

# Spatial Narratives and Deep Maps: Explorations in the Spatial Humanities

David J. Bodenhamer  
The Polis Center  
Indiana University Purdue University, Indianapolis  
Virtual Center for Spatial Humanities

IUB Networks and Complex Systems Workshop  
December 5, 2011

# Developing the Humanities

## **Nineteenth-century traditions**

Rationalism and empiricism

Scientific methods

## **Twentieth century maturation**

Disciplinary focus

Professionalization of the disciplines

Cult of objectivity/influence of structuralism

Specialization/ fragmentation

Importance of experts



# The Post-Modern Shift

## **Post-Modernism/Post-Structuralism**

rejection of master narratives

subjective, experiential

contingency, ambiguity

fluidity, simultaneity

multiplicity, diversity

emphasis on agency

interdisciplinary

# Current Perspectives

## **What perspectives engage us?**

Multiple realities

Interdependency

Intercultural and trans-cultural

Multi-scalar and inter-scalar

Hybridity and complexity

Ambiguity and nuance

# Current Themes

## **Context**

Non-linear, simultaneous

Fuzzy, ambiguous, contingent

## **Culture**

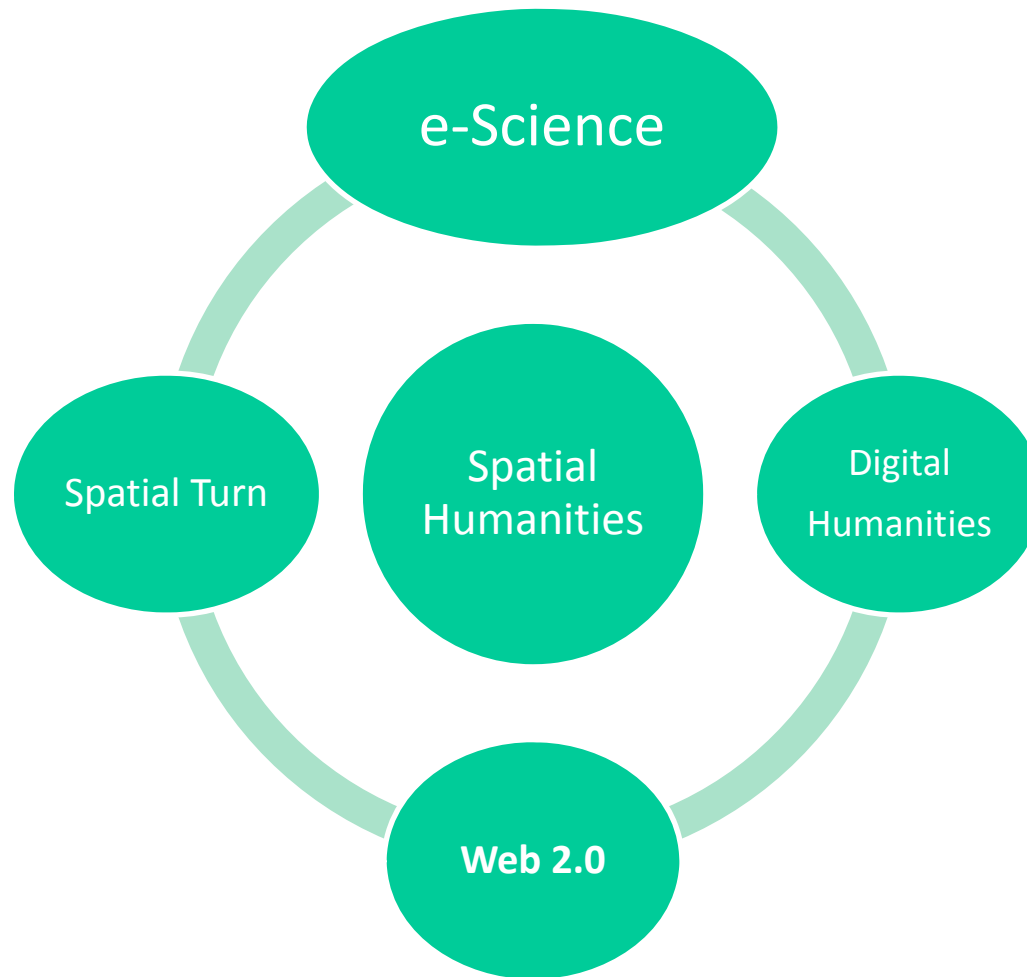
Variation

Diffusion

Transmission

## **Convergence**

# Convergence



# e-Science 1.0

Digital libraries

Initial goals focused on data

- Creation
- Access
- Preservation
- Exchange

# e-Science 2.0

Now, e-Science (or cyberinfrastructure) means grid-based collaboration

- Technical collaboration (e.g., networks, exchange protocols, middleware, etc.)
- Procedural collaboration (e.g., standards for access and use)
- Scholarly collaboration
- ICT-discipline/domain collaboration

# e-Science 2.0



# DARIAH

Digital Research Infrastructure  
for the Arts and Humanities

- Home
- Latest News
- About DARIAH
- Public Documents
- Partners
- Events

## WELCOME

The mission of DARIAH is to enhance and support digitally-enabled research across the humanities and arts. DARIAH aims to develop and maintain an infrastructure in support of ICT-based research practices.

DARIAH is working with communities of practice to:

- Explore and apply ICT-based methods and tools to enable new research questions to be asked and old questions to be posed in new ways of many kinds



## PROJECT bamboo

[HOME](#) [ABOUT](#) [APPLICATIONS](#) [INFRASTRUCTURE](#) [BLOG](#) [GET INVOLVED](#)

Project Bamboo is building applications and shared infrastructure for humanities research.

[Learn more ▶](#)



### Research Applications

Research environments and open source tools for collaboration, content-management, and analysis of humanities collections.

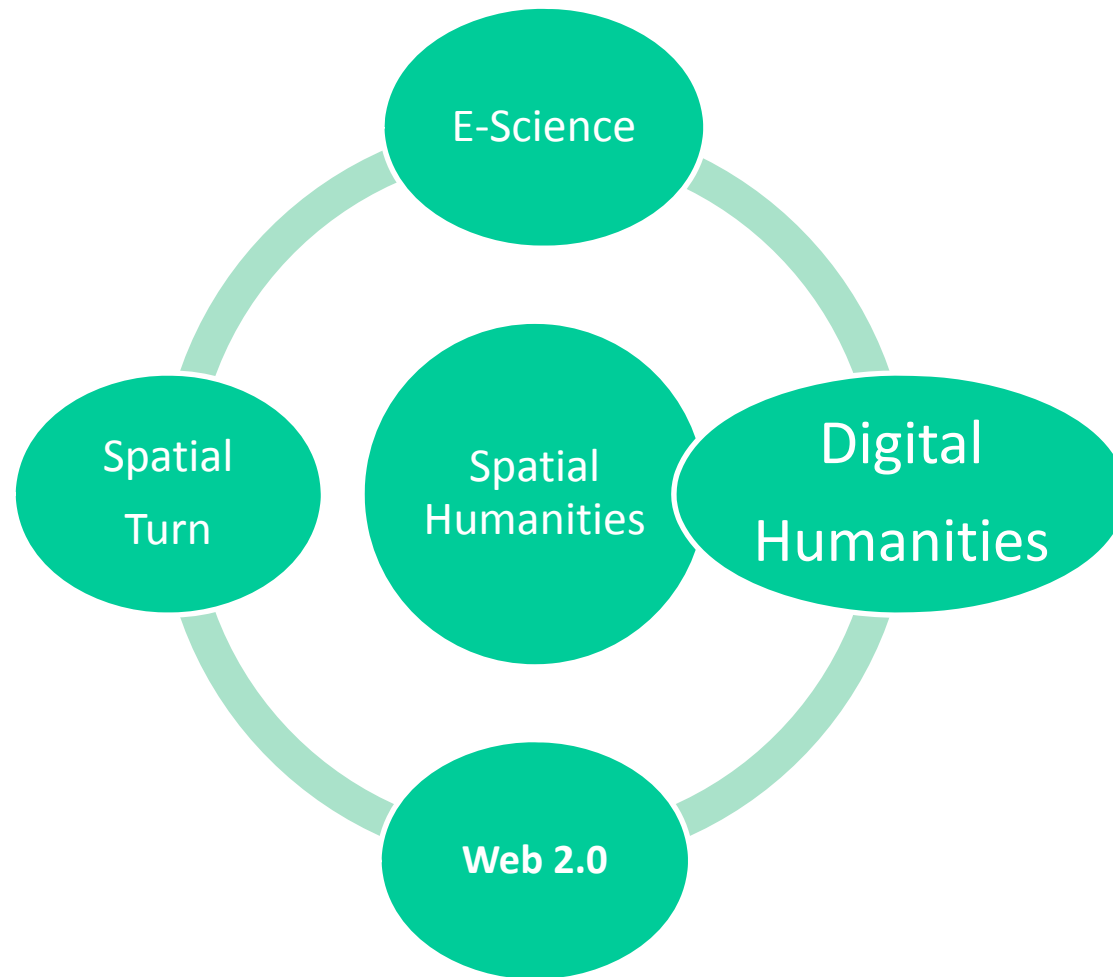


### Shared Infrastructure

Web services and platforms to support and connect humanities tools and collections.



# Convergence





# Digital Humanities

Rapid increase in digital data

Tools to address data deluge

Infrastructure

Platforms for multidisciplinary discovery

Collaborative

Integrating frameworks

# Successes

Rapid increase in digital materials (Project MUSE, JSTOR, databases, etc)

On-line access

Convenient search tools

Digital archives and repositories

Highly visible projects (Valley of the Shadow, Vision of Britain, etc.)

New funding: NEH Digital Humanities (e.g., Digging into Data Challenge)

# Scholarly Editions and Databases

## The Early Republic

Critical Editions on the Founding of the United States

[BROWSE](#) [SEARCH](#) [SUBSCRIBE](#) [ABOUT](#)

### What is The Early Republic online?

Since 1972, 17 volumes of primary material documenting the actions, debates, and thoughts of the First Federal Congress and its members have been collected by the First Federal Congress Project (FFCP) and published by the Johns Hopkins University Press. These volumes of the *Documentary History of the First Federal Congress* are used by Congress, historians, political scientists, and jurists to understand the most important and productive Congress in United States history.

[Read More](#)  
[User Guide](#)

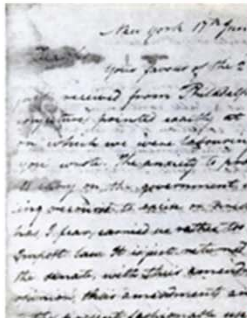
### More from the Press

THE PAPERS OF DWIGHT DAVID EISENHOWER

Accessible electronically to a new generation of students and scholars, *The Papers* combines the full text of 21 volumes of the most significant material written or dictated by Eisenhower with a powerful search engine and user-friendly interface.

