

PNC Osaka 21 Sep 2002



Recent developments in Time Map

Ian Johnson

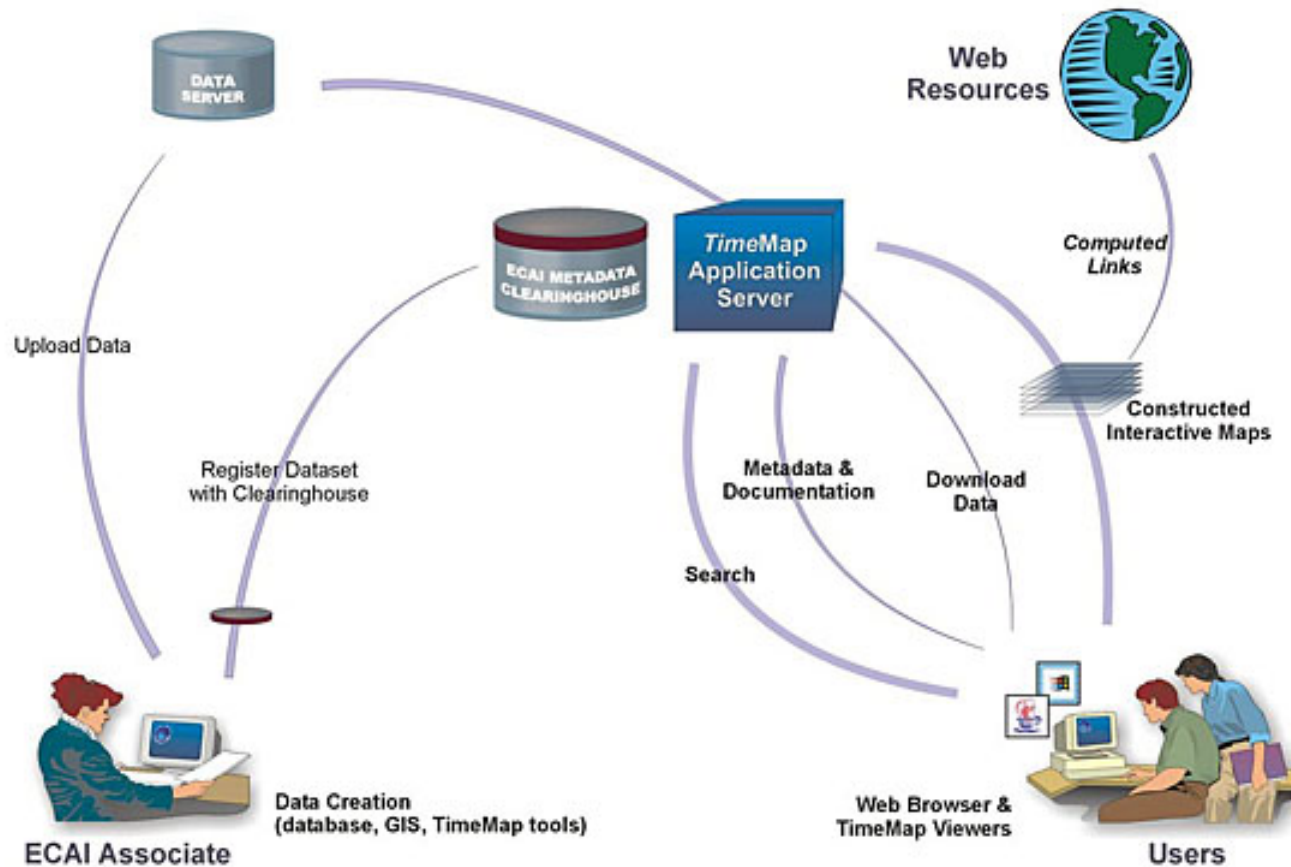
Archaeological Computing Laboratory
Spatial Science Innovation Unit

University of Sydney



The University of Sydney
AUSTRALIA

ECAI Structure





TimeMap Tools


- Clearinghouse management
 - TimeMap publishing tools (TMView/TMEdit)
 - TimeMap Java mapping applet for interactive maps on the web (TMJava)
-
- Datasets
 - MapSpaces




Why Interactive (Time) Maps?

