

Designing the User Experience:

A Digital Object Design Story
from the California Digital
Library

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California Digital Library

Society of American Archivists Annual Meeting 2013



User Experience (UX)
team drives the user-
centered assessment and
design process across all
services at CDL.

Market research

- Determining your audience demographic
- Looking at larger scale quantitative patterns

Contextual research

- Understand at a fundamental level what your users are doing
- And why they do what they do

Generative research and design methods

- Get your users to participate in generating and designing service requirements

Calisphere

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 **calisphere** a world of primary sources and more



[view all featured images](#)

Collections for Educators

Themed Collections

Quickly find compelling primary sources that support California Content Standards.

1780-1880: California in Transition

1848-1865: Gold Rush Era

1870-1900: Closing of the Frontier

1900-1940s: Emerging Industrial Order

1929-1939: The Great Depression

1939-1945: World War II

1950s-1970s: Social Reform

Especially for teachers

California Cultures

Discover the faces and history of California's diverse population.



Japanese American Relocation Digital Archives

Explore Japanese American incarceration from the inside.



Local History Mapped

Take a virtual tour of your hometown and California's changing landscapes.



New! Browse by institution

Explore primary sources contributed by 120 libraries, archives, and museums.

Browse A-Z

1-9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1-9 **1906 earthquake**
442nd Regimental Combat Team

A Abernathy, Ralph
Advertising
Aerospace industry
Agricultural equipment
Agricultural laborers
Assembly line
Automobile industry


B Bear Flag Republic
Bidwell, John
Black Panthers
Bracero Program
Bridges
Bridges, Harry

C Central Pacific Railroad
Chavez, Cesar
Chicano Moratorium

Calisphere: Digital Object View

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Title:
Women employees performing various jobs
Contributing Institution:
UC Berkeley, Bancroft Library
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Title:
Women employees performing various jobs

Identifier:
11

Identifier:
PIC

Collection:
[Selections From the Henry J. Kaiser Pictorial Collection, 1983.018, Richmond Shipyard--Workers--Women](#) Women employees performing various jobs






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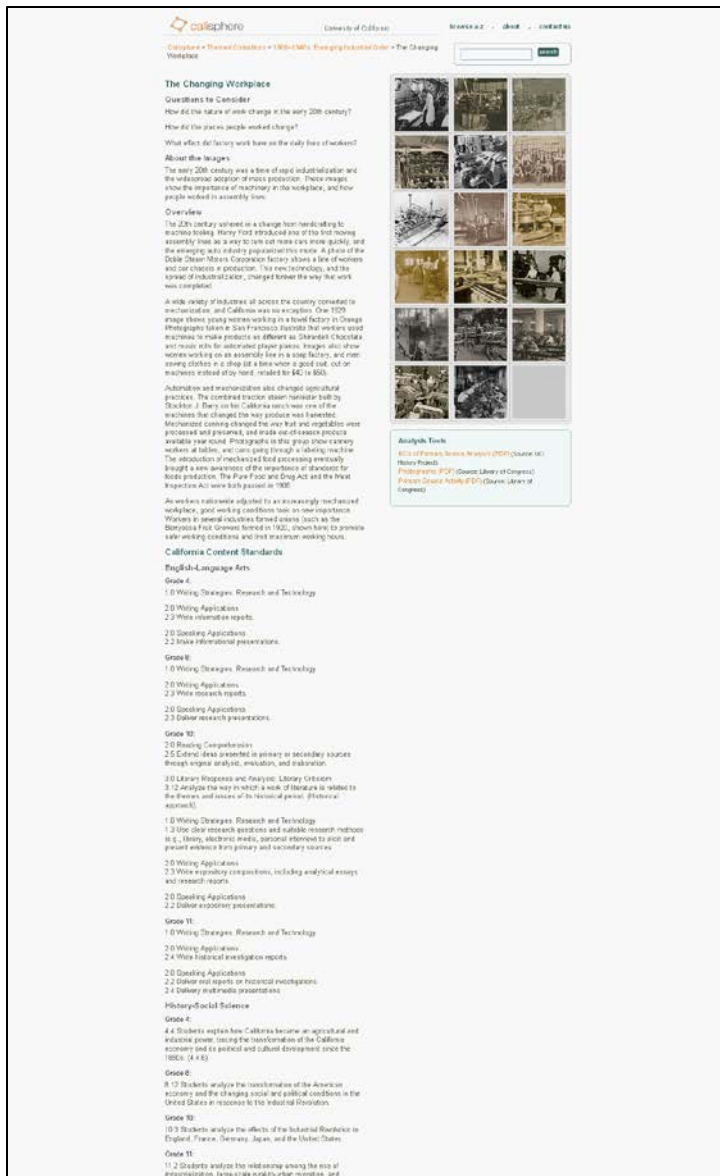
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Calisphere: Themed Collection



