

PostGIS Saves Human History

Middle Eastern Geodatabase for Antiquities – Jordan (MEGA-J)

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October 12, 2008



Full Disclosure: about Farallon



- System developers/integrators with emphasis in GIS
- Vendor-agnostic approach to technical solutions.
 - Competent in multitude of technical platforms.
- Leaders in free and open source GIS
- Client list includes:
 - Government (all levels), NGO's, Insurance

The Problem



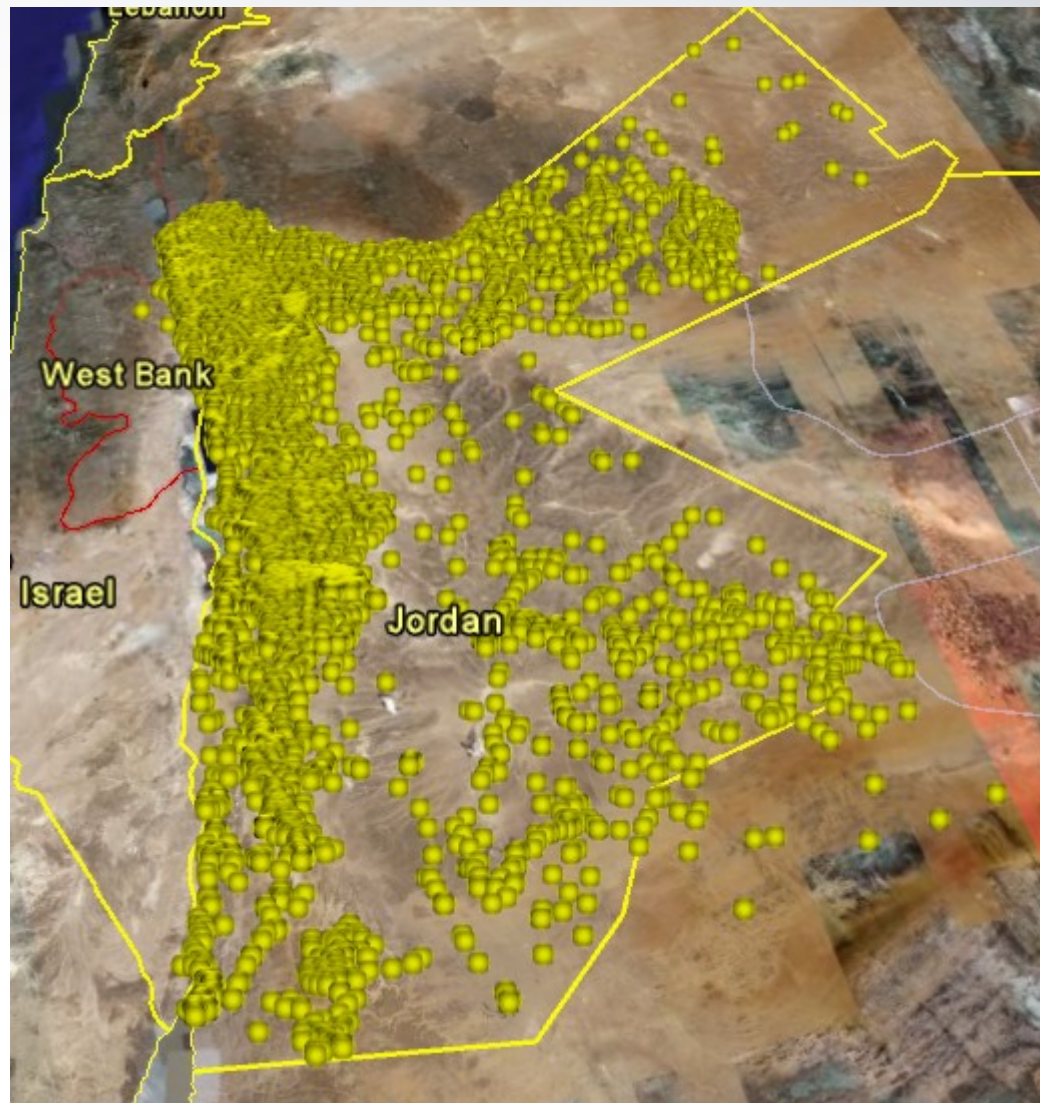
- Immigration to Jordan results in ongoing and explosive urbanization
- Developers ignore and bulldoze archeology