[Read More](#)

### Abraham Baldwin




## Features

### Three centuries of English crops yields 1211-1491

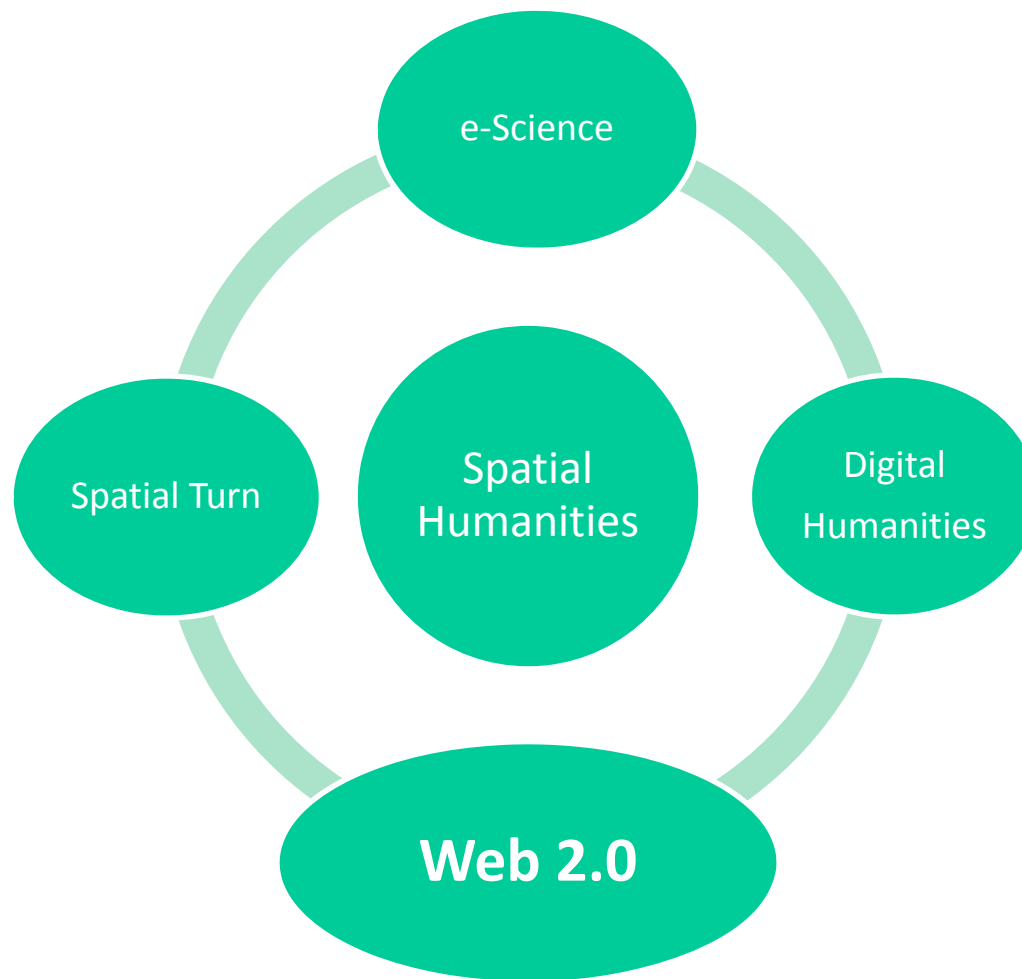
[Home](#) [Acknowledgements](#) [Sources](#) [The Data](#) [Chronologies](#) [Database](#)

Welcome to the Medieval Crop Yields Database



Men stacking sheaves, folio 173, Luttrell Psalter, provenance East Anglia c.1325-35  
[British Library, Add. 42130] © British Library.

# Convergence



# The Appeal of Web 2.0

Ubiquitous

Speedy

Relatively non-technical

Connective

Collaborative

Open platforms

# Web 2.0 Platforms

Wikis

Mash-Ups

Blogs

Social networking sites

Volunteered video

VREs

Games

Mobile devices

# Participatory Learning

“Participatory Learning includes the ways in which new technologies enable learners (of any age) to contribute in diverse ways to individual and shared learning goals. Through games, wikis, blogs, virtual environments, social network sites, cell phones, mobile devices, and other digital platforms, learners can participate in virtual communities where they share ideas, comment upon one another's projects, and plan, design, advance, implement, or simply discuss their goals and ideas together. “

McArthur Foundation, 2008

# Collaboration by Difference

Unstructured interactions

No disciplinary boundaries

Global potential

Does not privilege expert

Open to experiential knowledge

Based on contributed information



# Wisdom of the Crowd

Aggregation of anonymously produced data

Requirements:

- Diversity

- Independence

- Decentralization

- Means of reaching collective verdict

Games a key platform

Surowiecki, *Wisdom of the Crowds* (2004)

# Collective Intelligence

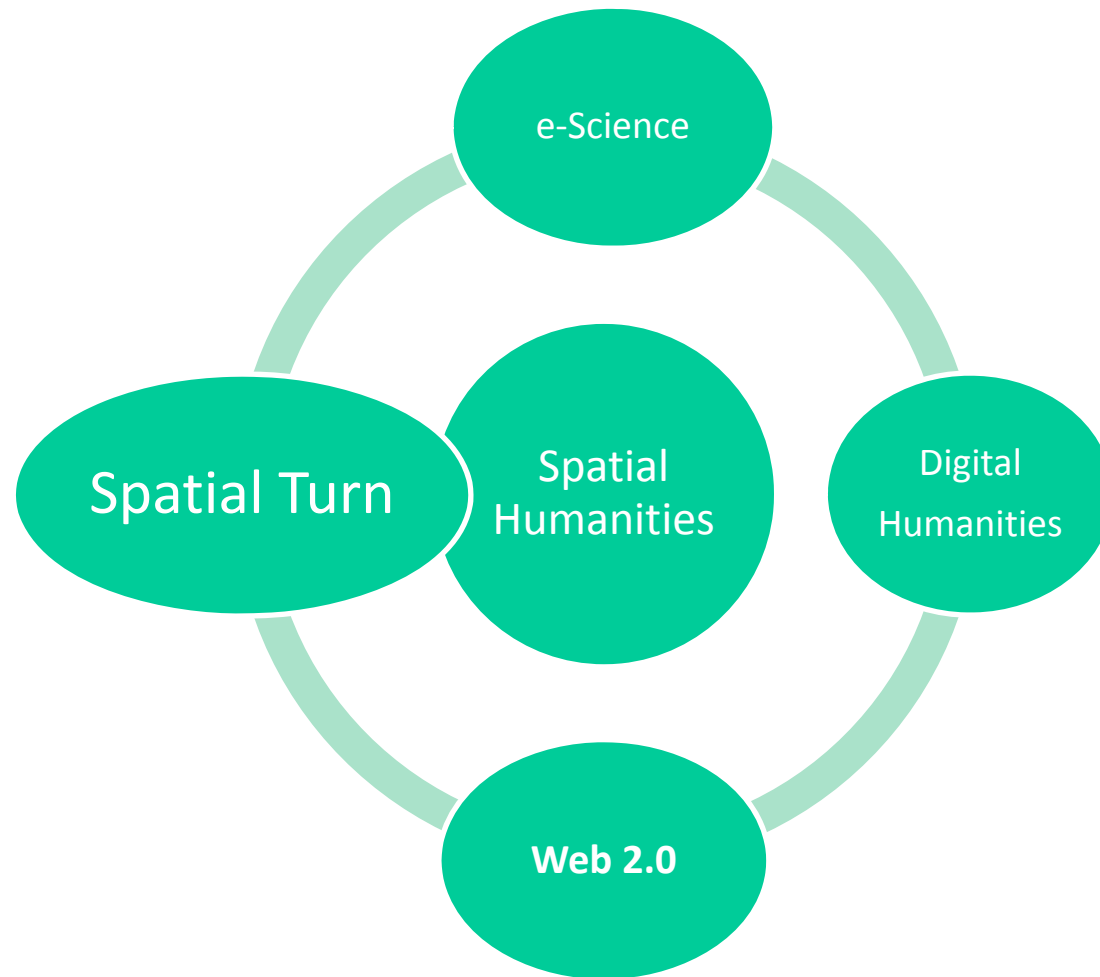
Harness the problem-solving capabilities of a networked and communicating group of participant-collaborators

Uses Web 2.0 and Grid technologies

Wiki is prime example: based on compromise and consensus (old tradition) but leading to new structures of knowledge

*Levy, Collective Intelligence (1997)*

# Convergence



# Spatial Turn

Increased attention to space and spatiality,  
beginning in 1960s

Affects both social sciences and humanities,  
although differently

New technologies support the spatial turn. GIS  
developed in 1960s for environmental sciences,  
urban planning; ubiquitous by 1990s

Emergence of GIScience

# Geographic Information Systems

GIS integrates and visualizes spatial data and its attributes

Key elements of GIS

- Spatially-enabled data

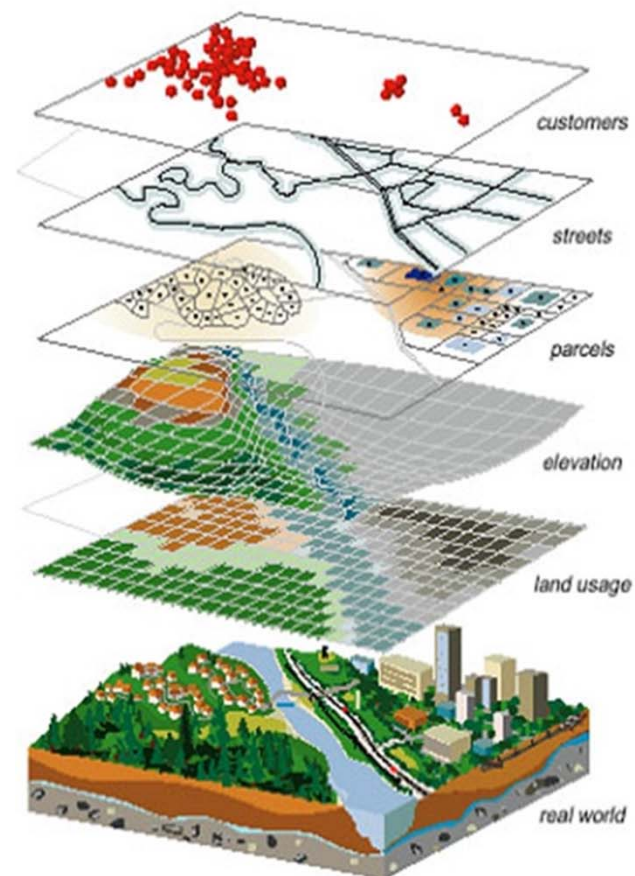
- Geographically-referenced thematic layers

- Software

- Tool-kit

- Approach

# Thematic Layering



# Tool-Kit

Manage (sort, classify, control spatially)

Manipulate (calculate distances, change projection/scale, integrate data spatially)

Analyze (pattern analysis, spatial regressions, ESDA)

Visualize (maps, animations, 3-D)

# Approach

Explore the database spatially

Focus explicitly on spatial perspective

What are the implications of location?

