

Visualizing Map Retrieval: Searching CONTENTdm collections with ISIS: an Interactive Spatial Image Search Tool

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ISIS background

- Graphical-spatial search application for digital maps hosted in CONTENTdm
- Inspired by GEODEX (in-house software at the American Geographical Society Library)
- Spare-time project in 2007
- Released as open-source in 2008
 - We are the only ones using it that I'm aware of
- Not currently under active development

Rationale for spatial searching

- Language breaks down when dealing with:
 - Different eras
 - Cataloging inconsistency
 - Places with multiple names
 - Multiple places with the same name
 - Place names that change over time
 - Place name that overlap & change with scale
 - Place names that conflict politically
 - Different themes
 - Different languages
 - Etc.

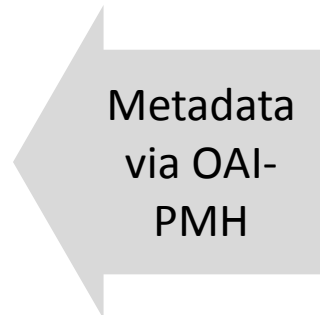
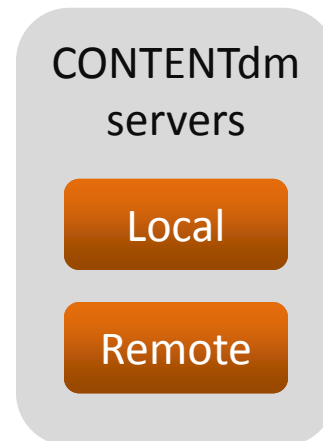
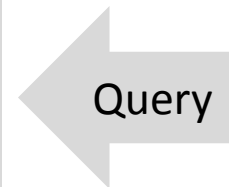
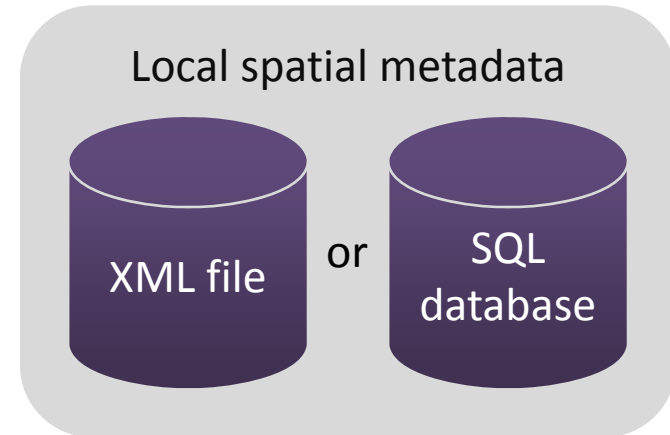
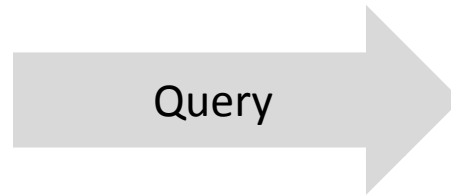
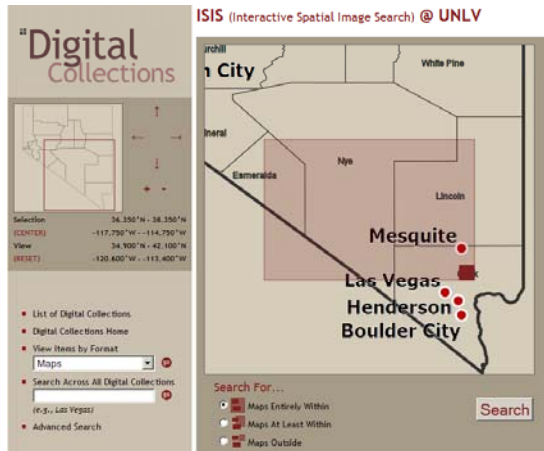
Spatial search advantages

- Does not discriminate based upon any non-spatial factors
- Does not involve language or typing
- Can complement, but not replace, text search for maps

Walkthrough

- <http://digital.library.unlv.edu/isis/>

Simplified overview



The map canvas

- Uses scalable vector graphics (SVG)
 - XML-based, W3C-sponsored graphics format
- Current incarnation is very primitive
 - No geospatial database
 - Geodata lives in SVG/raster images, pre-downloaded by the client
- As a result, ISIS works best with collections of maps that cover a certain area at similar scales

Browser compatibility

- KHTML (Safari, Chrome): Excellent
- Gecko (Firefox, Camino): Good
- IE: Need to download a plugin
 - IE is unlikely to ever support SVG

ISIS benefits

- Another option for the visually-oriented
- Can reveal previously hidden relationships among digital maps
- Can potentially succeed where textual searching fails
- Capable of searching across collections and across institutions
- Can be installed by anyone, not just CONTENTdm users

Limitations

- The map is the main weakness
 - Hard to create a good one (requires GIS experience, software, and geodata)
 - Does not support auto-generalization
 - The map can't be rendered until it's completely downloaded
- Bounding coordinates can be labor-intensive to acquire & enter (not ISIS's fault)
 - No widely-used standard for encoding them in DCMES

Availability

- Currently deployed on our Digital Collections home page: <http://digital.library.unlv.edu/isis/>
- Planning to integrate it into our maps collection template as an alternative search method
- Available as open source (see above link)
- Thank you!