The Solution



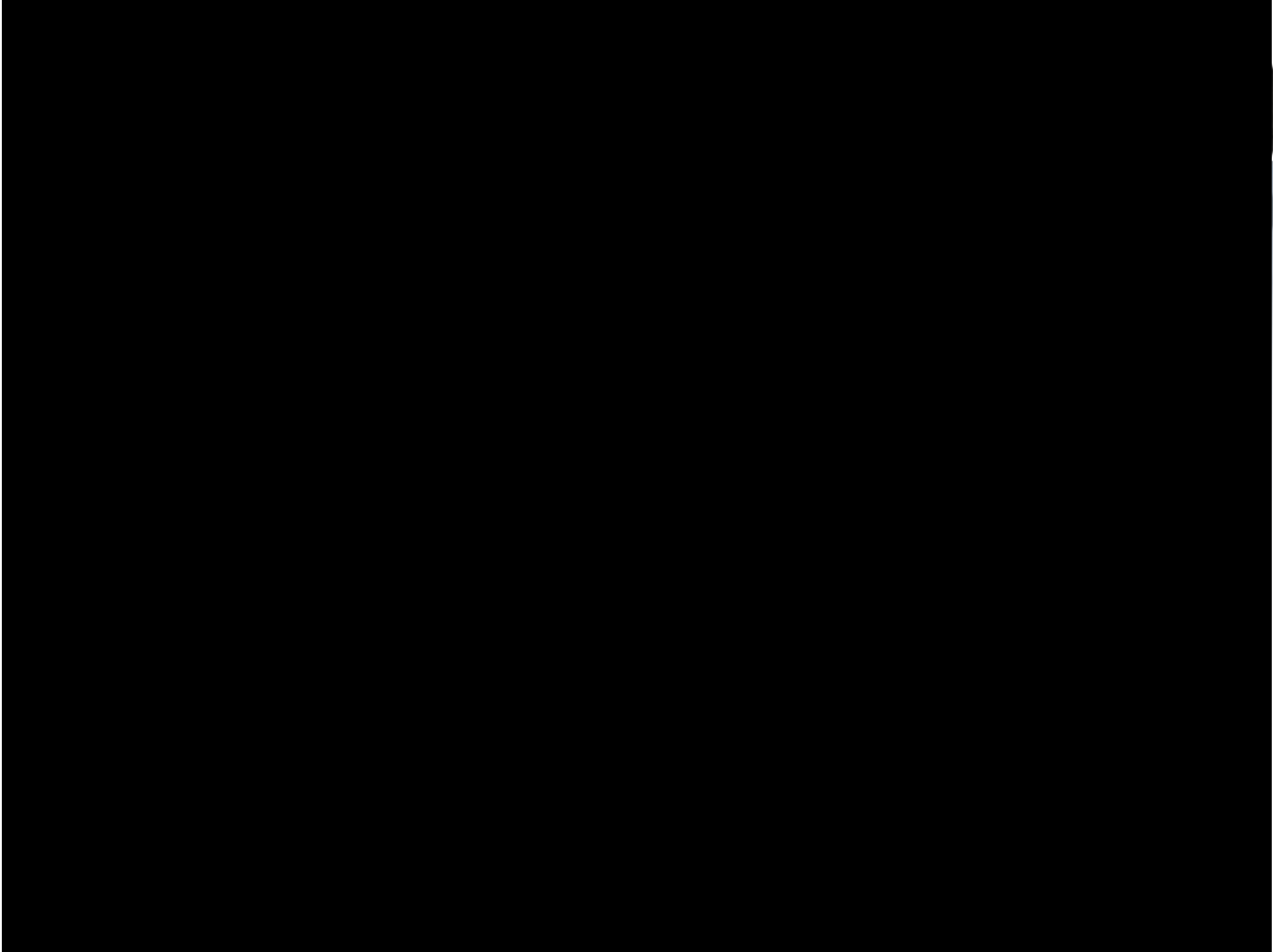
A Kingdom-wide Inventory of Archeological Sites



The Solution



That can integrate with other data to help planners do a better job of preserving human heritage



The Partners



- The Getty Conservation Institute
- The World Monuments Fund
- The Jordanian Department of Antiquities
- Farallon Geographics

Incomplete list of Requirements...