- Unlimited map variants
- Spatial detail
- Pull together data sources
 - Distributed data
 - Overlaying information
- Time
 - Dynamic queries
 - Animation
- Contextualisation
 - Hot-link objects on map to URLs

ECAI Clearinghouse Search



Electronic Cultural Atlas Initiative






TimeMap

Developed by University of Sydney
TimeMap® Project

Clearinghouse Search

[About the Clearinghouse](#)

1. Find area of interest

2. See info - click or drag box

3. Set search area (drag box)

4. Enter keywords
5. Show:
 - Datasets
 - MapSpaces
 - Rated Datasets
 - All datasets
6. Sort by
[ECAI Registration Number]
7. **Search**

48.05, 73.22
Zoom: 39774 km

- TimeMap Mapspaces
- TimeMap Datasets
- Lat/Long Labels
- Country Labels
- Rivers
- Fifteen Degree Grid
- World Background

v2.0.36

Full: 0/1/1 0:0:0 - 2005/1/1 0:0:0
Sel.: 0/1/1 0:0:0 - 2005/1/1 0:0:0

Longitude limits: W to E -ve W of Greenwich

Latitude limits: N to S -ve S of equator

Time limits: CE to CE -ve for BCE

Search in: Include descendants



Data Publishing





Data publishing (step 1 of 3)

Place data on server

- Web server
- MrSID server
- SQL server

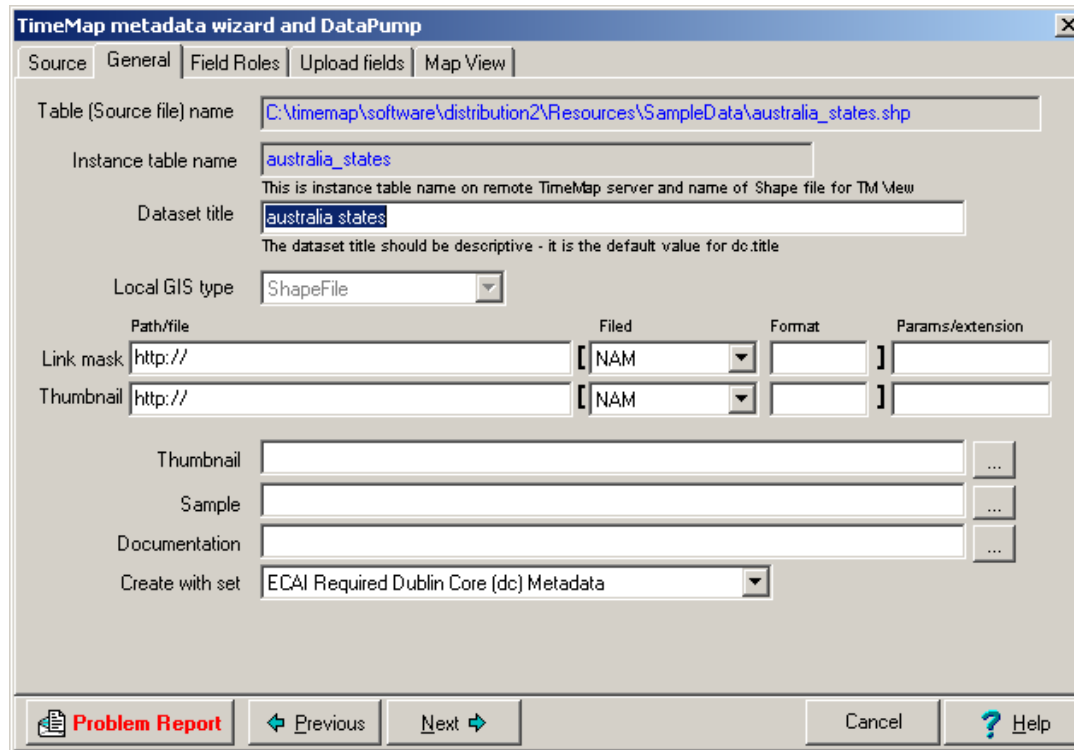
1. Shapefile, DBF, CSV, JPG, GIF
2. SID file (MrSID compression e.g. in ArcGIS)
3. MySQL, MSSQL, Interbase, Sybase, Oracle, Informix, others ...