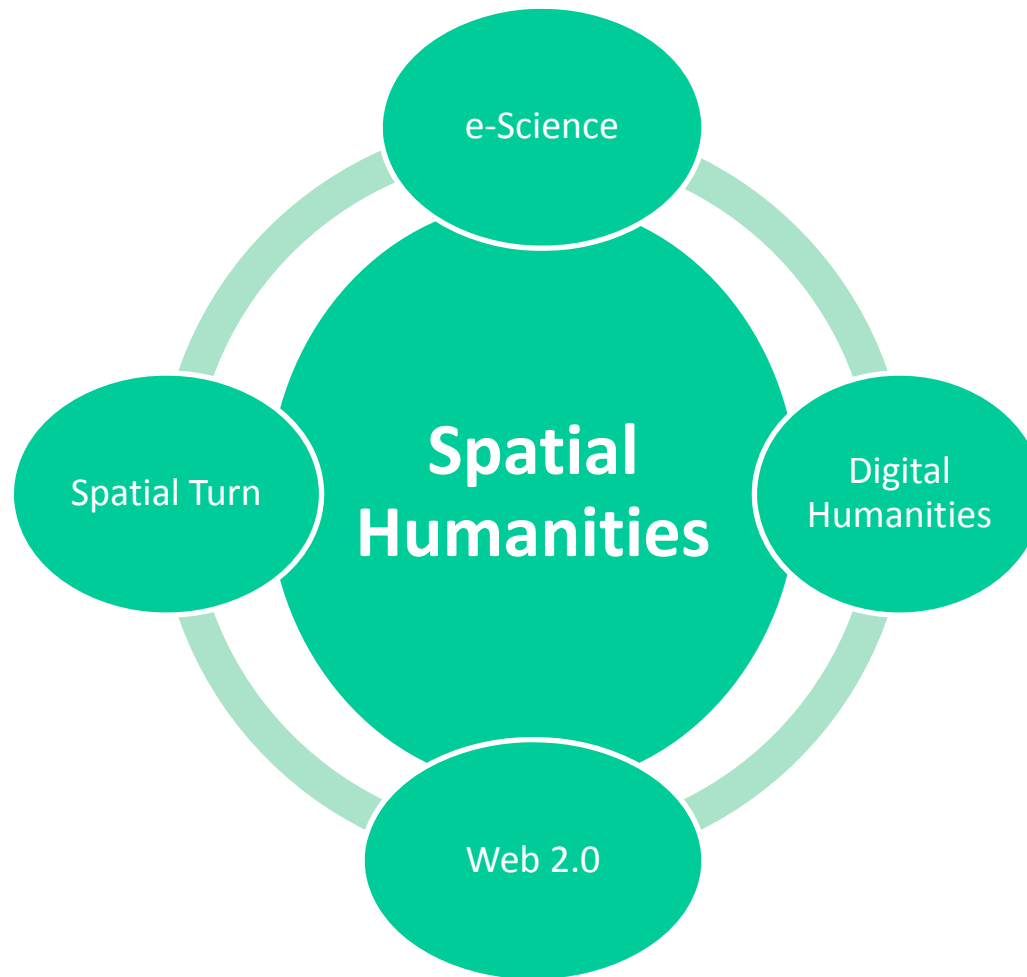
What is the spatial context of an event?

How do spaces compare?

What is the effect of scale on the event?



# Convergence



# Spatial Humanities 1.0

Spatial turn in humanities in 1990s

Space offers opportunity for:

- Integration

- Visualization

- Analysis

GIS-facilitated tools and methods

- Changing boundaries

- Spatio-temporal integration

New genres of scholarship in history, archaeology, cultural studies, etc.

# Infrastructure

## International collaborations

ECAI, UK/EU/NEH initiatives, Expert Networks (EU)

## National Historical GIS

US, Great Britain, Ireland, Belgium, Germany, China, etc.

Strategic spatial datasets, including base maps (e.g.,  
[www.davidrumsey.org](http://www.davidrumsey.org))

# ECAI




## Electronic Cultural Atlas Initiative

About ECAI Activities Community Atlases Research Technology Participating

**Cultural Atlas Portal**



Link to example projects or browse cultural atlases in Google Earth

**Dynamic Map Catalog**



Search the [ECAI Clearinghouse](#) of cultural material which uses place and time as a common element.

**Community**



Participate in the ECAI community through twice yearly conferences and international working groups.

**Technical Infrastructure**



ECAI technical infrastructure illustrates the vision of sharing distributed data and using time enabled mapping tools.

**Research & Development**



Collaborate to identify research topics and

**ECAI uses time and space to enhance understanding and preservation of human culture.**

**Highlights**

Upcoming:

**ECAI / PNC 2011 Joint Meetings**  
 October 19-21, 2011  
 Sasin Graduate Institute of Business Administration of  
 Chulalongkorn University  
 Bangkok, Thailand

Past Events:

**Western Han Dynasty Exhibits**  
Virtual Masterpieces From Ancient China  
 April 16-22, 2011  
 CITRIS Tech Museum  
 345 Sutardja Dai Hall, UC Berkeley

**ECAI Workshop: Visualization, Computation, and Analysis**  
in Large Text Corpora and Cultural Collections  
 16 March 2011  
 Academia Sinica, Taipei, Taiwan

**Joint Conference with KAIST & VSMM**  
 October 2010  
 COEX Conference Center, Seoul, Korea

**ECAI / PNC 2010 Joint Meetings**  
 Nov 30 - Dec 3, 2010  
 City University of Hong Kong, Hong

**ECAI Workshop, in collaboration with the Central Library of**  
 Fudan University  
 May 2010  
 Fudan University, Shanghai, China

Projects:

# National Historical GIS

**NHGIS**  
National Historical Geographic Information System

Home Shape Finder Data Finder Extract History Contact Us Site Map Accessibility

**Welcome to NHGIS**

The National Historical Geographic Information System (NHGIS) provides, free of charge, aggregate census data and GIS-compatible boundary files for the United States between 1790 and 2000. NHGIS offers the following options to obtain data:

- The [NHGIS Shape Finder](#) provides access to [boundary files](#) for mapping data in a [GIS software package](#).
- The [NHGIS Data Finder](#) provides access to [aggregate census data](#).

NHGIS memory upgrade on 4/28/11

news

- NHGIS memory upgrade on 4/28/11 2011-04-28
- New School Attendance Boundaries Data 2011-04-05
- NHGIS Updates 2007-03-19

More news...

Home **Start** Info Impressum Links Kontakt English

welche staaten? welche provinzen? welche straßen? welche bilder? welche regierungsbezirke? welche alianzen? welche dokumente? welche jahre? welche grenzen? welche räume? welche wappen? welche dynastien? welche exklaven? welche hauptstädte? welche gebietsveränderungen? welche flüsse? welche verfassungen? welche entfernungen? welche stahlproduktion? welche gebietsveränderungen? welche eisenbahnen? welche kohleförderung? welche monarchen? welche inseln? welche flächengrößen? welche textilproduktion? welche dokumente? welche flaggen? welche jahre? welche alianzen? welche kondominate? welche staaten? welche regierungsbezirke? welche alianzen? welche straßen? welche dokumente? welche wirtschaftsräume? welche gebietsveränderungen? welche wappen? welche exklaven? welche flüsse? welche bildung? welches kulturelberbe? welche unionen? welche hauptstädte? welche dynastien? welche wirtschaftsräume? welche gebietsveränderungen? welche provinzen? welche inseln? welche bilder? welche textilproduktion? welche zeiträume? welche wappen? welche verfassungen? welche staaten? welche provinzen? welche straßen? welche bilder? welche bezirke? welche alianzen? welche wirtschaftsräume?

**w.hgis-germany.de**


ny ist ein multimediales historisch-geographisches Informationssystem der Staaten und Mitteleuropas seit 1820. Es wird erarbeitet am Institut für Europäische Geschichte sowie am Institut für Raumbezogene Informations- und Messtechnik (i3mainz) der Universität Mainz. Kooperationspartner ist das Deutsche Historische Museum (DHM) in Berlin. Es ist die Alfred Krupp von Bohlen und Halbach-Stiftung, zusätzlich das Land Rheinland-Pfalz.

**地歴圖史**  
中文版

home intro data members meetings docs

search tools maps

**China Historical GIS**



**Gazetteer Search Engine**  
**List of Free Datasets**  
**XML Web Service**  
**Skinner Map Collection**

with funding from the Henry Luce Foundation, the National Endowment for the Humanities and support from