The screenshot shows the Calisphere website interface. At the top, there is a navigation bar with the Calisphere logo and the University of California name. Below the navigation bar, there are several tabs: 'Home', 'Themed Collections', '19th-20th Century', 'Research and Learning', and 'The Changing Workplace'. The 'The Changing Workplace' tab is selected. The main content area is divided into two columns. The left column contains text, and the right column contains a grid of images. The text on the left is titled 'The Changing Workplace' and includes sections for 'Questions to Consider', 'About the Images', 'Overview', and 'California Content Standards'. The 'California Content Standards' section lists standards for English-Language Arts (Grades 4, 8, 10, 12) and History/Social Science (Grades 4, 8, 10, 12). The grid of images on the right shows various scenes of industrial work, including factory floors, workers, and machinery. Below the grid, there is a 'Analysis Tools' section with links to 'ERIC of Periodicals, Books, and Videos (PDF) (Open Set)', 'History Project', 'Photogram (PDF) (Open Library of Congress)', and 'Project Chronic Activity (PDF) (Open Library of Congress)'.

The Changing Workplace

Questions to Consider
How did the nature of work change in the early 20th century?
How did the place people worked change?
What effect did factory work have on the daily lives of workers?

About the Images
The early 20th century was a time of rapid industrialization and the widespread adoption of mass production. These images show the importance of machinery in the workplace, and how people worked in assembly lines.

Overview
The 20th century witnessed a change from hand-crafting to machine-making. Henry Ford introduced one of the first moving assembly lines as a way to turn out more cars more quickly, and the emerging auto industry popularized the idea. A piece of the Dodge Clear Motor Corporation factory shows a line of workers and car chassis in production. This new technology, and the concept of industrial labor, changed forever the way the work was completed.

A wide variety of industries all across the country contributed to mechanization, and California was no exception. One 1920s image shows young women working in a food factory in Chicago. Photograph taken in San Francisco illustrates that workers used machines to make products as efficient as Shredded Chicken, not meat, while automobile plant workers began also show workers working on an assembly line in a new factory, and one woman stands in a shop lot a brief while a good cut out on machines rolled out the road, ready to be in 1920.

Automated and mechanized also changed agricultural practices. The combined tractor steam harrow built by Stearns J. Berry on the California ranch was one of the machines that changed the way produce was planted. Mechanized corn planting for use both and vegetables were processed and prepared, and made use of machine process available now used. Photographs in this group show young workers at tables, and some going through a labeling machine. The adoption of mechanized food processing eventually brought a new awareness of the importance of standards of food production. The Pure Food and Drug Act and the first inspection Act were both passed in 1906.

As workers naturally adjusted to an increasingly mechanized workplace, good working conditions took on new importance. Women in several industries formed unions such as the International Fur Workers Union in 1921, shown here to promote safe working conditions and limit maximum working hours.

California Content Standards

English-Language Arts

Grade 4
1.0 Writing Objectives: Research and Technology
2.0 Writing Applications
2.3 Write research reports.

Grade 8
1.0 Writing Objectives: Research and Technology
2.0 Writing Applications
2.3 Write research reports.

Grade 10
1.0 Writing Objectives: Research and Technology
2.0 Writing Applications
2.3 Write research reports.

Grade 12
1.0 Reading: Comprehension
2.5 Extend ideas presented in primary or secondary sources through original analysis, evaluation, and interpretation.
3.0 Literacy: Processes and Analysis: Library Outcomes
3.12 Analyze the way in which a mode of language is related to the themes and issues of its rhetorical context (literary or non-literary).

1.0 Writing Objectives: Research and Technology
1.3 Use clear research questions and suitable research methods (e.g., theory, historical media, archival references to past and present evidence) to primary and secondary sources.
3.0 Writing Applications
2.3 Write synthesis compositions, including analytical essays and research reports.

