ECAI Vision

- Advancing scholarship and understanding by encouraging greater attention to *TIME* and *SPACE*

- Demonstrating the value of *Using a Time and Space* interface

- *Building Virtual* collections of cultural information using *Time and Space* as a framework for integration

- *Creating a Digital Library* of distributed cultural resources contributed by scholars all over the world
Initial Successes (Then)

- Community Development & Conferences
- Central Infrastructure
  - ECAI Clearinghouse of distributed spatio-temporal data
- TimeMap System
  - Atlas Creation and Browsing Tools
- Cultural Atlases
  - Sasanian Seals
  - NARA – North American Religion
  - Silk Road Atlas
  - North American Missions
  - ECAI Iraq……. And many more
Instruments called ney or nai include end-blown and side-blown flutes. The end-blown ney of Turkey and Iran is made from the stem of a bamboo plant, and is played using a unique technique. The player rests the end of the instrument against his teeth at the side of his mouth and blows across the top. His teeth and tongue shape the sound. Side-blown neys are played by blowing over a hole in the side of the instrument. They may be
French and Spanish Missions in North America

Dynamic TimeMap of Mission History

- Missionaries
- Population Records for North America
- Epidemics Recorded at North American Missions
- Institutions Associated with North American Missions
- Indian Tribe
- Commodity
- Religious Order
- French Missions
- Spanish Missions
- North American Missions
- States
- World Lakes
- Rivers


Time ranges: 1751/1/1 0:00 ~ 1854/1/1 0:00

Zoom: 70000

North American Mission History Home
Introduction

ECAI IRAQ is a temporal-spatial portal into existing digital resources about history, cultural sites, archaeological excavations and heritage preservation initiatives. Users can access these information sources using interactive, time-enabled thematic maps.

The data, that can be displayed for the Iraqi and Mesopotamian material culture, is found on hundreds of web sites around the world. ECAI IRAQ catalogs this material in a dynamic database and provides retrieval of information from these distant servers. Owners of these resources retain control of their content and the ability to update it at any time.

By using time and space to integrate the large number of digital resources, ECAI IRAQ attempts to address one aspect of the current crisis of Iraqi cultural heritage.
Era & Empires

Roll over the blue segments of the timeline and time ranges for the eras/empires will appear. Clicking on the time range for an era/empire will take you to its profile.

This list shows names for time periods associated with historical empires, city-states, and archaeological periods in the Iraq and Mesopotamian region. Each era/empire has a profile that can be accessed through the list or via the segmented timeline above.

Each profile displays a detailed timeline segment. Information available in the profile includes links to abstracts from a variety of sources, artifacts, collections, history, maps, news, and other relevant documentation.
Era & Empires Profile

View Dynamic Map for: 8000 BCE to 3000 BCE

Ubaid Period

Library Books

Mevyl Library Catalog records pertaining to Ubaid Period provided by: Cheshire

Abstract

- Ubaid Culture hosted by: British Museum Compass
- Ubaid culture - Mesopotamia: Prehistoric period, c. 6000 - 4000 BC hosted by: Grove Dictionary of Art Online

Source: U.S. Department of State, Bureau of Educational and Cultural Affairs

Artifacts and Collections

- Archaic Mesopotamia - Includes Al-`Ubaid (5-4th millennium, South Mesopotamia) hosted by: Images from history, University of Alabama at Birmingham
- Prehistoric Baked-Clay Female Figurine hosted by: U.S. Department of State, Bureau of Educational and Cultural Affairs
Prehistoric Baked-Clay Female Figurine
Original Challenges

Practical Issues

- How to find contextual or background information for my project?
- Should we use GIS? What about expressing time?
- What metadata standards should we use?
Theoretical & Academic Issues

- How do you quantify that?

- How do you define place? And what do boundaries mean?

- What do you do about missing, incomplete, contested, or not very precise information?

- How do you make the source and accuracy/precision of the information you use clear to the end user?
Integration Issues

- How do I make it possible for my information to be integrated into a larger system?

- How do I make my digital project persistent or at least have as much longevity as possible.

- How can I allow users to customize their view of my data to their own needs?

- How do we encourage a bottom up approach, encouraging people to contribute to a distributed system?
Global Developments (Now)

In the last two years significant changes have occurred in the following areas with accompanying impacts on the development of cultural atlases.

- Time and Space
- User skills
- Data availability
- Data quality
- Integration
New time and space interfaces and digital Earth browsers

For example:

- Google Earth provides a virtual 3D space and a linear time bar
- Simili presents a zoom-able time bar and separate map interface
- Custom built displays using dynamic web development technologies
ECAI Google Earth Browser
World Regions, 1800–1900 A.D.
Technology needed to support high quality electronic cultural atlases will only continue to improve over time.