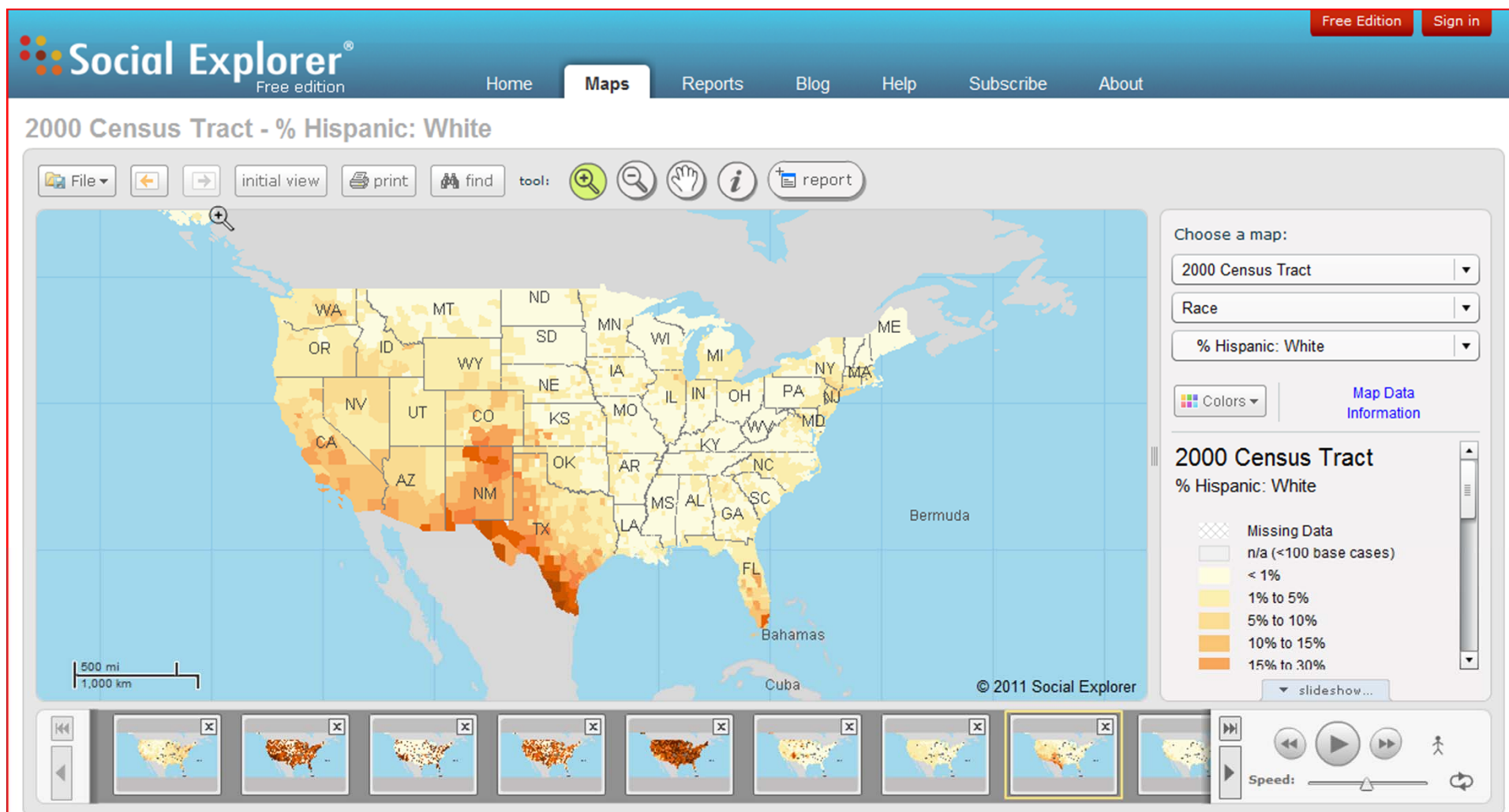
Fairbank Center for Chinese Studies  
Harvard Asia Center  
Harvard Yenching Library  
Harvard Yenching Institute

© 2001-2010 - Harvard University and Fudan University

CHGIS  
Center for Geographic Analysis  
1737 Cambridge St, K021  
Cambridge, MA 02138  
tel: 617-495-2451  
new office location

China GIS DATA Japan GIS Demo Dynamic Maps WEB MAPS Map Scans Japan-1890-1945 Featured EdSite Sichuan Earthquake

# Social Explorer





# Historical Maps

[Home](#) [About](#) [View Collection](#) [Publications](#) [Blog](#) [Help](#)

## David Rumsey Map Collection

CARTOGRAPHY ASSOCIATES

### THE COLLECTION

Share this Page

Welcome to the David Rumsey Map Collection Database and Blog. The Map Database has many viewers and the Blog has numerous categories.

The historical map collection has over 27,000 maps and images online. The collection focuses on rare 18th and 19th century North American and South American maps and other cartographic materials. Historic maps of the World, Europe, Asia, and Africa are also represented.

Popular collection categories include antique atlas, globe, school geography, maritime chart, state, county, city, pocket, wall & case, children's, and manuscript maps. Search examples are United States map, Geology maps, California map, Afghanistan map, America map, New York City map, Chicago map, and U.S. Civil War maps. Browse map categories Where, Who, When, or What. The collection can be used to study history, genealogy, art, explorations, local and family history. [Learn more](#)

Watch 360 degree QTVR of the Collection Space [→](#)  
Browse Lists of the Collection's many Atlases [→](#)

[View this Map in LUNA Browser](#) [→](#)

[Launch Collection in LUNA Browser](#) [→](#)



*Rand - McNally Official Railway Map Of The Pacific Coast States Including Territory East To Denver; Rand McNally and Company; 1901; Case Map*

### Blog

[Email Feed](#) [RSS \(7\)](#)

- [All Categories](#)
- [Recent Additions](#)
- [News](#)
- [Featured Maps](#)
- [Related Sites](#)
- [Videos](#)

### Quicklinks

The collection may be viewed with the following applications:

- [LUNA Browser](#) [↗](#)
- [MapRank Search](#) **NEW!** [↗](#)
- [Google Earth](#) [↗](#)
- [Google Maps](#) [↗](#)
- [Second Life](#) [↗](#)
- [2D GIS](#)

# Projects and Publications

## Projects with HGIS Components

Salem Witchcraft Trials, e-Williamsburg, etc.

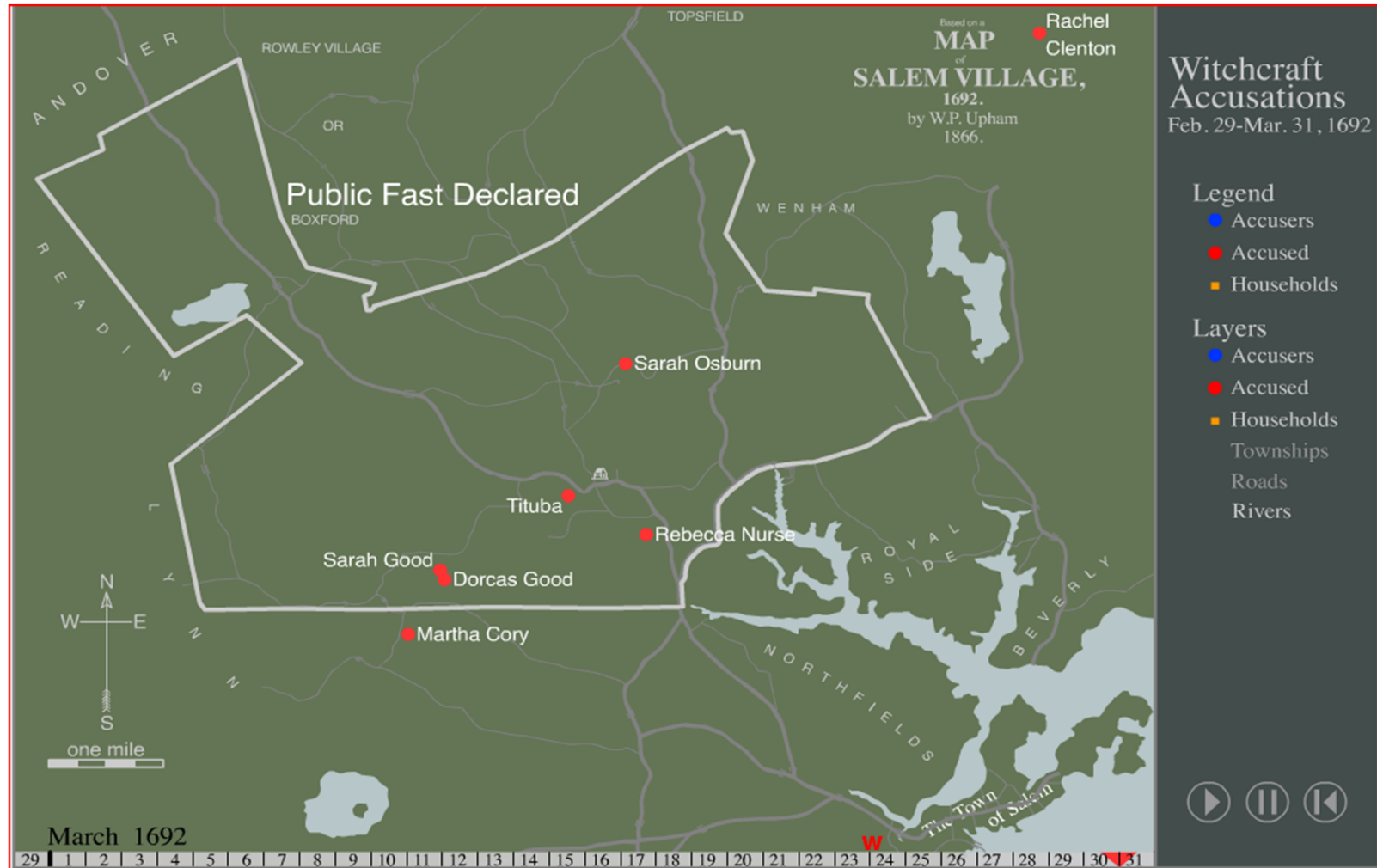
## Major HGIS Projects

Stanford Spatial History Project, North American Religion Atlas, PhillyHistory, Irish Famine, Aurora Project (Dynamic Atlas of US History), Holocaust Project

## Major Publications and Conferences in HGIS and Spatial Humanities



# Salem Witch Trials: Accusations



# Spatial History Project



## The Spatial History Project

STANFORD UNIVERSITY

JUNE 10, 2011

- Publications
- About Us
- Gallery
- Resources

### RECENT PUBLICATIONS::

- Conceding the Ocean
- A Data Model for Spatial History
- Neoliberalism, Civic Participation and the Salmon Industry in Southern Chile
- When the Loss of a Finger is Considered a "Minor" Injury
- Land Speculation in Fresno County: 1860-1891

### CURRENT PROJECTS ::

- Shaping the West
- Terrain of History
- Tooling Up for Digital Histories
- Holocaust Geographies
- Chile's Aquaculture Industry, 1950-2000

### RECENT VISUALIZATIONS ::



The Spatial History Project at Stanford University, a part of the Bill Lane Center for the American West, is made possible by the generous funding of the Andrew W. Mellon Foundation.

### RECENT UPDATES

01 June 2011

### OUR TEAM ::

#### PRINCIPAL INVESTIGATORS

**DAN EDELSTEIN -**  
(Principal Investigator) Dan Edelstein is an associate professor of French at Stanfor...

**ANDREW GERHART -**  
(Principal Investigator) Andrew Gerhart is a Ph.D. candidate in the Emmett Interdisci...

**MICHAEL KAHAN -**  
(Principal Investigator) Michael Kahan is the Associate Director of Urban Studies at ...

**RICHARD WHITE -**  
(Principal Investigator) Richard White is the Margaret Byrne Professor of American Hi...

**ZEPHYR FRANK -**  
(Director) Zephyr Frank is an Associate Professor of History at Stanfor...

**JON CHRISTENSEN -**  
(Principal Investigator) Jon Christensen is the principal investigator for the Critic...

**MATTHEW BOOKER -**



# New Scholarship



# Critiques

Mostly mapping/spatial primitives

Limited functionality on Web HGIS

Difficult to sustain

About space, not place

Where is time?