2.0 Reading Applications
2.2 Deliver expository presentations.

Grade 11
1.0 Writing Objectives: Research and Technology
3.0 Writing Applications
2.4 Write historical investigation reports.

2.0 Reading Applications
2.2 Deliver oral reports or historical investigations
2.4 Deliver multimedia presentations.

History/Social Science

Grade 4
4.4 Students explain how California became an agricultural and mining power, tracing the transformation of the California economy and its political and cultural environment since the 1800s. (4-8)

Grade 8
8.17 Students analyze the transformation of the American economy and the changing social and political conditions in the United States in response to the Industrial Revolution.

Grade 10
10.9 Students analyze the effects of the Industrial Revolution in England, France, Germany, Japan, and the United States.

Grade 11
11.2 Students analyze the relationships among the rise of mechanization, laissez-faire economic theories, and



So many questions...

- What do users perceive as function of Calisphere?
- Who do they think is the intended audience?
- Is the K-12 orientation apparent to them?
- Are themed or curated collections relevant to user base?
- What features do users want/expect at an object level?
- What needs to be most visible?
- What are users' needs for accessing and interacting with digital objects?

And yet more questions...

- How do users prioritize elements once they've been determined?
- What are more current display mechanisms for optimal display of these objects



For complex questions, one method is often not enough, the best methods draw on one from each major methodology category and alternates back and forth in a star pattern so you can get a core of common information.



Requirements and Branding Methods

- Survey (interlinked with an online card sort exercise)
- Interview
- Literature Review

Design Methods

- Comparative Analysis
- Online Card Sort
- Design Exercise

Optimal Workshop: Survey

Before we begin

--> Don't forget to click on "**continue**" at the end of this page for the fun sorting activity!!

What is your occupation?

- K-12 Educator
- K-12 Student
- Undergraduate Student
- Graduate Student
- Faculty, Lecturer, or Academic Researcher
- Librarian, Library Staff, or Archivist
- Genealogist or Family Researcher
- Other

If you answered "other," please specify here.

If applicable, what is your field of study?

Is this your first visit to the Calisphere site?

- Yes
- No

If you have used Calisphere before, how often do you visit the site?

- Once a year
- Several times a year
- Once a month
- Several times a month
- Once a week
- Several times a week
- Once a day
- Several times a day

Optimal Workshop: Card Sort

The screenshot displays the OptimalSort interface, which is used for conducting card sort workshops. The interface is divided into several sections:

- OptimalSort Header:** Located at the top left, featuring a folder icon and the text "OptimalSort".
- Left Sidebar:** A vertical list of 13 cards, each with a different text label. From top to bottom, the labels are: "Link to archival collection (that this image belongs to)", "Date attributed to image", "Name of contributing institution for image", "Link to themed collection (that this image belongs to)", "Print version of image", "Permanent citation link to image", "'More like this' (selection of other images like this image)", "Image genre or format", "Related subject links for image", "Name of image creator", "Add this object to my bookbag (personal Calisphere account)", and "Zoomable version of image".
- Main Workspace:** The central area where cards are placed. It contains several grouped cards:
 - Finding other images:** A group containing "Subject/tag cloud" and "Description of image".
 - Information:** A group containing "Image title" and "Historical notes for image".
 - Image:** A group containing "'Standard' version of image".
 - Share:** A group containing "Share image on Pinterest", "Share image on Facebook", "Share image on Twitter", and "Share image via email".

Virtual interviews and design exercise

- Readytalk phone and web conferencing system
- Google Draw

Google Draw: Design Exercise

The screenshot displays the Google Draw interface with a design exercise layout. At the top, the user is identified as 'Calisphere_design_exercise_user9' with a star icon and a notification. The menu bar includes 'File', 'Edit', 'View', 'Insert', 'Format', 'Arrange', 'Tools', and 'Help'. A status message indicates 'Last edit was made 12 days ago by rachael.hu'. In the top right corner, there are 'Comments' and 'Share' buttons, with the user's name 'Rachael Hu' and a dropdown arrow.