The availability and accessibility of tools for both users and developers continually improves.

What is the future of GIS and specialized GIS systems. How will they be integrated into an overall system with other spatial technologies?
New User Communities

- Both creators and consumers...

- Web users are now familiar with using interactive maps
  - Mapquest, Google Maps, traffic maps, etc

- Larger community of people creating content

- More content being created w/ spatio-temporal context
The Three Gorges Dam (Simplified Chinese: 三峡大坝; Traditional Chinese: 三峽大壩; pinyin: Sānxiá dàbà; Chángjiāng Sānxīxià Dàbà), also known as the Qiantao Dam, is a Chinese hydroelectric dam which spans the Yangtze River in Sandouping, Hubei, China. As of 2023, it is the largest hydroelectric dam in the world.

The dam is made of concrete and is about 2,335 m (7,661 ft) long, and 185 metres (607 ft) high. The project used 28,000,000 cubic metres (97,000,000 cu ft) of concrete, 134,000,000 m³ (175,000,000 cu yd) of aggregate, and 39.3 cu km (9.43 cu mi) of water, half of which was pumped back into the river. The Three Gorges Dam project is capable of producing 22,500 MW of power, with an expected annual electricity generation of 84.7 TWh, making it the second largest hydroelectric generator in the world, after Itaipu, which generates 93.4 TWh annually.

The concept of the dam was envisioned by Sun Yat-sen in *The International Development of China* in 1919. After the People's Republic of China was founded, several leaders were tempted to start the dam but with limited
BBC Story on Saffron Revolution
Timeline: Burma
A chronology of key events

1057 - King Anawrahta founds the first unified Burmese state at Pagan and adopts Theravada Buddhism.

1287 - Mongols under Kublai Khan conquer Pagan.

1531 - Toungoo dynasty, with Portuguese help, reunites Burma.

1755 - Alaungpaya founds the Konbaung dynasty.

1824-26 - First Anglo-Burmese war ends with the Treaty of Yandabo, according to which Burma ceded the Arakan coastal strip, between Chittagong and Cape Negrais, to British India.

1852 - British annexes lower Burma, including Rangoon, following the second Anglo-Burmese war.

1885-86 - Britain captures Mandalay after a brief battle; Burma becomes a province of British India.

1937 - Britain separates Burma from India and makes it a crown colony.

Japanese occupation

1942 - Japan invades and occupies Burma with some help from the Japanese-trained Burma Independence Army, which later transforms itself into the Anti-Fascist People's Freedom League (AFPFL) and resists Japanese rule.

1945 - Britain liberates Burma from Japanese occupation with help from the AFPFL, led by Aung San.
Google Earth provides a complete set of current contextual spatial data to use as background for cultural information.

A large amount of spatially referenced contextual and cultural data is showing up on the web daily.
Bégram

MUR D'ENCEINTE
Peer Production

- From team work to crowd sourcing…
- Cultural data is engulfing us…
Hagia Sophia Mosque, Istanbul Turkey

Panoramio

Hagia Sophia Mosque, Istanbul Turkey
in Kadikoy, Istanbul (Turkey)

Upload your photos to Panoramio.com »

Comment it

Directions: To here – From here

Photograph by S.M.
Tourl - www.tourlweb.no
Istanbul, Hagia Sophia

Panoramio

Istanbul, Hagia Sophia

in Kadıköy, Istanbul (Turkey)

Upload your photos to Panoramio.com »
Comment it

Directions: To here – From here
Data Quality

- Data quality becomes a bigger issue as quantity increases
- Authors and users need to be able to quickly identify sources and evaluate the quality of digital resources
- Figuring out how to create quality data is still difficult when there are more technical choices and more ‘experts’
- The complexity of each type of cultural data is increasing exponentially
Scans reveal lost gravestone text

By Cristina Jimenez

Illegible words on church headstones could be read once more thanks to a scan technology developed in the US.

Scientists at Carnegie Mellon university are making high resolution 3D scans of tombstones to reveal the carved patterns in the stone.

A computer matches the patterns to a database of signature carvings which reveals the words.

The technique could one day also be used by doctors to examine a patient's tongue for signs of illness.

Scientists often find it difficult to distinguish between natural phenomena and man-made art works carved into stone, due to the build-up of algae and surface dirt.

At the moment, archaeologists are forced to do hand-tracing work with plastic sheets and to examine objects first hand in order to decipher obscured writings.

Carved figures

And sometimes, it is just impossible to read what lies beneath the dirt.

The new scanning method detects carved figures such as writings and drawings through 3D scans and computer analysis.
 Integration

- Cultural atlas design and development
  - challenges increase as the amount and complexity of available information increases

- Linking of digital resources into integrated services
  - Requires different types of tools to effectively navigate between the different contextual dimensions

- User expect to collect the information they are interested into portfolios and use them in a variety of visualization modes
Creating a new generation global digital library

- eScience, Grid, semantic web, digital library reference collection development, new media interfaces….

