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## Navigating to Success: Finding Your Way Through the Challenges of Map Digitization

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# Navigating to Success: Finding Your Way Through the Challenges of Map Digitization

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Western History Association Conference/WAML Meeting

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# Presentation Overview

- Why digitize maps?
- Copyright and privacy issues for geographic materials
- Digital conversion challenges and strategies
- Descriptive metadata for digital map collections
- Image viewers and interfaces for digital maps
- Geographic coordinates / spatial metadata
- Assessing impact
- Questions / discussion

# Out of the map drawer... into the world!

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Items with relevant content / topical relationships

Maps that are valuable to local community or context of digital collections

Maps in fragile condition (preservation / limiting handling of physical map)

Items with interesting design / illustrations; visual impact

# audience

- *K-12 students* use maps to get oriented to their home state and surrounding region / the world
- *College students and faculty* use maps for research (changes in an area, distribution of animal and plant species, and characteristics of a population, etc.)
- *Businesses* use maps for purposes such as finding out if hazardous wastes exist in an area, distribution of types of businesses to decide where to put a new business, and where mineral deposits are for mining
- *Genealogists* use maps to find out what areas were called during different eras to help in researching records and to figure out which churches their ancestors might have attended, or track immigration patterns
- *Community patrons* use maps to plan trips, to learn more about the history of their neighborhoods and cities, and to find interesting places to visit in their communities
- Web statistics can be a powerful tool to learn about map users in the digital environment

# Audience 2

## **Maps in Context—History**

- *Nevada Test Site Oral History Project—contested landscapes*
- *Southern Nevada The Boomtown Years— counties of Nevada*
- *Historic Landscape of Nevada— maps of water /pipelines*
- *Southern Nevada: History in Maps— local history*

## **Local History**

- Maps provide a visual guide to the changes in an area
- Maps, whether designed for governmental, exploration, land speculation or tourism purposes, have reflected the physical changes wrought by historical events and each has a unique story to tell
- Digitizing these fragile maps increases access to all types of users
- Maps provide not only a history of a region through its changing political boundaries, but also a history of map-making and the development of the cartographic knowledge of the area

# Now, hold on just a second...

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Be cautious of:

Copyright issues (Commercial interests)

Privacy / sensitive information (Homeland Security, locations of petroglyphs)

Oversized items that will require digital photo-stitching

# Wow, those are some BIG files!

Items that may be too fragile for large format scanners

Items that are too large for current equipment

File sizes that demand additional storage space / PC memory

Handling encapsulated maps / reflection off encapsulation / streaking

Scanning equipment (large format) or stitching images

Deciding on color correction (automated or manual, or none)

Creating file naming conventions for file management (several derivatives because of extreme file size: archival, access, custom sizes and on-demand image processing)

Explore the value of outsourcing large collections and costs of in-house vs. vendor-provide scanning services

# The fine print: metadata for maps

Dublin Core Standards:

Metadata should include the known information about the maps. such as: title, cartographer, scale, year and place of publication, publisher, description of the map, details of digitization, subject headings, and rights to use the map

Dublin Core is a common metadata standard that has 15 basic elements and is easy to use / popular in digital collections / CONTENTdm community

Subject access facilitated through local subject headings file, Getty Thesaurus of Geographic Names, Sears, LC Subject Headings or FAST, or LC's Thesaurus for Graphic Materials (TGM)

Geographic information can be coded into Dublin core using: DCMI Box or DCMI Point data (latitude and longitude)

Preservation metadata (software & hardware used, OS, archival file information

# Viewing maps online: Not just another photo collection

Size of files presents challenges in processing, delivery, and storage

What type of files will be available for download or purchase?

What type of contextual information will be provided to accompany the digital maps (narrative, historical essays, links to other resources)?

How do users seek information contained in maps: title of map, date, geographic location, geographic data, subject, non-text based searching?

How well can users manipulate the digital image? (Zoom into detail easily, pan across map, rotate, share image, etc.)

# Interfaces and Viewers

- Not all software is powerful enough to handle map projects; consider file sizes and interface features and any restrictions on storage
- Viewer may be provided with the digital asset management software (i.e. CONTENTdm, SimpleDL, DSpace); compare these viewers
- Often these viewers are good for photographs and text but fall short with larger items like newspapers, architectural drawings and maps
- Open source viewers are available but require installation and configuration to work with local technical environment
- Users will expect your maps collection to work like Google Maps (the web standard for maps)
- Custom applications for expert users (GIS, advanced search, spatial search, layers, etc.)
- Maps vary in scale, some manual calculation may be required to leverage geographic data in modern interfaces

# Getting spatial

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- ISIS Spatial Search tool (open-source developed at UNLV) to provide non-text based searching
- Second generation map metadata with geographic coordinates for new interface display (results shown on a map)
- More integration of GIS data
- More Google map-like features for web-based mapping by users / non-cartographers
- Maps integrated in traditional catalog searches through next generation discovery tools (Summon, Primo, Worldcat Local, etc.)

# Was it worth it?

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- Web stats
- Comments
- Feedback
- Reproduction requests

# Resources

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## Resources and Standards

- How to scan old maps: [http://www.ehow.com/how\\_7733918\\_scan-old-maps.html](http://www.ehow.com/how_7733918_scan-old-maps.html)
- Large-format scanners buying guide: <http://www.largeformatscanners.com/>
- Dublin Core basic elements: <http://dublincore.org/usage/terms/dc/current-elements/>
- DjVu map viewer downloads: <http://djvu.org/resources/>
- SimpleDL software: <http://www.simpdledl.com/>
- CONTENTdm: <http://contentdm.org/>
- ISIS (Interactive Spatial Image Search): <http://digital.library.unlv.edu/isis/>

# Example collections

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UNLV Southern Nevada and Las Vegas: History in Maps

<http://digital.library.unlv.edu/collections/maps>

Nevada in Maps (University of Nevada, Reno)

<http://www.delamare.unr.edu/maps/digitalcollections/nvmaps/Default.htm>

Southern Nevada Maps (Henderson District Public Library)

[http://digitalcollections.mypubliclibrary.com/c/Southern-Nevada-Maps/?q=&fq\[\]=c](http://digitalcollections.mypubliclibrary.com/c/Southern-Nevada-Maps/?q=&fq[]=c)

David Rumsey Map Collection: <http://www.davidrumsey.com/>

Questions?

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