The main workspace is divided into three sections:

- Left Panel:** Contains a large blue box labeled 'Image (standard size)'. Below it is a section titled 'More images like this' with four small blue boxes. Underneath are four social media icons: 'Email icon', 'Twitter icon', 'Facebook icon', and 'Pinterest icon'. At the bottom of this panel are two larger blue boxes: 'Historical Notes for image' and 'Description of image'.
- Center:** A large, empty area with a light gray and white checkerboard background, intended for the main image.
- Right Panel:** A vertical list of metadata fields, each with a corresponding blue box: 'Title', 'Date', 'Creator', 'Link to contributing institution website', 'Format or genre', 'Print version of image', 'Zoomable version of image', 'Link to archival collection (that this image belongs to)', 'Link to themed collection (that this image belongs to)', 'Link to other items from this contributing institution', 'Permanent link to image', 'Related subject links for image', 'Add object to my bookbag (personal Calisphere account)', and 'Subject/ tag cloud'.

Findings for service level questions

- Themed collections were very relevant to users (especially if their entrée into site was from a Google search)
- Most participants felt that site was intended for broad swath of users (students, educators, and general public)
- Many of them missed K-12 content all together
- While users enjoyed essays describing historical events, the image was the primary draw and so was object level description

Recommendations

- Since themed collections were very important to users' topic based discovery needs, **re-orient themed collections for general users**
- In navigating the site, users focused on object/image level discovery found thumbnails to be most helpful but wanted **more description with the thumbnails** consider design solutions to answer this need

Highest priority elements

- Image itself was most important!
- Primary metadata
 - Title
 - Description
- Secondary metadata
 - Institutional affiliation
 - Copyright and usage information
 - Author/photographer
 - Historical background
- **Ability to download** (primary use case)
 - Personal use
 - Use in presentation or paper

Second level priority elements

- More accessible attribution information (how to cite)
- High resolution image (for specialist user)
- More modern zoom technology
- Related images (from similar geographic locations)
- Related links to content outside of Calisphere (journal articles, other relevant primary source or museum material)

Less important features

- Comments (trustworthiness a concern)
- Personal account was not something users wanted (unless they could login from another existing account like Facebook or Google)
- Sharing on social media not as important
- Nobody uses print feature

Comparative Analysis

- Cultural heritage sites, video sites, stock photograph sites, retail sites (anything with an item level product page)
- Overall, item layouts followed a few common patterns

Layout Option 1: The Menu

Order before 1pm PST for **FREE Next Business Day** shipping on all **Clothing**. [Learn More](#)

24/7 Customer Service (800) 927-7671 [Help](#) [Live Help](#) [Log In or Register](#) [My Account](#) [My Favorites](#)

Zappos
POWERED BY SERVICE

Shoes, Clothing, Bags, etc. [SEARCH](#)

CLEARANCE **FREE** SHIPPING & RETURNS [MY CART](#)

SEARCH BY: [Size](#), [Narrow Shoes](#), [Wide Shoes](#), [Popular Searches](#)

SHOES CLOTHING BAGS & HANDBAGS AT HOME BEAUTY ACCESSORIES SHOP BY... WOMEN'S MEN'S KIDS' ALL DEPARTMENTS

ALPHABETICAL BRAND INDEX # A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

« Back | Home > Shoes > Heels > Loeffler Randall > Franca

Share: [f](#) [t](#) [p](#) [e](#)

Loeffler Randall Franca SKU 8145533

\$450.00

— SHIPS FREE! —
Shipping Options

Color:
Camel Dot/Black (Printed Haircalf/Aviator Calf)

Size: [Size Chart](#)
Select Women's Size



Width:
B - Medium

[ADD TO CART](#) [ADD TO MY FAVORITES](#)
Don't see your size?

LOEFFLER RANDALL

Item Images

- Item Information
- Similar Items
- About the Brand



Layout Option 1: The Menu

Title: Black Panthers press conference

Caption: Panthers speak out--Shermont Banks, center, deputy chairman, Black Panthers of Southern California, answers question at press conference. Michael Pennewell, seated left, is keeper of the law; Raymond Hewitt, right, is area captain. Man at left is unidentified

Contributing Institution: [UCLA, Special Collections, Young \(Charles E.\) Research Library](#)

Item	➔
Information	
Similar items	



Layout Option 2: The Tab Look


Visit Exhibitions Calendar **Collections** Education About Support Shop Press Community

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Brooklyn Museum

Collections: Photography: America (Snoop Dogg)

Collections On View Exhibition Archive Research Resources News Play



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America (Snoop Dogg)

Snoop Dogg is part of Andres Serrano's series *America*. It attempts to document the current social reality of the U.S.A. In addition to *Snoop Dogg*, the series includes images of such diverse personalities as a Playboy Bunny, a homeless man, a firefighter, a street vendor, a boy scout, and an assistant at an investment bank. Undertaking the series in response to the shock of 9/11, Serrano set out to answer the question of who we are and what the diversity of America actually looks like. He captures the humanity of his subjects while at the same time the scale of the figures, as they are positioned within the picture frame, gives them almost heroic proportions.