- People in many fields are contributing to a growing integrated infrastructure
New Questions (The Future?)

- Practical – Many new questions
- Scholarly questions - Haven’t gone a way
- Integration – New opportunities
How do we identify the resources we need from the plethora of those created?

How do we truly know the source or author of the information and evaluate the quality of the Internet resources?

Where is the library like reference works to help index, identify, and contextualize all the information?
Google Search in Google Earth

e.g., San Francisco
blue mosque Istanbul

Printable view

- Istanbul - The Blue Mosque
  Traces in the Sand posted a photo: Stand as a counterpoint to the...
- Istanbul - The Blue Mosque
  Traces in the Sand posted a photo: The Blue Mosque at night during...
- Blue Mosque, Istanbul, Turkey
  Truly an impressive sight, especially during Ramadan. At night during...
- Blue Mosque, Istanbul, Turkey
  Tina Chadha Blue Mosque, Istanbul, Turkey
- Blue mosque, Istanbul
  kippefinger posted a photo:
- Blue Mosque, Istanbul, TUR
  (sightseeing info) aka Sultan Ahme Mosque
- Istanbul Blue mosque
  See description at maps.nomocom.com
- Blue mosque (Sultan Ahmed Mosque), Istanbul,...
Complexity of Cultural Data

How can new forms of cultural data be integrated into atlases.

- Are there creative ways to address issues of handling large amounts of cultural data?
  - The thousand images at one point becomes a real problem. This is no longer just hypothetical in the era of digital cameras and cell phones.

- How should three dimensional and virtual reality data be integrated into cultural atlases or vice versa how can virtual reality include more contextual and source information?
Orissa Temples Project
What about preservation…. Now it’s getting to be a really BIG problem

How can we work together to make a global system of cultural atlases?

integrating both the individual scholars work and the large projects funded and administrated by national, regional, and global organizations
Current Projects and Approaches

- Maintain access to the current ECAI resources
- Provide a portal for access to Cultural Atlas examples
- Make a variety of spatio-temporal data types available and accessible
- Experiment with new models of atlases using Google Earth
Batanes Islands Cultural Atlas

This Website is a Cultural Atlas that includes maps, a timeline, and images of Batanes. Batanes is the northern most provence of the Philippines. It is comprised of 10 islands, three of which are occupied. The islands have a long history beginning with prehistoric people who traveled among the Batanes Islands and to and from Luzon, Orchid Island (Lan-yu), and Taiwan.

**Highlight:**  [Google Earth Batanes Atlas](#)
If you have Google Earth installed you can click on the link and it will load the Atlas.
(If you need to install Google Earth see [here](http://earth.google.com/))
Diura fishing village, Batan

Boats on shore looking at Mt Iraya

Boats on shore looking at Mt Iraya

Boats on shore looking at Mt Iraya

Boat Making

Boat Making

Boat Making

Boat Making
Research Projects

- Participating in a current generation of development projects focusing on specific sub-tools
  - Enhanced timeline functions
  - Gazetteer development tools
  - Biography markup tools and standards
  - Specialized peer production systems for community participation in information collection.

- Religious Atlas of China & Himalaya
- Supporting the Learner: What Where When Who
Religious Atlas of China and Himalaya

Menu

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Browse by:
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...During the 5,000 years of Chinese history, Daoism and indigenous practices flourished in every region of the realm.

Foreign religions including Buddhism, Zoroastrianism, Islam, and Christianity, entered and spread throughout China......
Search and Display by Location

**USA State** — **Major Cities** — **Countries**

- **Select State**
- **Select City**
- **Select Country**

**Afghanistan**

**Historical events which occurred in or near......**
- Click on the plus sign to expand/collapse
  - Saur Revolution, 1978, Afghanistan
  - Soviet occupation, 1979-1989, Afghanistan

**People**
- Click on the plus sign to expand (minus sign to collapse)
  - Amin, Hafizullah, president of Afghanistan, 1929 to 1979
  - Karmal, Babrak, president of Afghanistan, 1929 to 1996

**MET Timeline of Art History**
- Click on the plus sign to expand (minus sign to collapse)

**Art and Architecture Slide Library**
- Afghanistan, Asia

**Cultural Atlases**
- Bagram Ivory and Bone Carvings, ECAI UCB
- ECAI Silk Road Atlas, ECAI
- ECAI South Asia - Examples, ECAI
Development Project Examples

- The Cultural Atlas Portal
- Ivories of Begram, Afghanistan
- Batanes Cultural Atlas
- IMLS4W - Time Period Directory
- Religious Atlas of China and the Himalaya

Live Link .... ECAI.org