DataPump tool

Data publishing (step 2 of 3)

Create metadata

TMEdit
Metadata
wizard



TimeMap metadata wizard and DataPump

Source | **General** | Field Roles | Upload fields | Map View

Table (Source file) name: C:\timemap\software\distribution2\Resources\SampleData\australia_states.shp

Instance table name: australia_states
This is instance table name on remote TimeMap server and name of Shape file for TM View

Dataset title: australia states
The dataset title should be descriptive - it is the default value for do.title

Local GIS type: ShapeFile

	Path/file	Filed	Format	Params/extension
Link mask	http://	[NAM]	[]	[]
Thumbnail	http://	[NAM]	[]	[]

Thumbnail: [] ...

Sample: [] ...

Documentation: [] ...

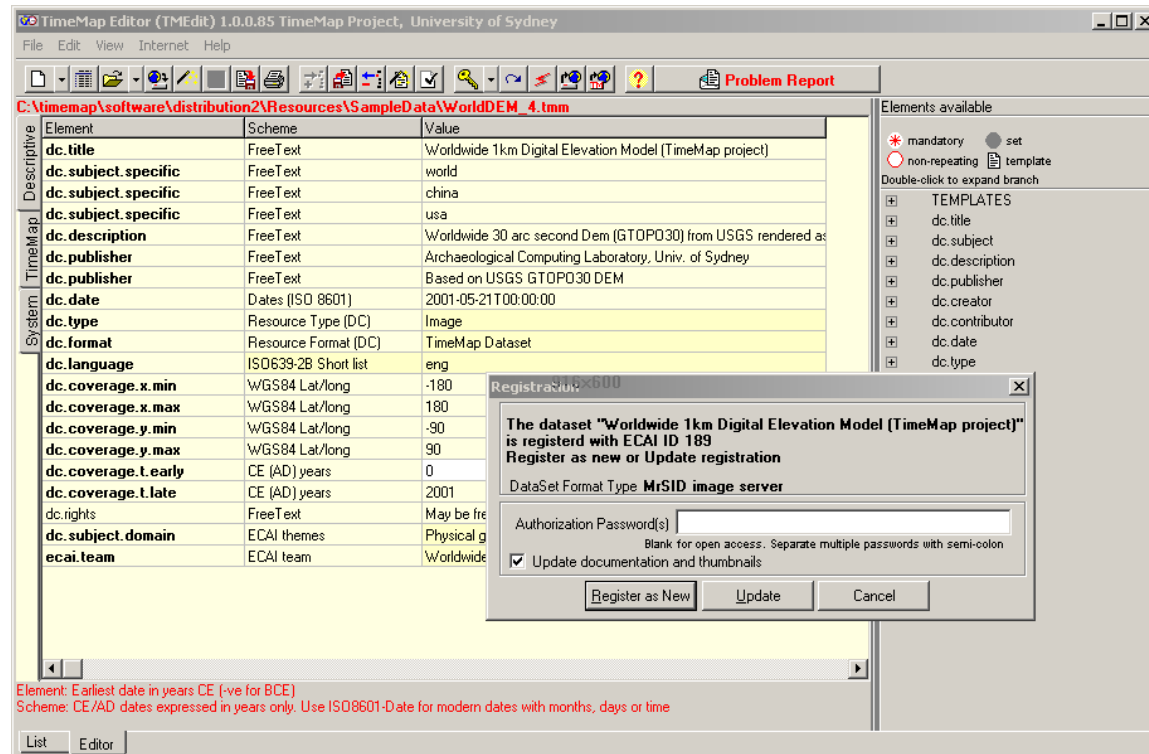
Create with set: ECAI Required Dublin Core (dc) Metadata

Problem Report | Previous | Next | Cancel | Help

Data publishing (step 3 of 3)

Register dataset with clearinghouse

TMEdit



The screenshot shows the TMEdit application window with a metadata table and a registration dialog box.

