Map Indexes: a practical application of GIS for a map collection

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Today’s topics

• Classic problem of how to best provide access to maps
• Solution – interactive website
• How to make indexes with GIS -- ArcMAP
• Create a plain/base index that all can use
  – Create a grid with the fishnet tool
  – Populate the grid with data
  – Upload to arcgis.com – Clearinghouse
• Create an index with holdings to your library’s collection
  – Create printable indexes
• Create an interactive website on arcgis.com
This is an index to scanned copies of Colorado maps. The scanned maps are part of a collection of digital map images at the University of Texas at Austin and are available for non-commercial use. The maps are also included in the Digital Map Library, which can be accessed through the Map Library's Catalog. The catalog provides detailed information about each map, including its title, scale, date, and other relevant details.

The scanned maps are available for download in PDF format. They can be viewed using Adobe Acrobat Reader or other PDF viewers. The maps are also searchable and can be browsed by state, county, or other geographic areas.

The scanned maps include a variety of data sources, including the United States Geological Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA), and other federal and state agencies.

The scanned maps are provided as a free service to the public and are intended for non-commercial use. The maps are not to be used for any commercial purposes, including reproduction or distribution without permission.

The scanned maps are subject to copyright laws and should be used in accordance with the laws governing the use of copyrighted materials. The University of Texas at Austin and the Map Library cannot be held responsible for any use of the scanned maps that violates copyright laws.

For more information, please visit the Map Library's Catalog or contact the Map Library's staff at (512) 471-9292. The Map Library is located at 1901 San Martin Drive, Austin, TX 78712.
“I want one of those for my maps!”

• How do you make one of these websites?
• Sounds complicated
• Step-by-steps instructions available:
  – http://library.mines.edu/LBGuide_Maps_GIS_how_to
• You can make your own GIS-based indexes and share them with the world
• Make your own website & print off new indexes
• Over 100 base maps already created and available for free in the Clearinghouse
Getting started with GIS (ArcMap)

- I am not a GIS expert and you don’t have to be one either
- Why ESRI products?
- You will improve upon my methods
- Step-by-steps instructions available:
  - http://library.mines.edu/LBGuide_Maps_GIS_how_to
How to begin in GIS --
Create a Geodatabase in ArcCatalog
ArcMap for Desktop
Start a new project – pick a base map
Create a fishnet & change the projection
The fishnet appears! But is opaque.
Trim the fishnet – get rid of those unsightly boxes
Move and reshape boxes
Add a sheet number field in the attribute table
Add sheet numbers & make them display

- Lli1 – Calibri
- LIIi1 -- Tahoma
Move information to Excel – Create a report
Excel work
## Matching data

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Back to GIS – add the Excel data
Merge the 2 datasets
Indexes to paper map sets

This group contains layer packages to the indexes to paper map sets. The packages contain base information, not information about a specific library’s holdings.

This group contains ArcGIS layer packages to indexes to paper map sets. The layer packages were created as a part of a co-operative initiative begun by the Colorado School of Mines, Yale, and the American Geographical Society Library (AGSL) at the University of Wisconsin, Milwaukee.

This group is meant to be an open resource to all who may find it useful to have GIS-based indexes to paper maps.

The map packages contain only base information about the paper maps; no library holding information is included in the indexes. At a minimum, the indexes have the sheet numbers. Other data is often added; these fields include, but are not limited to, sheet name, alternative sheet number, year of publication, and series name. When available, links to scanned copies of the paper maps are included.

It is a goal of this group to provide a space to house GIS-based indexes to paper maps. It is hoped that this will be a co-operative project (a crowdsourced solution to access problems).

These indexes can be used to create plain map indexes or once attached, create indexes that show library holdings. Here is an example of pdf created using the map package and library holdings:

- Mexico 1:250,000 topo maps

HOW TO PARTICIPATE:
You can create indexes using

alee@esri.com
Share as a Map Package

Item Description

Summary (Optional):
Index to 1:50,000 topographic maps of Cambodia (DMA 17016)

Tags (Required):
Cambodia, 50k, index, topographic

Description:
Index to 1:50,000 topographic maps of Cambodia (DMA 17016). Footprints were created using the Digitize tool and data supplied by Colorado School of Mines and University of Texas Perry-Castañeda Library. After the footprints were created, the shpfile was trimmed and labeled according to the sources. Links added to scans of maps by University of Texas Perry-Castañeda Library.