Contributions to scholarship debated

Scanty uptake by humanists

# Barriers

Systems

Data

Culture

Epistemology

Literacy

Spatial/Geographic

Visual

# Pareto GIS

Pareto principle (80/20): 80% of the effects come from 20% of the causes

We often do not need the full analytical functionality of ArcGIS to accomplish what humanists need

# Redefining GIS

Moving beyond ESRI

Making GIS truly multimodal

Opening GIS to VREs and immersive environments

Creating collaborative spaces (PGIS)

Developing a new epistemology (nonlinear, fluid, reflexive)

# Spatial Humanities 2.0

Spatial humanities is an explicit recognition of the reciprocal influence of geographic and constructed space on culture and society.

Embraces all spatial technologies but bends them toward the humanities.

Multidisciplinary and multimodal.

Links time, space, and culture dynamically.

Joins humanities and GIScience.



# Web 2.0 and Spatial Humanities

Space as the meeting ground and offers an integrated perspective on place

Web 2.0 as the toolkit; does not privilege a spatial technology or quantitative data

Open, participatory framework for experts and non-experts

# New Approaches

Neogeography

Participatory GIS

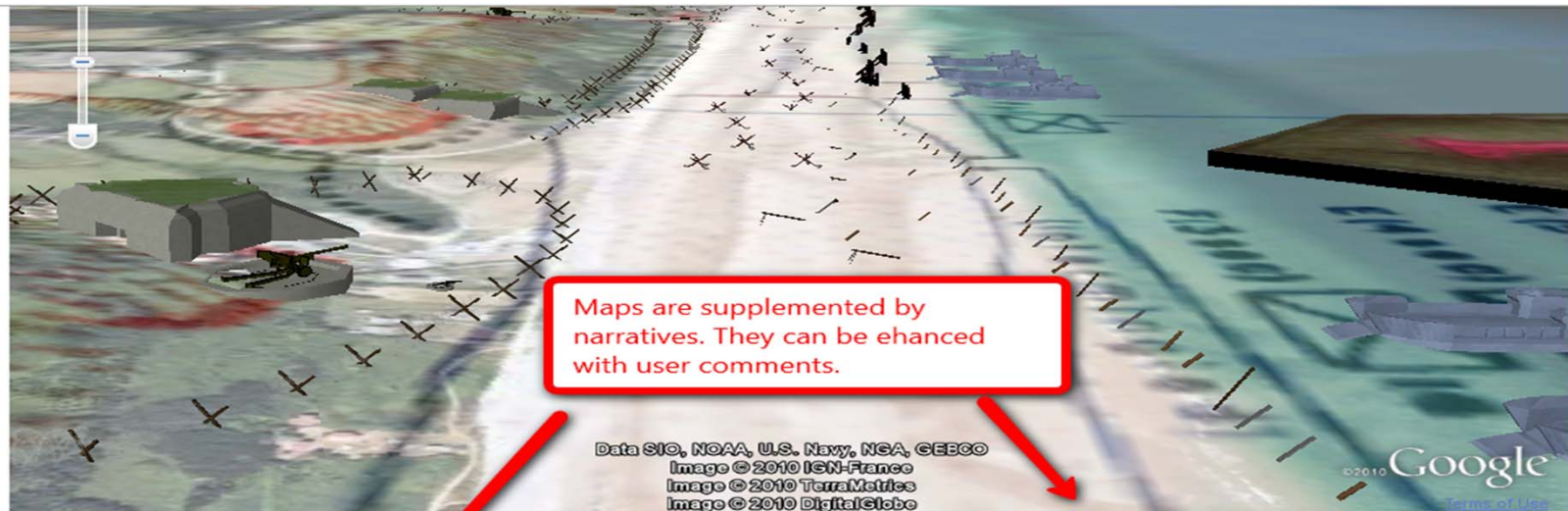
Volunteered Geographic Information (VGI)

Virtual globes and mash-ups

Gazetteers

Semantic searching

# Participatory GIS



## Omaha Beach

By [Sorin Adam Matei](#)

[Visible Past](#) > [Modern](#) > [20th Century](#) > [Omaha Beach](#)

Visible Past utilizes as one of its showcase mapping environments a model of Omaha Beach fortifications at the time of the Allies' landing on the morning of June 6, 1944 (D-Day). The model was produced by the Visible Past team.

Virtual Omaha Beach was built in Sketch up, a modeling platform distributed by Google for creating models compatible with the Google 3D mapping application Goggle Earth. The model includes the full set of two dozen German fortifications (Widerstandnest or in German military parlance WN) that the American 1st and 29th divisions encountered on the morning of 6 June 1944. Each WN includes a barbed wire enclosure and one or more points of fire: pillboxes, bunkers, mortar pits or field gun encasements. Many of the artifacts were provided by 3D weapons collections found at the Google Earth 3D Warehouse repository; some of them were reconstructions produced by the Visible Past team members. The 3D artifacts were selected and evaluated according to the historical literature dedicated to Omaha beach.

All artifacts were placed in the field according to information provided by historical

### About this map :

Map of Omaha Beach German fortifications (blue dropets) laid over the American operational map for June 6, 1944 (misaligned due to Google Maps limitations). Clicking the button "Google Earth" will show the 3d Model of the German fortifications and will correctly align the overlay map. Use upper left wheel to tilt the image. You might be prompted to download the [Google Earth 3D Plugin](#).

### YOUR COMMENT

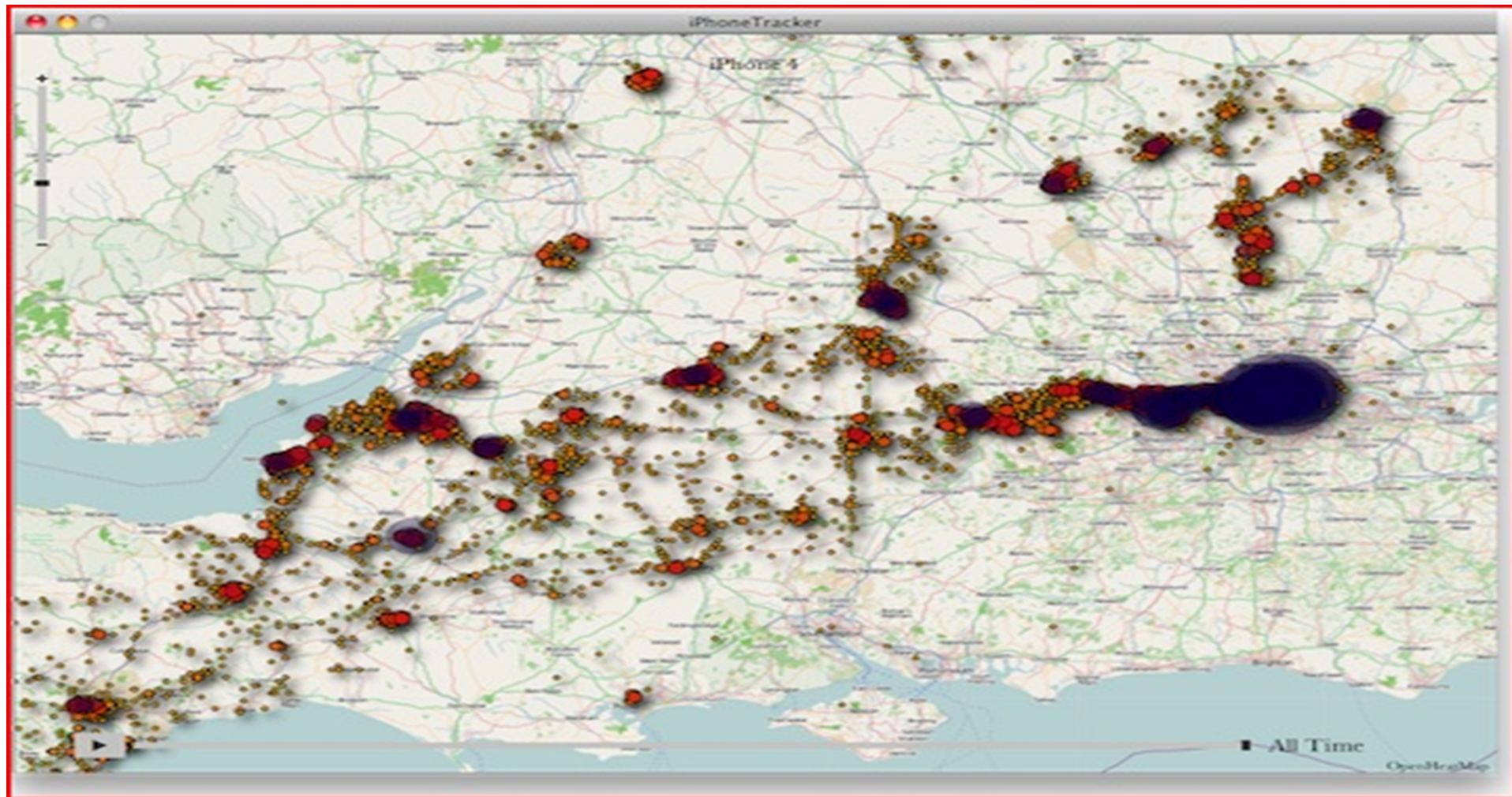
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Mail

