WorldMap

A GIS Platform for
Scholarly Collaboration & Teaching

Build your own mapping portal and publish it to the world or to just a few collaborators. WorldMap is open source software.

WorldMap is being developed by the Center for Geographic Analysis at Harvard University.
The WorldMap system attempts to fill a gap between desktop GIS, which is generally light on collaboration, and web-based mapping solutions which generally limit customization of large datasets.
• **Uses Cloud Services** – WorldMap application hosted in a remote data center with high-availability and the ability to expand (add more servers) or reduce resources depending upon user demand.

  **WorldMap** runs on Amazon’s Cloud [aws.amazon.com/ec2](http://aws.amazon.com/ec2)

• **Web-based application** deployment requires no on-site IT support except a broad Internet connection and user laptops/desktops.

  **WorldMap** – designed for **Firefox** and **Chrome**
  (open source code browsers)
As of February 21, 2017:
• 20,120 registered users
• 24,310 data layers added by users
• 7,032 map collections created
• 1,539,000 unique visitors
• About 1,300 visitors per day
WorldMap – a Web-based GIS?

A brief history of WorldMap
  • Purpose & Features – worldmap.harvard.edu/

Basic Concepts & Definitions
  • WGS84 Coordinate system for data upload
  • Base map options – Google, OpenStreetMap, ESRI & Bing
  • Layers can have Custom Labels

Examples
  • A Tour of WorldMap sites which demonstrate its features
  • Where WorldMap is used for presenting content
  • Courses where Students contribute content

Essential WorldMap Features
  • Add your own data – Data Upload (Shapefiles, ) & Built-in Tools (Points, Lines and Polygons)
  • Annotate your data and that of other users
  • Collaborate – permissions to View & Edit
WorldMap allows the user to:

• Create and edit maps
  • Use Online cartographic tools for symbolizing layers (create or annotate points, lines or polygons)
  • Upload datasets to create layers and overlay them with built-in Basemaps and thousands of other layers.
• Georeference scanned or digital maps online through Warp [http://warp.worldmap.harvard.edu](http://warp.worldmap.harvard.edu)
• Publish one’s data to the world or to just a few collaborators
• Export data to standard interoperable formats
• Link map features to media content (images, data sources or citations)
What Makes WorldMap Unique?

- **Publish** one’s data to the world or to just a few collaborators.

### Permissions

<table>
<thead>
<tr>
<th>Permission Level</th>
<th>Can View a Map</th>
<th>Can Download a Layer</th>
<th>Can Edit a Style</th>
<th>Can Add/Remove a Layer</th>
<th>Can Change Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>View</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Edit</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Manage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Viewers:**
- Anyone
- Any Registered User
- Only Users who can Edit

**Editors:**
- Any Registered User
- Only Users who can Edit
- Users who can Manage & Edit

Map Creator is Default MANAGER & EDITOR
WorldMap Functionality – the principal Navigation bar

Top Level Menu lead to Second and Third Tier Menus

Short video demo
https://youtu.be/lbSCw6LHsWg

Reference:
https://2016.foss4g-na.org/session/hhypermap-platform-enable-geospatial-search
SEARCH All of WorldMap’s layers and thousands of layers across the Web (101,000 and still Indexing more layers daily)!
WorldMap Search & Selection of ‘Shared Layers’
Display of Selected Layers

http://worldmap.harvard.edu/maps/nel/W6d
Add Layers: Search – Upload Layer – Create Layer – Rectify Layer – Submit a Map Service

Shapefile – browse to Upload

WorldMap Recognizes the Data file and prompts to upload related files
Sharing Layers and Revisions

Map Layers

Times Viewed and by Unique Viewers

Control Who Views the Map & Viewers of Individual Layers
• Gazetteer searches on Geonames, Nominatim (OSM) & Google.

Layers within WorldMap where place is found
Gazetteer search on “Al Aqa”

Historic Mecca Atlas of Images On WorldMap
Enter Metadata & Choose if it can be Downloaded

Editing details for geonode:Ports_Kition_DVN_FQr

*Title:
Phoenician Ports-Moun

*Date:
2011-11-14
01:46:17

Date Type:
Publication

Edition:

*Abstract:
Phoenician Ports, Mountains and Sites; published by Jeff Heany

Purpose:
Provide basis for navigation analysis

Distribution URL:
http://worldmap.harvard.edu/data/geonode:Ports_Kition_DVN_FQr

Distribution Description:
Online link to the 'Phoenician Ports-Mountains-Sites' description on GeoNode

Download

Data: Zipped Shapefile GML 2.0 GML 3.1.1 CSV Excel GeoJSON GeoTIFF JPEG PDF PNG KML View in Google Earth

Metadata: TC211

Downloadable? □
Allow Collaborators to Annotate the features on your layers.