Artist: [Andres Serrano, American, born 1950](#)
Medium: Cibachrome print
Dates: 2002
Dimensions: 45 1/4 x 37 5/8 in. (114.9 x 95.6 cm) ([show scale](#))
Collections: [Photography](#)
Museum Location: ✖ This item is not on view
Accession Number: 2004.19
Edition: Edition: 2/7
Credit Line: Gift of Joseph P. Carroll, Rosemary McNamara, and Mr. and Mrs. William A. Putnam, by exchange
Rights Statement: © [Andres Serrano](#)
Caption: Andres Serrano (American, born 1950). *America (Snoop Dogg)*, 2002. Cibachrome print, 45 1/4 x 37 5/8 in. (114.9 x 95.6 cm). Brooklyn Museum, Gift of Joseph P. Carroll, Rosemary McNamara, and Mr. and Mrs. William A. Putnam, by exchange, 2004.19. © Andres Serrano
Image: overall, 2004.19.jpg. Brooklyn Museum photograph, 2004
Record Completeness: [Best \(83%\)](#)










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snoop lion [x]	21st Century culture [x]
21stc [x]	Broadus [x]
Cordozar [x]	chain [x]
Dogg [x]	black [x]
celebrity [x]	entertainer [x]
musician [x]	hip-hop [x]
daze stare [x]	powerful [x]
rapper [x]	portrait [x]
yellow [x]	man [x]
male figure [x]	African American [x]
Cibachrome print [x]	Snoop Dogg [x]
hiphop [x]	serrano [x]
photography [x]	snoop [x]
america [x]	rap [x]

[Tag!](#)

Tags by Posse members

-  [tld](#) (3)
-  [etccdb](#) (2)
-  [EllaMMChinn](#) (1)
-  [Betti_Maia](#) (2)
-  [olacarlsson](#) (4)
-  [Charles_Kyte](#) (2)
-  [BenjaminBanneker](#) (3)
-  [ninakuriloff](#) (7)
-  [dopeswan](#) (6)

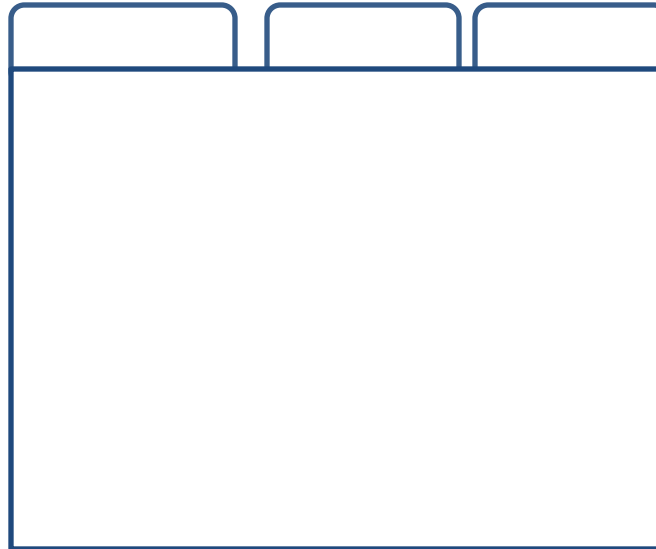
Layout Option 2: The Tab Look




Title: Black Panthers press conference

Caption: Panthers speak out--Shermont Banks, center, deputy chairman, Black Panthers of Southern California, answers question at press conference. Michael Pennewell, seated left, is keeper of the law; Raymond Hewitt, right, is area captain.