Access and Use Constraints:
NO access or use constraints. This file may be freely used by all.

Credits:
Christopher J.J. Thiry, Map Librarian, Colorado School of Mines, cthiry@mines.edu

Sharing

Share with Everyone [Public]

Members of these groups:
- Colorado School of Mines; Khul Library; Map Room

Index to public maps
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Creating a Map Service

Connecting My Hosted Services
Service Name: Cambodia_50k_L7016

Capabilities
Choose the capabilities you would like enabled for this service:
- Tiled Mapping
- Feature Access

Item Description
Summary (required):
Index to 1:50,000 topographic maps of Cambodia (DWG 7016)

Tags (required):
Cambodia, 50k, index, topographic

Description:
Index to 1:50,000 topographic maps of Cambodia (DWG 7016). Footprints were created using the ESRI tool, and data supplied by the University of Texas Perry-Castañeda Library. The footprints were created, the shapefile was converted and labeled according to the sources. The data is available to users of the University of Texas Perry-Castañeda Library NO access or use constraints. This file may be freely used and distributed by Christopher J.J. Thiry, Map Librarian, Colorado School of Mines.

Access and Use Constraints:

Credits:
Christopher J.J. Thiry, Map Librarian, Colorado School of Mines, cthiry@mines.edu

Update missing metadata in document based on item description.
Creating a Map Service
Making a Printed Index
Adjust the labels

- Lli1 – Calibri
- LIiI1 – Tahoma
Insert Title
Insert a Neatline – an outline around the title 🕵️‍♂️
Add legend and print
Create a website on arcgis.com

Add your newly-created map feature

Save map
Share your Web Map to create a Web Application
Configure a Web Application

Make a Web Application

You have successfully published your web application. Here are a few things to do before other people can use it.

Share your application - The application is only viewable by you until you share it with others. Just like you shared the web map this application references, you need to share this application as well. Typically, you'll share it with the same people you shared the web map with.

Configure your application - If the application can be configured, select the 'Configure App' button on the item details page to change how the application looks and works.

You can go to the item now to share and configure your application or click close below to return to the map.

Access and Use Constraints

App Registration
This application is not registered
REGISTER

Properties
URL
Code Attachment
Purpose
API
Shared with
Tags
Credits
Size
Delete Protection
Extent
Comments (0)
Add a Comment

http://samples.mapgis.arcgis.com/apps/OnTheWeb/basicviewer/index.html?appid=a0f3a365-e814383c070dab6af57ce
Change the website’s display
Make your map look pretty
Finished product

http://csmgis.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=a09fa365e5b142b3bc070dab9ef7a628
Library's paper maps (scales 1:50,000 to 1:125,000). BLUE = map available

Scanned maps, scales 1:50,000 to 1:125,000. RED = scan available
• **Instructions:**
  - [http://library.mines.edu/LBGuide_Maps_GIS_how_to](http://library.mines.edu/LBGuide_Maps_GIS_how_to)
  - This website will change 6/2/14 – [http://Library.mines.edu/LIB-Maps-GIS-Instructions](http://Library.mines.edu/LIB-Maps-GIS-Instructions)

• **Scanned maps of the world:**
  - 1:50,000 to 1:125,000. [http://tinyurl.com/ksnep8e](http://tinyurl.com/ksnep8e)
  - 1:200,000 to 1:253,440. [http://tinyurl.com/scannedtopos200k-253k](http://tinyurl.com/scannedtopos200k-253k)

• **Clearinghouse** to GIS-made indexes to map sets: [http://tinyurl.com/nx9anx3](http://tinyurl.com/nx9anx3)

• **Maps owned by the Colorado School of Mines:**
  - 1:50,000 to 1:125,000. [http://tinyurl.com/k93l6ds](http://tinyurl.com/k93l6ds)
  - 1:200,000 to 1:250,000 [http://tinyurl.com/my5wkg4](http://tinyurl.com/my5wkg4)

• “**The GIS 20 Essential Skills,**” 2nd edition, by Gina Clemmer.

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*GPO Webinar June 24, 2pm EDT*