Element	Scheme	Value
dc.title	FreeText	Worldwide 1km Digital Elevation Model (TimeMap project)
dc.subject.specific	FreeText	world
dc.subject.specific	FreeText	china
dc.subject.specific	FreeText	usa
dc.description	FreeText	Worldwide 30 arc second Dem (GTOPO30) from USGS rendered as
dc.publisher	FreeText	Archaeological Computing Laboratory, Univ. of Sydney
dc.publisher	FreeText	Based on USGS GTOPO30 DEM
dc.date	Dates (ISO 8601)	2001-05-21T00:00:00
dc.type	Resource Type (DC)	Image
dc.format	Resource Format (DC)	TimeMap Dataset
dc.language	ISO639-2B Short list	eng
dc.coverage.x.min	WGS84 Lat/long	-180
dc.coverage.x.max	WGS84 Lat/long	180
dc.coverage.y.min	WGS84 Lat/long	-90
dc.coverage.y.max	WGS84 Lat/long	90
dc.coverage.t.early	CE (AD) years	0
dc.coverage.t.late	CE (AD) years	2001
dc.rights	FreeText	May be fre
dc.subject.domain	ECAI themes	Physical g
ecai.team	ECAI team	Worldwide

The registration dialog box displays the following information:

- The dataset "Worldwide 1km Digital Elevation Model (TimeMap project)" is registered with ECAI ID 189.
- Register as new or Update registration.
- DataSet Format Type: MrSID image server.
- Authorization Password(s): [Blank]
- Blank for open access. Separate multiple passwords with semi-colon.
- Update documentation and thumbnails.
- Buttons: Register as New, Update, Cancel.

At the bottom of the TMEdit window, there is a legend:

Element: Earliest date in years CE (-ve for BCE)
 Scheme: CE/AD dates expressed in years only. Use ISO8601-Date for modern dates with months, days or time