Highlight areas of wine presses

Allow Collaborators to Annotate your features on your layers.
- Warp built into WorldMap for Georeferencing scanned maps: warp.worldmap.harvard.edu/

- Publish one’s scanned maps to the world or keep them private in Warp.
Summary - Tour of WorldMap

- Layout
- Layers
- Maps
- Tool Bar Features
- Annotation – Jezreel Valley Survey
- Symbolization
- Search – Web Search!! (>100,000 layers & growing)
- Mobile Client

DEMO of WorldMap Functions
NEAR EAST LANDSCAPES
http://worldmap.harvard.edu/maps/nel/
<table>
<thead>
<tr>
<th>Major WorldMap Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Africa Map – Trade Routes, Ethnicity, Health &amp; More</strong></td>
</tr>
<tr>
<td><a href="http://worldmap.harvard.edu/africamap/">http://worldmap.harvard.edu/africamap/</a></td>
</tr>
<tr>
<td><strong>China Map</strong></td>
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<td><a href="http://worldmap.harvard.edu/chinamap/">worldmap.harvard.edu/chinamap/</a></td>
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<tr>
<td><strong>Social Justice – Get on the Map for Women &amp; Girls – Includes Video Clips</strong></td>
</tr>
<tr>
<td><a href="http://worldmap.harvard.edu/womenintheworld/">worldmap.harvard.edu/womenintheworld/</a></td>
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<tr>
<td><strong>Reischauer Institute – Japan Digital Archive (JapanMap)</strong></td>
</tr>
<tr>
<td><a href="http://worldmap.harvard.edu/japanmap/">http://worldmap.harvard.edu/japanmap/</a></td>
</tr>
<tr>
<td><strong>Trade Routes and Cities in Europe from Rome to the Middle Ages</strong></td>
</tr>
<tr>
<td><a href="https://worldmap.harvard.edu/maps/europeoutlinemap">https://worldmap.harvard.edu/maps/europeoutlinemap</a></td>
</tr>
<tr>
<td><strong>Radcliffe Institute for Advanced Study and Rappaport Institute (Boston Research Map):</strong></td>
</tr>
<tr>
<td><a href="http://worldmap.harvard.edu/boston/">http://worldmap.harvard.edu/boston/</a></td>
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<tr>
<td><strong>World Economy – Income Stratification</strong></td>
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<tr>
<td><a href="http://worldmap.harvard.edu/maps/WorldEcon">worldmap.harvard.edu/maps/WorldEcon</a></td>
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Social Justice – Get on the Map for Women in the World

Vital Voices

Specializes in: Economic Opportunity

Vital Voices, in cooperation with the Middle East Partnership Initiative of the U.S. Department of State (MEPI) and a number of regional partners, undertook a groundbreaking project in 2007 to promote public-private partnerships for social and economic progress. The focus of the Building Public-Private Partnerships for Women’s Advancement Program was to promote partnerships that result in a positive impact on communities, especially for women in Bahrain, Egypt, Iraq, Jordan, Morocco, Palestine, Tunisia, and the United Arab Emirates. This program was designed to encourage cross-sector collaborations in each country between private businesses, the government, and civil society by showcasing successful models and building partner capacity.

Vital Voices: It Starts with a Leader
Research Maps

Archaeology & Digital Archive
Kition – Phoenician Port on Cyprus in 1st Millennium BCE
http://worldmap.harvard.edu/maps/MedCoastGIS/Jji
http://hdl.handle.net/1902.1/15837    Digital Archive Collection

Shikhin, Israel
http://worldmap.harvard.edu/maps/neareastcollab/Jli
Zoom & Click

Giza, Egypt
1878 Giza Plan - http://worldmap.harvard.edu/maps/neareastcollab/Jlk
Related Maps
Harvard Course where students were required to post research on WorldMap

Literature

CB51 All Saints – Medieval History Course - Each Student prepared a layer for a saint. [http://worldmap.harvard.edu/maps/cb51_allsaaints/JHf](http://worldmap.harvard.edu/maps/cb51_allsaaints/JHf)
Habitat Survey – Gadara, Jordan

http://worldmap.harvard.edu/maps/nel/W6r
Scale Control of Layer Display Allows Details to be Protected

Jezreel Valley Survey Features

Feature Layer Scale Control limits display of Archaeological Feature Location
Sailing to Kition – a Phoenician Navigator’s View

Using the distant landmark of Mt. Stavrovouni for navigating to Kition from Salamis or the Phoenician island port of Aradus Island.
Share, archive, and get credit for your data. Find and cite data across all research fields.

Dataverse REPOSITORIES - A WORLD VIEW

22 Installations
2,015 Dataverses
48,055 Datasets
2,217,870 Downloads
Navigating from Salamis to Kition, Cyprus


Description
Viewed on Mt. Stravoukis is demonstrated as a navigation point for ships sailing to Phoenician port of Kition.
WorldMap integration with the Dataverse
Published Research on Navigation to Kition

Mediterranean Coast GIS Dataverse (Harvard Semitic Museum) WorldMap Page

Harvard Dataverse > Jeff Howry Dataverse > Mediterranean Coast GIS Dataverse > Navigating from Salamis to Kition, Cyprus > Sailing to Kition from Salamis.pdf

Sailing to Kition from Salamis.pdf
Jeff Howry, 2011, "Navigating from Salamis to Kition, Cyprus", hdl:1902.1/15837, Harvard Dataverse, V3, Sailing to Kition from Salamis.pdf [fileName]

Sailing to Kition from Salamis.pdf
Adobe PDF - 1.0 MB - Last Updated: May 11, 2011
Demonstrates how Mt. Stavrovouni, a peak in southwest Cyprus, was used for coastal navigation from Salamis to Kition

Continuing the Conversation

WorldMap Near East Collaborative

Weekly Online Video Conference

Using Skype – ‘Jefflex5’

or

Pre-Arranged Online Video Conference Training

Join the Near East Collaborative E-mail List

Jeff Howry
jhowry@fas.harvard.edu
Harvard Semitic Museum
Cambridge, Massachusetts