Website

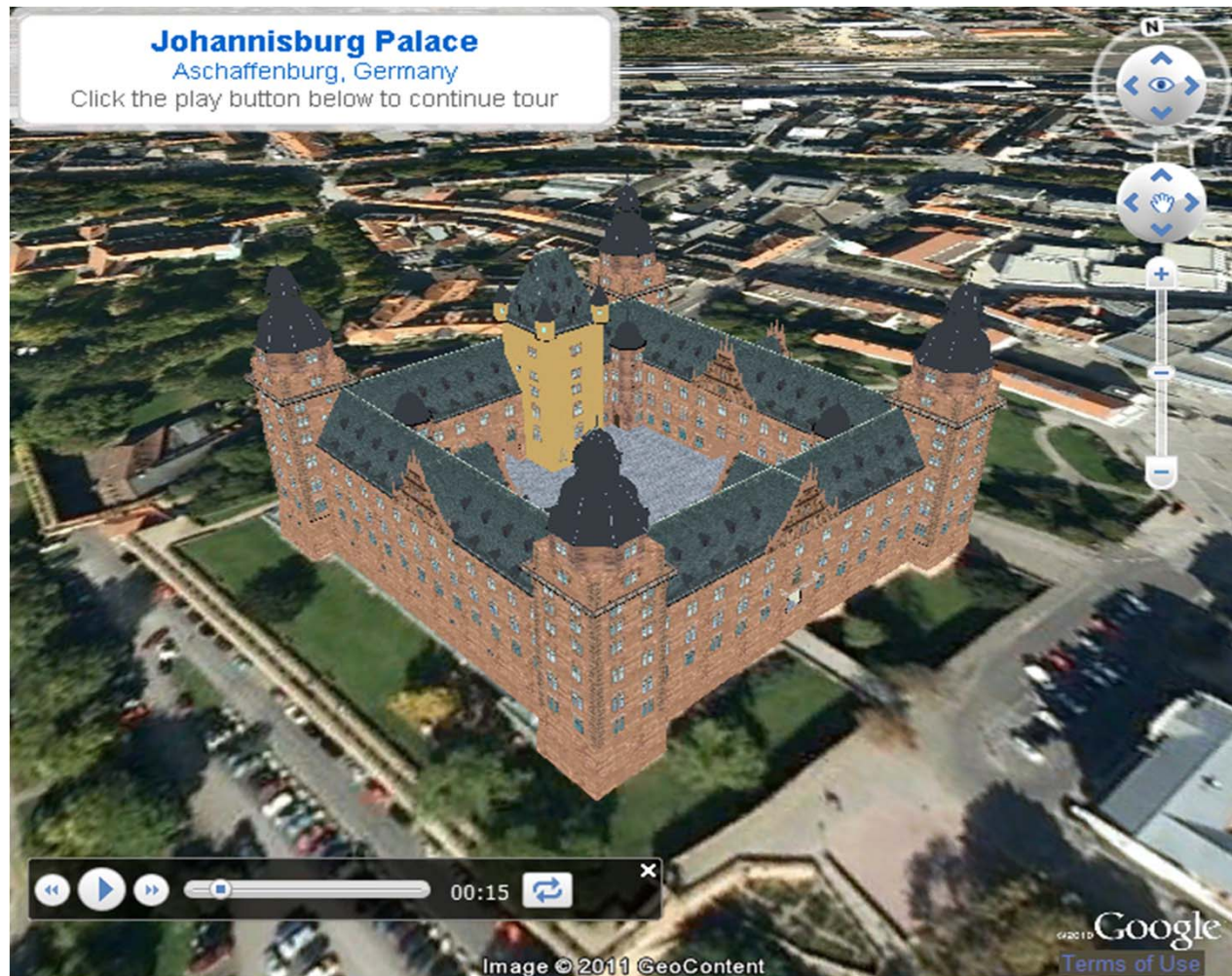


# VGI: A Week's Journey in Britain





# Virtual Globes



# Mash-ups



www.flickr.com



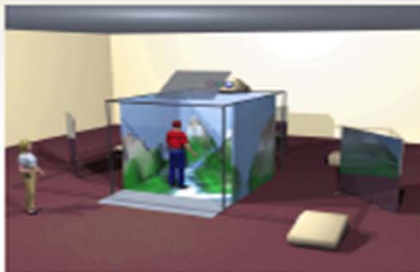
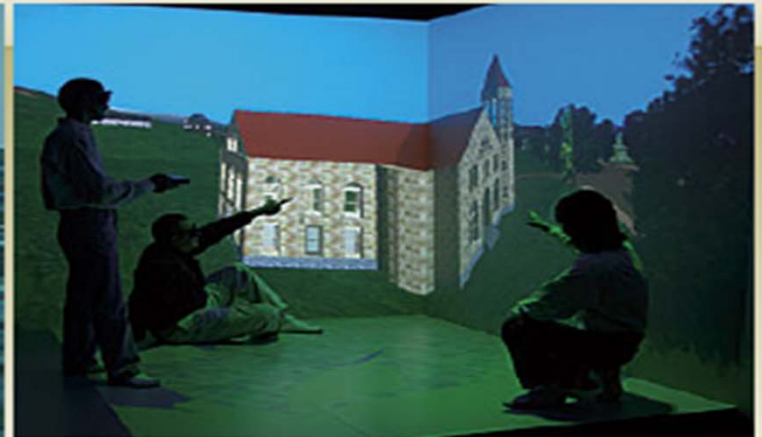
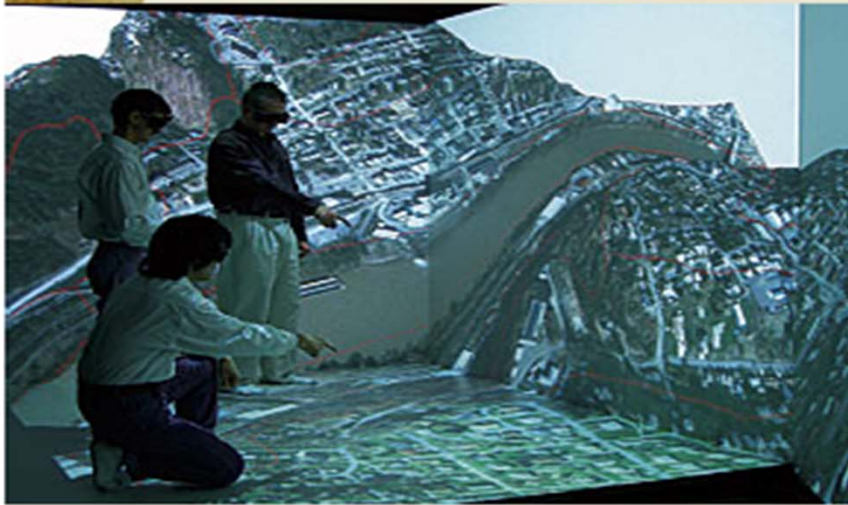
# Spatial 3D



# Immersive Visualization



Interactive, immersive, and experiential visualization



‘a sense of  
being there’





# Spatial Gaming

Serious gaming engine – XNA – using rules, rhetoric, avatars



# Spatial VR



Virtual Reality and GIS



# HyperCities.com

 **hypercities**

search

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hypercities :: HOW DOES IT WORK?

1935

1977

2007

- BEGIN IN THE PRESENT
- BROWSE, NETWORK, SEARCH, UPLOAD, & DOWNLOAD CONTENT BASED ON SPACE & TIME
- TRAVEL BACK IN TIME & CREATE FAMILY GENEALOGIES, MAKE THE PAST COME ALIVE.

Launch HyperCities

hypercities is a collaborative research and educational platform for traveling back in time to explore the historical layers of city spaces in an interactive, hypermedia environment.

## Recent Posts

[Presner delivers Plenary lecture at Coalition for Networked Information](#)  
presner | May 26, 2011 | In Uncategorized

[How to Add an ArcGIS Server Map to a Rich Object](#)  
David Shepard | May 19, 2011 | In How To

[HyperCities Now: Linking GIS and Twitter \(Japan, Egypt, Libya\)](#)

## Presner delivers Plenary lecture at Coalition for Networked Information

by presner | May 26, 2011 | In Uncategorized

no comments

Todd Presner delivers the keynote lecture at the Coalition for Networked Information (April 2011): "HyperCities; Using Social Media and GIS to Archive and Map Time-Layers in Berlin, Los Angeles, Rome, Tehran, and Cairo."

CNI: HyperCities: Using Social Media and GIS to...



# Cities through time





# Berlin 1650 and 2011

The screenshot displays the Hypercities website interface. At the top, a timeline ranges from 1200 to 2050, with markers for 1237 and 2011. The main map area shows a satellite view of Berlin, with a historical map overlay showing the city's layout in 1650. The right sidebar contains a search bar, a world map, and a list of historical maps. The bottom of the page features the Hypercities logo and copyright information.

**WORLD** **SEARCH** **LOGIN** **HELP**

1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050

1237 2011

Satellite

POWERED BY Google

☒ automatically refresh maps and collections

**MAP (41)** **COLLECTION**

**Berlin** **1237** Berlin 1237

**1650** Berlin 1650: Nach

**1688** Die Churfürstliche

**1710** Le Veritable Plan de la

**1723** Plan von der Konigl:

**1745** Abriss der KÄniglichen graphic

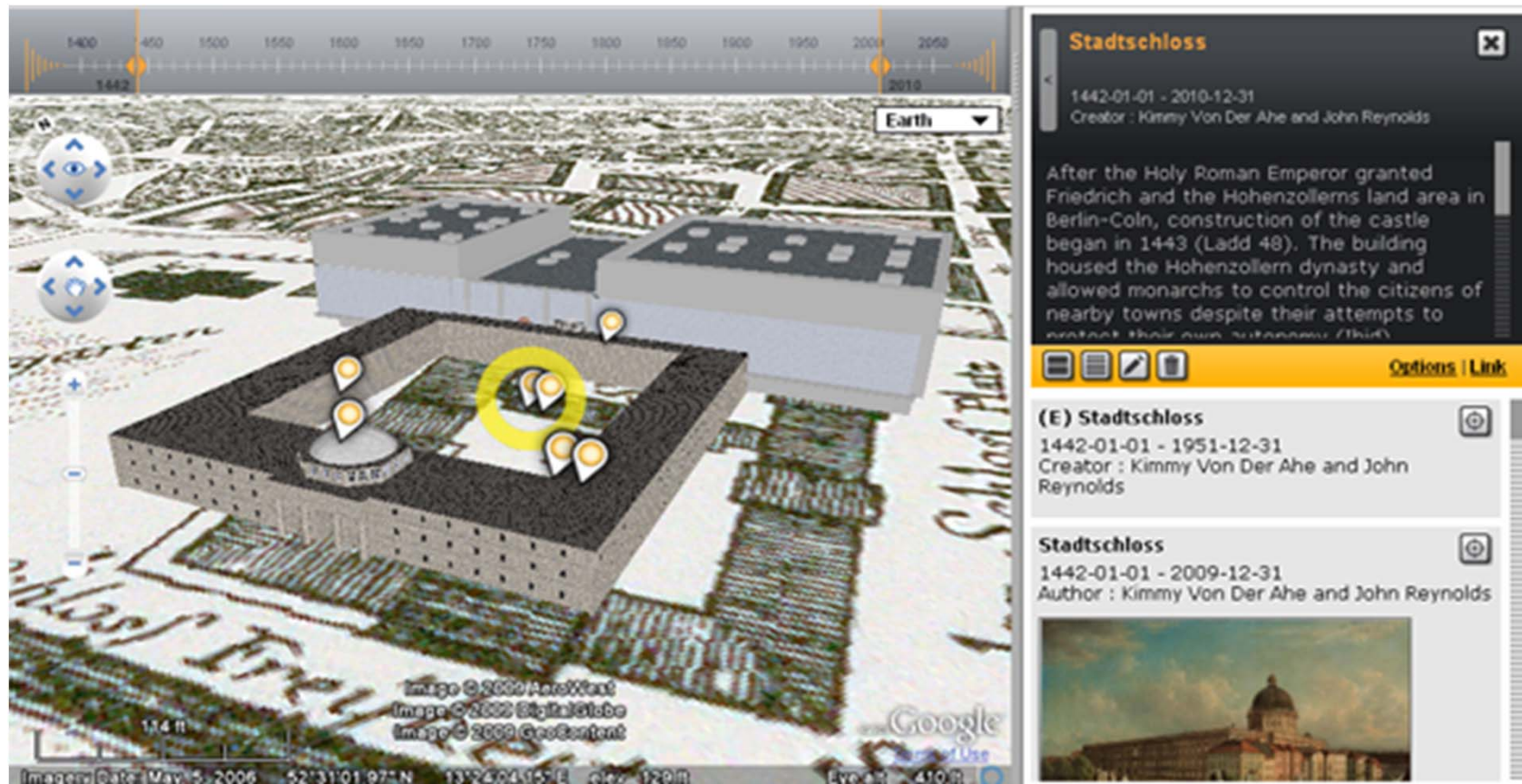
**BERLIN** **1237** - **2011**

Imagery ©2011 DigitalGlobe, GeoContent, AeroWest, Cnes/Spot Image, GeoEye - Terms of Use

hypercities



# Spatial 3D



# Integration

The screenshot displays the 'Ghost Metropolis' interactive map interface. At the top, a large, colorful, semi-transparent map of Los Angeles is shown, overlaid on a historical map. Below this, a horizontal strip of eight small, black-and-white historical photographs is displayed. The interface includes several navigation and information elements:

- NarrativeOne**: A label in the top left corner.
- About**: A label in the bottom left corner.
- Credits**: A label in the bottom right corner.
- Navigation and Information Links**: A series of links at the bottom, including **NarrativeOne**, **Photographic Narrative**, **infinite Landscapes of the Motion Picture Industry**, **Oiling Los Angeles**, **Aerial Supremacy**, and **Text Narrative**.

**GHOST METROPOLIS: LOS ANGELES, 1542-2000**  
By PHILIP J. ETHINGTON  
History and Political Science, University of Southern California  
*Programming by Dave Lopez*  
IML, School of Cinematic Arts, University of Southern California



# New Forms of Scholarship

Los Angeles and the Problem of Urban Historical Knowledge


Home Essay Locations Concepts Genres Maps

**Philip J. Ethington**  
History Department, University of Southern California

**Los Angeles and the Problem of Urban Historical Knowledge**

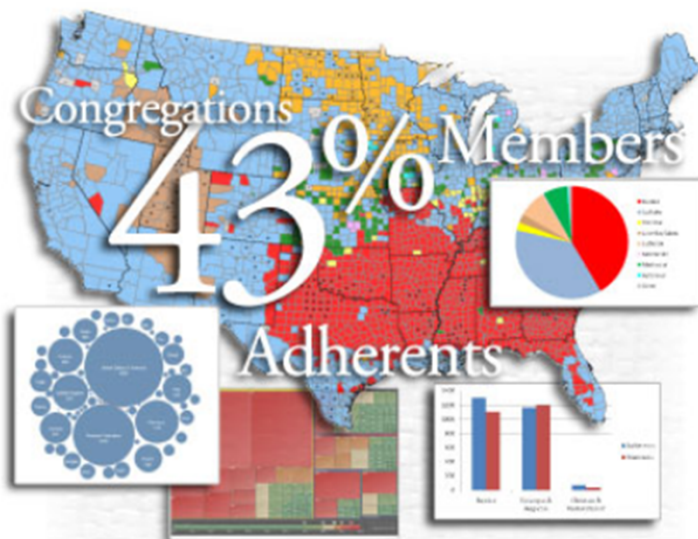
*A Multimedia Essay to Accompany the December Issue of The American Historical Review, published by the [historycooperative.org](http://historycooperative.org) December 2000*

Preface





## Your Tool for Visualization of Complex Data

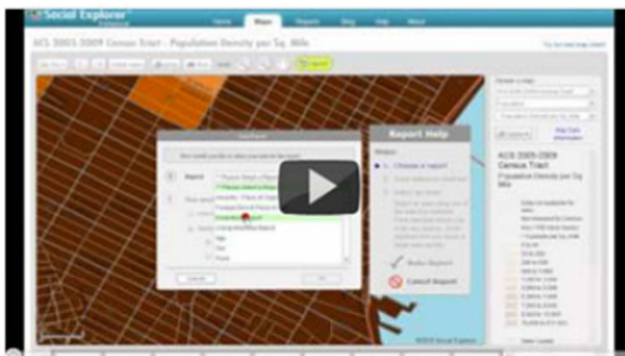


### How to Use This Site:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin blandit condimentum rhoncus. Fusce sed augue nec augue venenatis sollicitudin eu sed turpis. Nunc urna orci, mollis volutpat gravida at, lobortis ut turpis.

Sed quis ligula nulla, eget pharetra sapien. Morbi convallis adipiscing nisi vitae accumsan. Nullam ac libero at mi aliquam rutrum. Nam scelerisque placerat est ac cursus. Phasellus consequat, enim nec auctor cursus, lacus nunc laoreet leo, sit amet viverra purus tortor quis leo.

Nullam ac libero at mi aliquam rutrum. Nam scelerisque placerat est ac cursus. Phasellus consequat, enim nec auctor cursus, lacus nunc laoreet leo.



0:00 / 4:59

### Introductory Text

Sed quis ligula nulla, eget pharetra sapien. Morbi convallis adipiscing nisi vitae accumsan. Nullam ac libero at mi aliquam rutrum. Nam scelerisque placerat est ac cursus.



### DATA SEARCH

#### Religion

☐ Dominant Denomination

☒ Select one or more  
DENOMINATION FAMILIES

- ☐ Baptist
- ☐ Catholic & Orthodox
- ☐ Christian & Restorationist
- ☐ Episcopal & Anglican
- ☐ Lutheran
- ☐ Etc.
- ☐ Baptist
- ☐ Catholic & Orthodox
- ☐ Christian & Restorationist
- ☐ Episcopal & Anglican
- ☐ Lutheran
- ☐ Etc.
- ☐ Baptist
- ☐ Catholic & Orthodox
- ☐ Christian & Restorationist
- ☐ Episcopal & Anglican
- ☐ Lutheran
- ☐ Etc.

☐ Select one or more DENOMINATIONS

☐ Filter by Religious Attribute

☐ Create a Custom Topology or Attribute

Compare

Combine Totals

☒ Space (Geography)

☒ Time

☒ Demographic Context

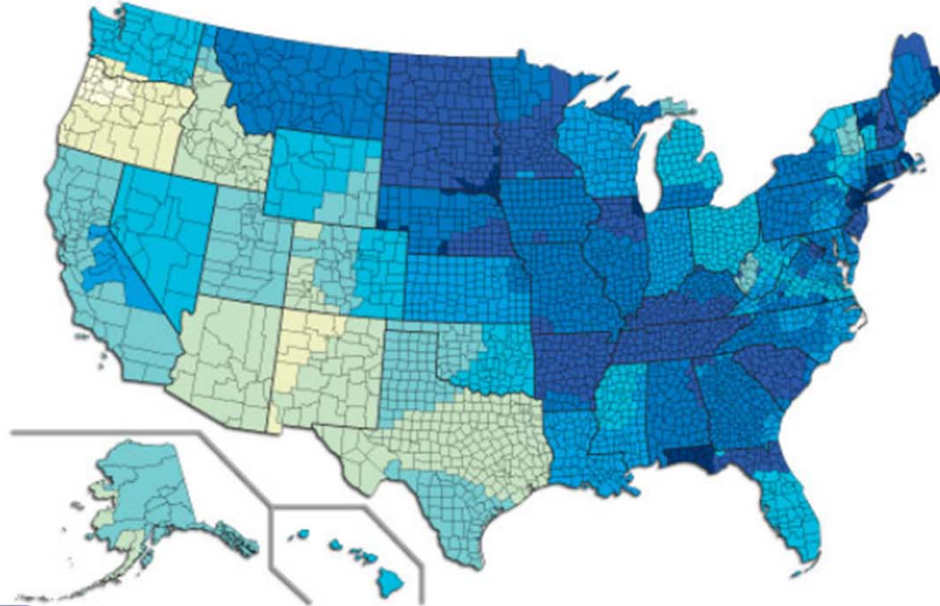
SEARCH

Search Result Title

Save Search

Save Workspace

DATA SEARCH



#### TOOL BOX

##### Legend

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur magna erat, porttitor vel placerat eget, ullamcorper a ligula. Integer id elit magna. Cras at purus risus, vitae

- ☒ Baptist
- ☒ Catholic & Orthodox
- ☒ Christian & Restorationist
- ☒ Episcopal & Anglican
- ☒ Reformed
- ☒ Holiness
- ☒ Lutheran
- ☒ Other

#### Data Tools

Find

Download Data

Permalink

Print



SPEED

#### SLIDESHOW



Click Here  
to Save  
Current Map

Click Here  
to Save  
Current Map

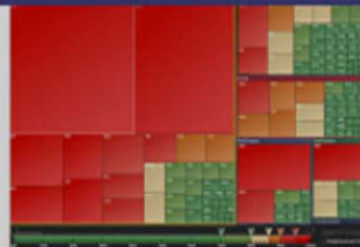
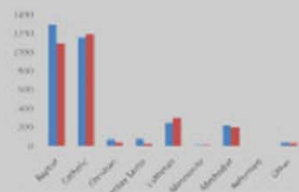
Click Here  
to Save  
Current Map

Click Here  
to Save  
Current Map

#### OTHER GRAPH RESULTS



- ☒ Baptist
- ☒ Catholic
- ☒ Christian
- ☒ Episcopal
- ☒ Lutheran
- ☒ Methodist
- ☒ Presbyterian
- ☒ Reformed
- ☒ Other