Map Publishing



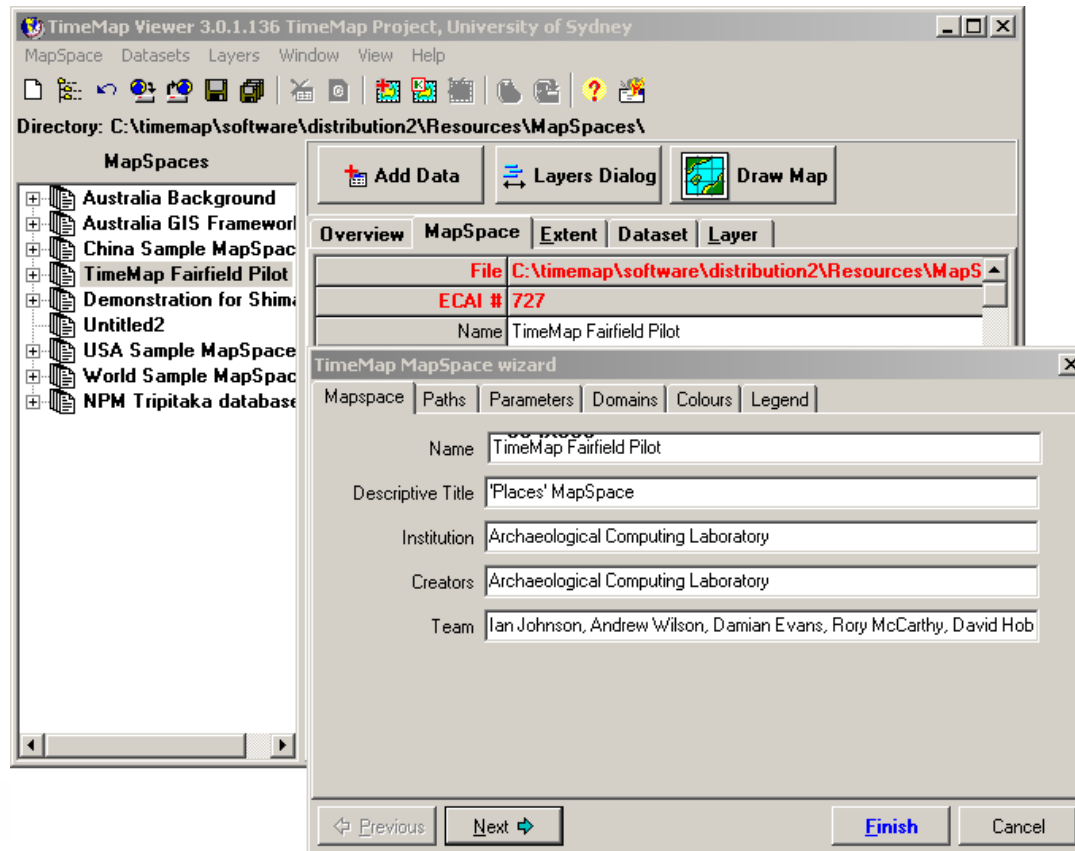


Map publishing

- Windows TimeMap (TMView)
 - 1. Create MapSpace
 - 2. Download data, symbolise
 - 3. Register MapSpace
- View MapSpaces in TMJava
- Embed MapSpaces in web pages

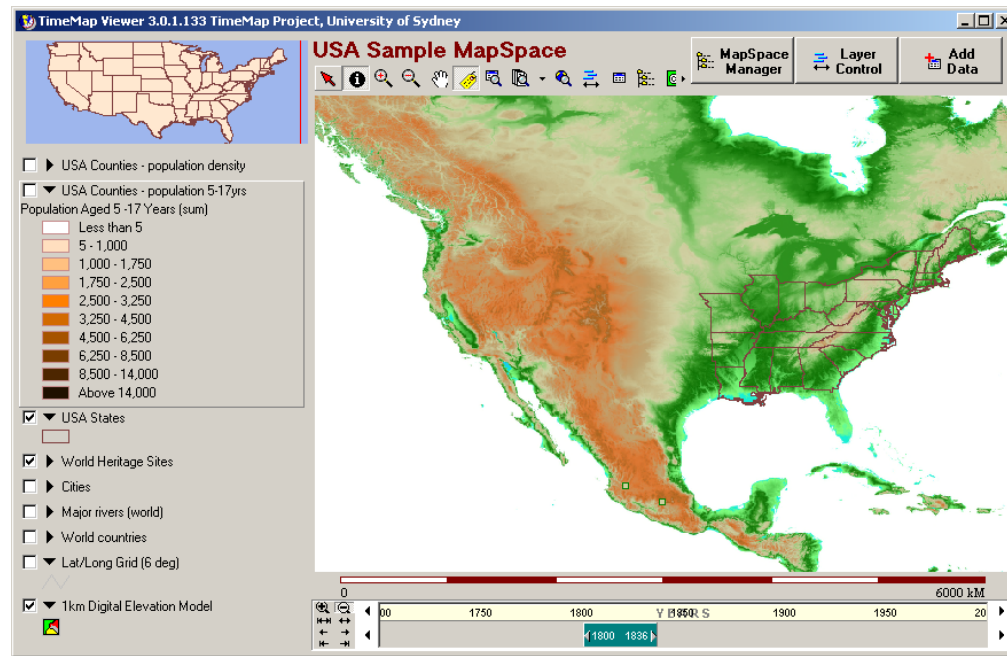
Map publishing (step 1 of 3)

Create MapSpace



Map publishing (step 2 of 3)