- Must capture and polygonal extent of sites... polygons, not just points
- Supports robust spatial data validation and integrity rules
- Robust Reporting Capabilities
- Sustainability: DoA will be the final owner
- Flexible: expected that system will be redeployed in other Middle Eastern countries with minimal expense

MEGA-J Technical Components...



Database: **PostgreSQL with PostGIS**

- Supports native spatial data, accessible with SQL in a robust relational database

Client Application: **Quantum GIS**

- Spatial data editing, ad-hoc outputs

Data Publishing Platform: **GeoServer**

- Web-enables spatial data using open standards

Rendering Environment: **OpenLayers** with Google Basemap Data

- Java Script map widget creator. Consumes spatial information from most any standards-based source

Why Open Source?



Remember the requirements...

- Sustainability:
 - Proprietary s/w maintenance = one year of typical Jordanian government salary
 - In the end, DoA will own the system
 - Other (potentially Third World) countries will deploy the system in the future
- Technical:
 - Data validation, integrity supported (based on spatial criteria)
 - Access to database by multiple GIS clients
 - Complex reporting capabilities, both spatial and non-spatial

Project Status



- Beta data model created
- Workflow (using QGIS and PostGIS) deployed in Jordan for initial data capture
- Final Data Model and Code Base currently under development
- RC 1 expected in Spring 2009

Middle Eastern Geodatabase of Antiquities
Online Archeological Site Inventory

Search

Site Name or Site Number or JADIS Number

Sites

Site Elements

GPS Coordinates

Places

- Contact
- Login
- Settings
- Help

Map Type: Topography



Search Results

Activities

icon

Add a New Site
Enter the location and descriptive information for a newly discovered site into the MEGA-J database
Upload GPS Points to help locate the site

icon

Add a New Site Element
Enter the location and descriptive information for a new site element
Upload GPS Points to help locate the site

icon

Add a New Survey
Enter the location and descriptive information for a new survey into the MEGA-J database

icon

Print Site, Site Element And Monitoring Cards
Print out new field data collection forms

icon

Add a Reference
Add a bibliographic reference to the MEGA-J database

Collections



Search

[Sites](#) | [Site Elements](#) | [GPS Coordinates](#) | [Places](#)

- Contact
icon
- Login
icon
- Settings
icon
- Help
icon

Map Type: Aerial | Jordan > Maan > Al Jafar

[Send](#) | [Print](#)



Search Results

Sort By:

+ Tell Aback
XYZ-12345-AA
This Tell was first described by Agnos (et. Al.) in 1926 and is located near the City of...

+ Tell Alj
XYZ-12345-AA
This Tell was first described by Agnos (et. Al.) in 1926 and is located near the City of...

- Tell Dalgity
XYX-23456-BB
This Tell was first described by Agnos (et. Al.) in 1926 and is located near the City of...

Site Facts:
Age: Pre-Bronze III to Ummeyyaid
Site Elements: 12
Last Inspection: Never Inspected

Reports | Jordan > Maan > Al Jafar > Site XYX-23456-BB

- General Information
- Site Elements
- Monitoring Reports
- Photographs
- Comments

Official Name: Tell Dalgity

Coordinates: 33° 23' 41" N 43° 13' 09" E

Site Description: This is where we might put the first couple of lines of the site description. In some cases, a site description might not exist, so we might post a "no description available". Sometimes the description might be long, meaning that it is truncated. Uses can expand the description... [Show full description](#)

Site Facts:
Total Area: 23.45 ha Ownership: DoA
Perimeter: 2.56 km Topography: Valley Floor
Buffer Zone: 200 m Survey: None
Age: Bronze III to Nabatean

Entered By: Catreena Yousef
Date Entered: September 1, 2007

Last Update: August 31, 2008

Additional Site Names:

These are local names, alternate spellings, or alternate language names for the site:
Name 1
Name 2 that might be in another language

Bibliographic References:

List bibliography here. We may want to think about whether a bibliography warrants its own tab...

(Im)ponderables



- “The new source of power is not money in the hands of a few but information in the hands of many. “
– John Naisbitt, Megatrends
- “The application of GIS is limited only by the imagination of those who use it”
– Jack Dangermond, President, ESRI
- “Fundamentally, successful OSS projects are not created by releasing free source code – they are created through the growth of communities of shared interest.”
– Paul Ramsey, Director, Refrations Research



Thank You!

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