#### Religion

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☒ Select one or more

DENOMINATION FAMILIES

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SEARCH

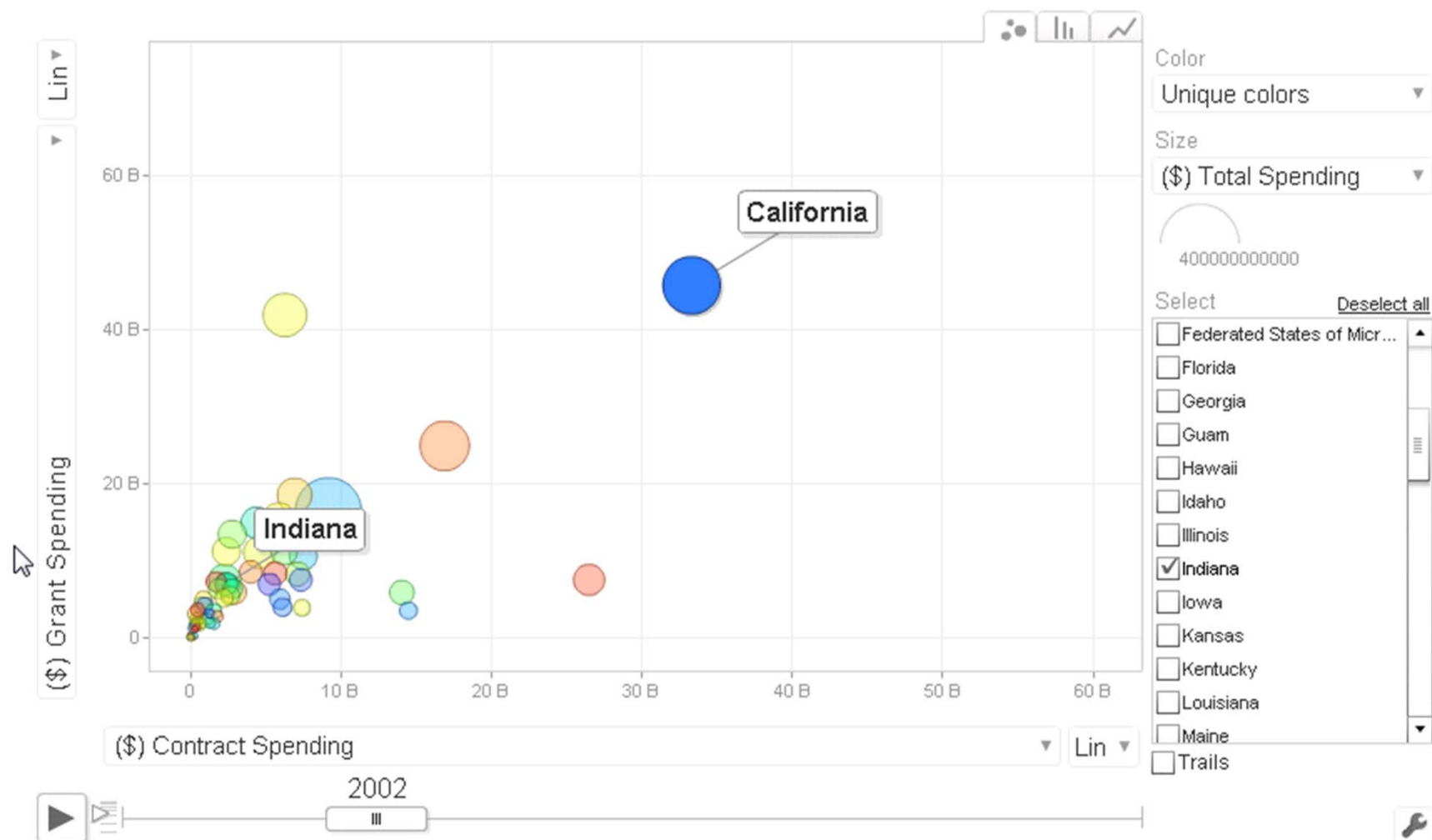
Configure Data

Graph View

List View

Report Data Issues

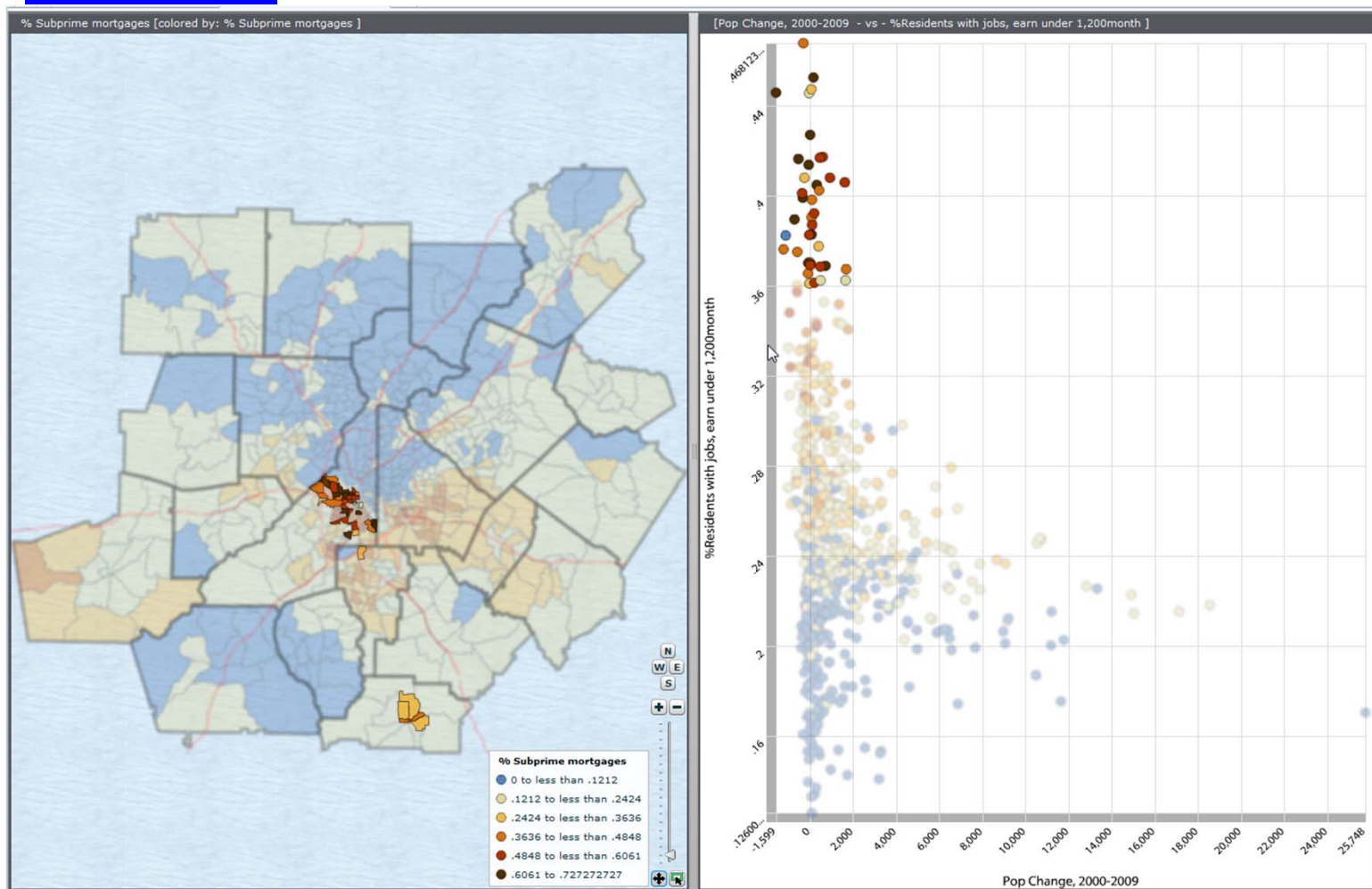
## Total Federal Spending





# Exploratory Spatial Data Analysis

## Website



# Technology Used

	Digital Atlas of American Religion	Digital Scholars Lab
Databases	<ul style="list-style-type: none"> <li>• PostgreSQL and MySQL relational databases</li> <li>• Neo4J graph database</li> </ul>	<ul style="list-style-type: none"> <li>• PostgreSQL and MySQL relational databases</li> </ul>
GIS Data and Spatial Functions	<ul style="list-style-type: none"> <li>• PostGIS extension of PostgreSQL</li> </ul>	<ul style="list-style-type: none"> <li>• PostGIS extension of PostgreSQL <i>for point data</i>;</li> <li>• GeoServer <i>for serving polygon and raster data</i></li> <li>• Google Maps/Google Earth</li> </ul>
Programming	<ul style="list-style-type: none"> <li>• Microsoft .NET</li> <li>• Adobe Flex</li> <li>• SQL</li> </ul>	<ul style="list-style-type: none"> <li>• Python</li> <li>• PHP</li> <li>• JavaScript</li> <li>• SQL</li> </ul>

# Programs Used for Visualizations

## Digital Atlas of American Religion

Visualization component	Adobe Flex	IBM Elixir	Weave
Maps	X	X ?	
Tree Map	X	X	
Bar Charts	X	X	
Pie Charts	X	X	
Bubble Charts	X	X	
Line Charts	X	X	
Cartograms	?	?	
Exploratory Spatial Data Analysis	?		X

## Digital Scholars Lab

Visualization component	Adobe Flex	Google Charts/ Maps API	ArcGIS/ AfterEffects	JavaScript/ OpenLayers	Geo Server
Point Data Maps				X	
Heat Maps				X	X
Line Graphs		X			
Animated maps			X		
Voting America Interactive	X				

# Future of Spatial Humanities

A unique post-modern scholarship with real and conceptual space as an integrating and animating framework :

Visual and experiential

Multiple perspectives

Complex environments

Simultaneous events

# Opportunities for Spatial Humanities

Life paths and spatial narratives

Networks

Virtual reality/immersion

Gaming and simulations

Practice theory

Deep mapping/deep contingency



# New Vision

New collaboratories that allow

- Retrieval
- Contextualization
- Hypothesis building
- Flexible narration
- Integration into knowledge networks

Virtual Research Laboratories(VRL)

- GRID+Web 2.0+Spatial Technologies

NEH Advanced Institute for Explorations  
in the Digital Humanities

**Spatial Narrative and Deep Maps:  
Explorations in the Spatial Humanities**

**June 18-29, 2012**

**The Polis Center, Indianapolis**

# Spatial Narratives

Time geography

Text mapping

Geospatial semantic web

But how to:

- Capture experiential/metaphorical space?

- Enable deep contingency? Integrate structure, process, event? Space, time, place?

- Understand the situatedness of the narrator(s)? Represent the narrative(s)?

# Deep Mapping

Multi-media

Multi-layered

Open to negotiation

Famed as conversation

Visual and immersive

Allows multiple narratives

Includes the discursive, ideological, and  
emotional meanings of place(s)

# Themes

Competing spatial schemes (geographical/conceptual)  
Discontinuous space and time  
Imagined communities  
Negotiating space  
Movement/flux  
Scale (autonomous, discontinuous, intersecting, competing)  
Spatio-temporal networks  
Spatial and temporal fluidity  
Emergent realities  
De-territorialization/re-territorialization  
Recursivity/Process

# Dynamic Map Space

## Characteristics

- Alternate realities
- Fluid conceptions of space
- Simultaneity
- Multi-nodal/multi-perspective
- Multi-scalar
- Movement
- Alternate mapping schemes
- Linked space /time
- Discontinuous time/space/scale
- Robust visualizations