Contributing Institution: [UCLA, Special Collections, Young \(Charles E.\) Research Library](#)




Layout Option 3: The Long View

Shared by  sawyer

1 save
242 views

+ Save

Tweet
Source



the fastest way to send transactional and triggered email
Powered by IntuAds



Shaped on all Six Sides

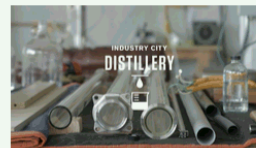
craft short film



Stahlemühle — The Art of Master Dis...
Shared by herrbrendel
art, craft, inspiring, spirits, gin

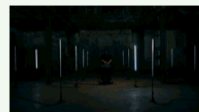


The New York Times
Shared by gustavocpimenta
short film, design, new york times



Industry City Distillery
Shared by steve_flory
short film, documentary, creativity, vodka

sawyer's wonder



Araabmuzik
Shared by sawyer
music, documentary, araabmuzik, di



The Future Is Ours
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inspiration



Timber Furniture
Shared by j
home, craft

Layout Option 3: The Long View

Title:

Interview with Malcolm X, Oct 11, 1963,
Dwinelle Studio

Creator/Contributor:

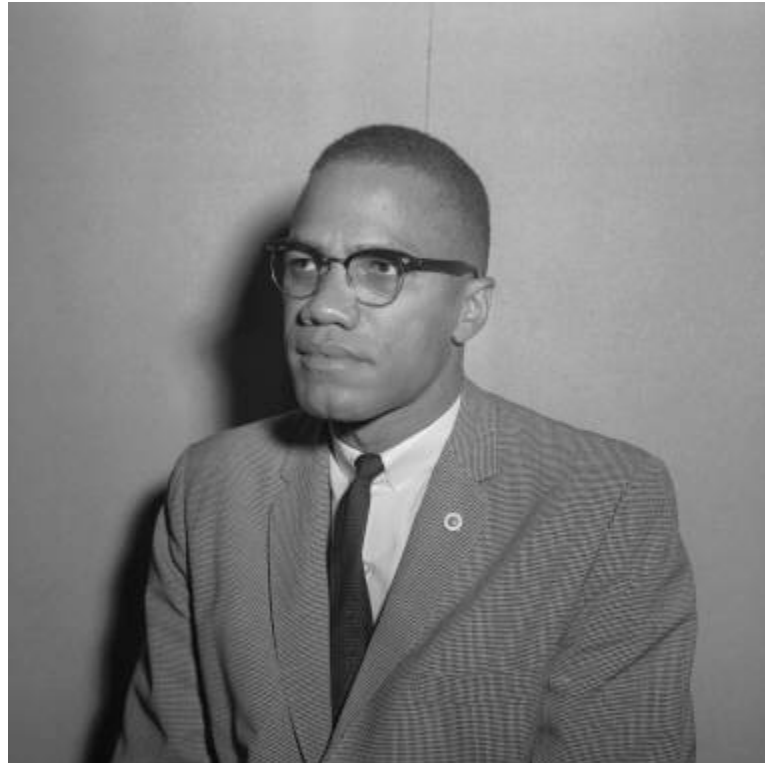
Malcolm X, 1925-1965
Blake, Herman

Date:

1963-10-11

Contributing Institution:

[UC Berkeley, Media Resources Center](#)



▼ Similar items:



▶ More information...

▶ Visit other collections:

Have we reached the end
of the story yet?



The story isn't over yet...

- Calisphere design improvements have been put on hold
- Inception of the UC Libraries Digital Collections Initiative
- Methods can be extended for any design process
- Findings, recommendations, and requirements can be used to create the digital object for this project or for your own digital object display projects

Photo Credits

- “Free Government Money!” by Ian, retrieved from <http://www.flickr.com/photos/44068323@N00/>
- “188/365 You make me feel taller, like I can be with the stars” by Janine retrieved from <http://www.flickr.com/photos/32561659@N08/>
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- Black Panthers Press Conference, retrieved from <http://content.cdlib.org/ark:/13030/hb35800504/?query=black%20panthers&brand=calisphere>
- Black Muslim Leader Malcolm X, retrieved from <http://content.cdlib.org/ark:/13030/hb6h4nb49h/?order=4&brand=calisphere>
- Brooklyn Museum object level screenshot, retrieved from http://www.brooklynmuseum.org/opencollection/objects/166835/America_Snoop_Dogg
- Organized Wonder video level screenshot, retrieved from <http://www.organizedwonder.com/videos/1892>
- All other images courtesy of the University of California Office of the President Photo Archive



Thank you.
rachael.hu@ucop.edu
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