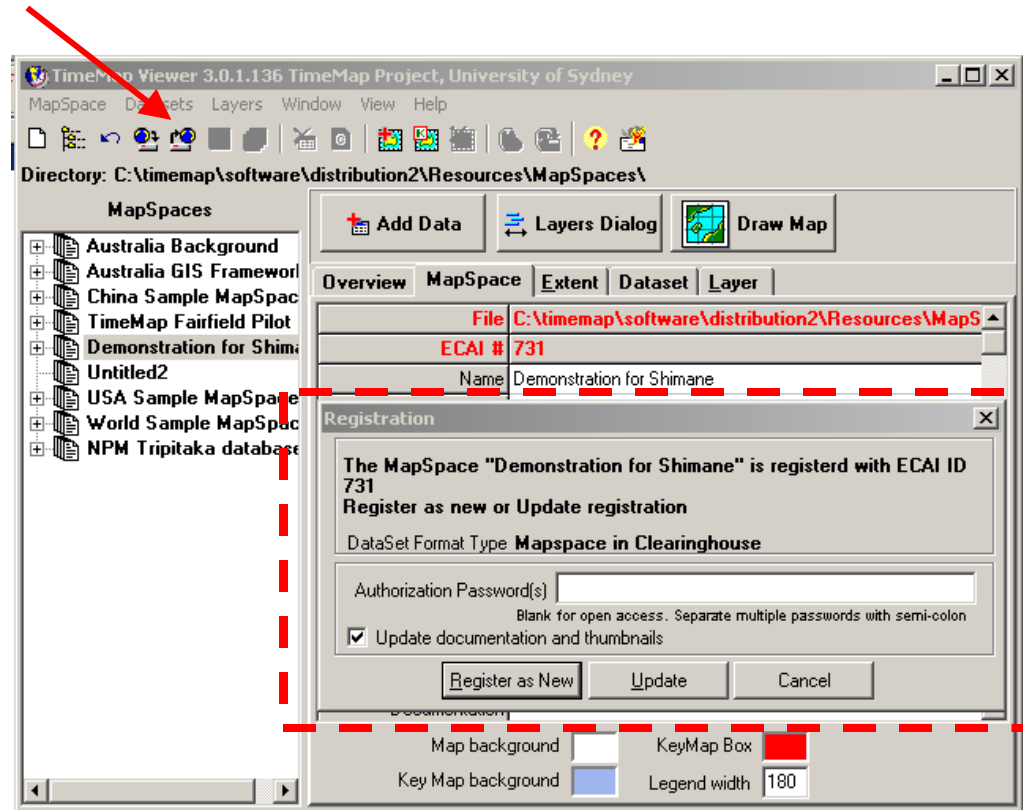
Download data, symbolise



Map publishing (step 3 of 3)

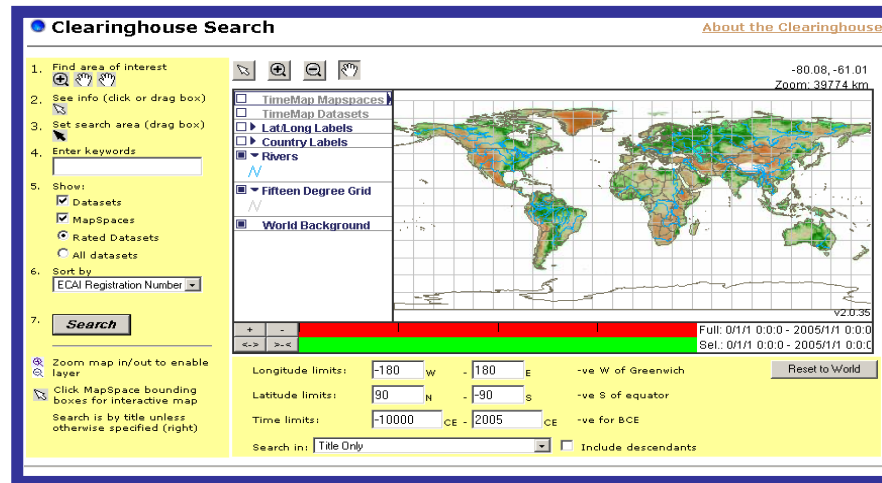
Upload MapSpace to clearinghouse

TMView



TMJava (un-customised)

- View mapspace in TMJava applet
 - Through clearinghouse search:

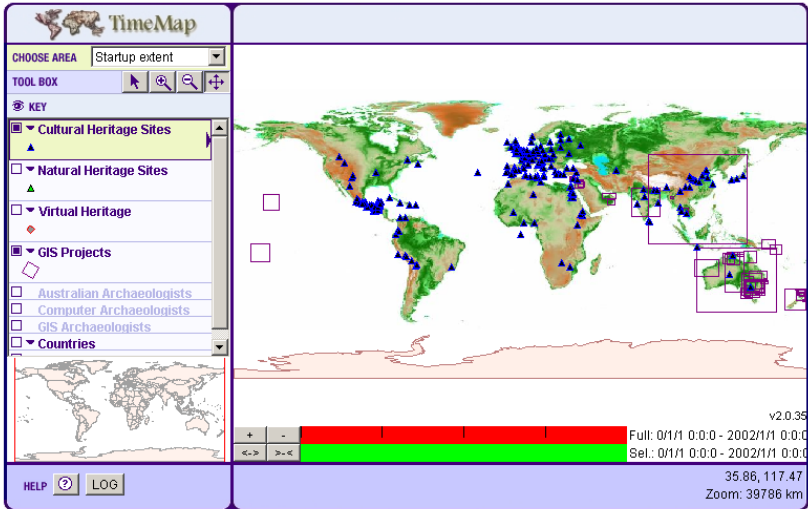


- Or URL: <http://www.timemap.net/clearinghouse/html/alov.cgi?id=568>

TMJava (customised)

