written by Francis Scott Key in 1814. Despite the challenging vocal range required and the antiquated lyrics, we sing the first verse before just about every U.S. sporting event. So how well do you know "The Star Spangled Banner"?

A.

B.

C.

1. Which flag represents the design that flew over Fort McHenry, inspiring Francis Scott Key?
   A. B. C.
2. When was "The Star Spangled Banner" legally designated as our national anthem?
   A. 1841 B. 1876 C. 1931
3. Which line is not in the song lyrics?
   A. "O say does that star-spangled banner yet wave"
   B. "'Tis the star-spangled banner - O long may it wave"
   C. "And the star-spangled banner o'er ferment doth wave"

E-mail your answers along with your contact information to Anne Strong at astrong@historyassociates.com by December 12, 2014. Correct responses will be entered into a drawing for a $50 Amazon gift card!
For answers to previous quizzes, visit our website at http://www.historyassociates.com/news/test-your-knowledge-quiz/

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