- XML layout file
 - Size, layout
 - Components
 - Images/logos
 - Behaviours
 - Colours
 - JavaScript

Archaeological Projects Index



Map Instructions:

Use checkboxes in the legend to turn layers on and off;

Select pointer, zoom or pan from the toolbox;

Navigate the map or, using the pointer, click on features on the map to link to more information (or drag a box around several features)

Access our Online Databases:

- Australian Archaeologists
- GIS specialists
- Computing specialists
- World Archaeological Sites
- Archaeological GIS Projects (primarily Australia / NZ at present)

Copyright © 2002 University of Sydney. All rights reserved. TMJava developed by Artem Osmakov and Leonid Vasilenko for the TimeMap Project, University of Sydney. Please report problems to johnson@acl.archaeology.usyd.edu.au

Archaeological Projects index

- From CH search
 - <http://www.timemap.net/clearinghouse/html/alov.cgi?id=643>
- Customised

Standalone TMJava

- XML clearinghouse
 - File generated from main clearinghouse
 - Allows selection of specific datasets
 - XML file + servlets + applet → new server
 - XML layout file
 - JavaScript
- [MacquarieNet](#)



Web Map Server

- OGC standard
- Map image generated on server
 - Server sends JPG
 - Return to server for new map
 - Only needs plain browser
 - Low bandwidth
 - Many street directory services
- [TimeMap WMS](#)

Animation

- Using (desktop) time to represent real time
- TMView generates AVI or SWF
 - SWF advantages
 - Scalability – vectors, static bitmaps
 - Small size, streaming
 - Korea TimeMap
 - Generated from TMView
 - Polished in Flash
 - Directions
 - Choice of components
 - Interactivity – layers, hot links

[Animation](#)



Web site

<http://www.timemap.net>

TimeMap | **ACL** | **Other Projects** | **ARCHAEOLOGY HOME** | **UNIVERSITY HOME**

- Home
- Showcase
- In Depth
- Documents
- Download
- About Us

Overview

The TimeMap project is researching methods for recording, indexing, analysing and delivering Humanities data with spatial and temporal components. We add value to historical and contemporary information by making it accessible on the web through indexed access to scattered resources, interactive maps, timelines and map animation.

The project has developed the world's first general purpose, interactive, time-enabled distributed mapping system. Using web or Windows-based software, users from around the globe can register and share cultural data through a central [clearinghouse](#) and combine dispersed datasets to generate interactive maps and online publications. > [More detail](#) >

Quick Links

- Search the ECAI Clearinghouse
- Download TimeMap Software
- TimeMap Software Internal Documentation
- Find / Contact Us

Latest Applications

TimeMap Korea Animation	North American Religion (ECA)	Index of GIS & Archaeology	Sasanian Seals Project (ECA)
ECAI Clearinghouse Search Page	International Dunhuang Project (ECA)	Fairfield TimeMap Pilot Project	China Dynasties (TMJava/Geotools)

News

MacquarieNet 'Explore Australia'
Launched 13 August 2002

Using the TimeMap software, we have developed an interactive map interface to MacquarieNet, the premier online encyclopaedia of Australian content (subscription service) > [Go to MacNet](#) >

Open GIS Consortium visit
14th August 2002

David Schell, President, and Carl Reed, Executive Director Specification Program, visited the ACL for discussions with members of the TimeMap project and GeoSciences GIS group.

GIS in the Humanities Workshop
5th & 6th September 2002

The ACL recently presented a [GIS in the Humanities](#) workshop for The Australian e-Humanities Network. The workshop was over-subscribed and may be repeated. Watch this space for details....

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