

Proposal for a Canadian Historical GIS Network

CARTO 2013
June 14, 2013
Edmonton, Alberta

Marcel Fortin

Map and Data Library

Byron Moldofsky

GIS and Cartography Office, Department of Geography and Planning

University of Toronto

Abstract

Historical GIS Projects are gaining in popularity across Canada. Later this year a book will be published by the University of Calgary Press featuring fourteen such projects spanning the entire country. With this increase in use in historical geospatial data, comes the impetus to ensure that nobody is reinventing the wheel, or better yet re-digitizing the wheel. Historical census polygons, historical urban street and building data, historical national infrastructure data such as the building of the railway and the highway networks, historical topographic map layers - these are data layers that have been created and recreated by numerous projects. They should not have to be re-created anew every time researchers in a different part of the country start an historical study. Without a set of standards and protocols for creating, sharing, distributing, crediting, and archiving these data however, it is difficult to rationalize this process. We look at some examples which may be useful models for such a system, and hope to inspire debate on potential methods for development and funding.

Intro

One of the challenges associated with this presentation is a basic one... what to call it... We still haven't decided on the appropriate name for this idea... Canadian Historical GIS System? Or Network? Or Infrastructure? Whatever we call it, we are talking about the creation of basic resources, an enabling infrastructure, to allow and empower people to do Historical GIS in Canada.

Considering this is a cartographers and map librarians conference we have seen a huge proportion of presentations this week using Historical GIS - just look at the program - Morgan Hite, Rebecca Bartlett, David Malaher and Andreas Korsos, Frank Tough, Kisha Supernant, and others - clearly there is a lot of work being done using HGIS in Canada, even within this small group.



Wouldn't it be great if, as a group, we could help provide these and many other researchers with the basic resources to help them do this work more easily, efficiently? And if these researchers, after creating new resources - digitizing historical road networks, georeferencing old maps - could contribute them back to the community for others to use in the future? That's the idea.



Click on Bubble at top left to view Speakers Notes

What is Historical GIS? it's more than:

- Scanned maps
- Thematic maps
- Conventional GIS





HGIS is

"...new knowledge and new scholarship about the geographies of the past."

Ian Gregory, 2008

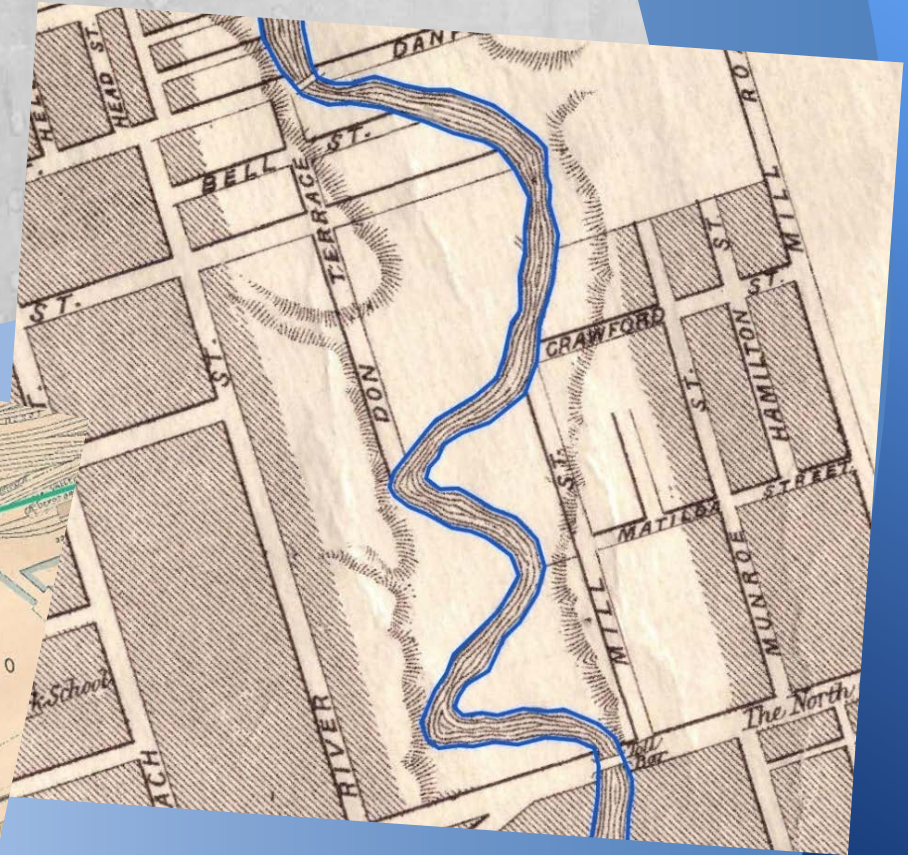
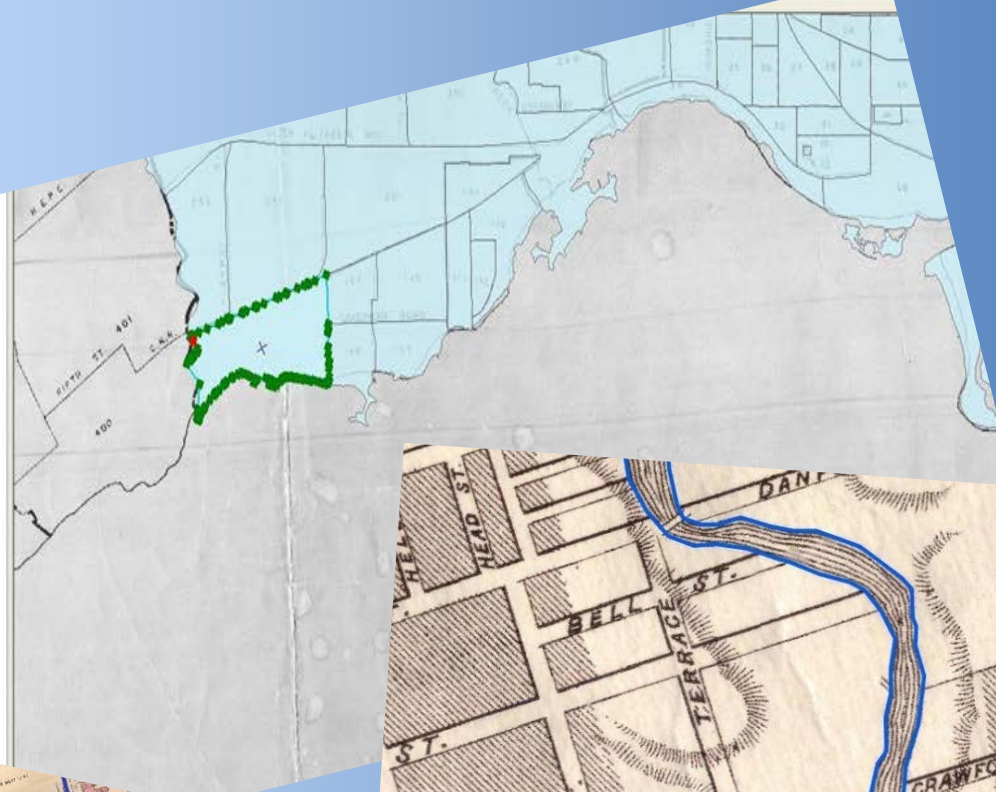


HGIS is

GIS resources designed for doing history

Time, space, data, documentation, visualization

But...



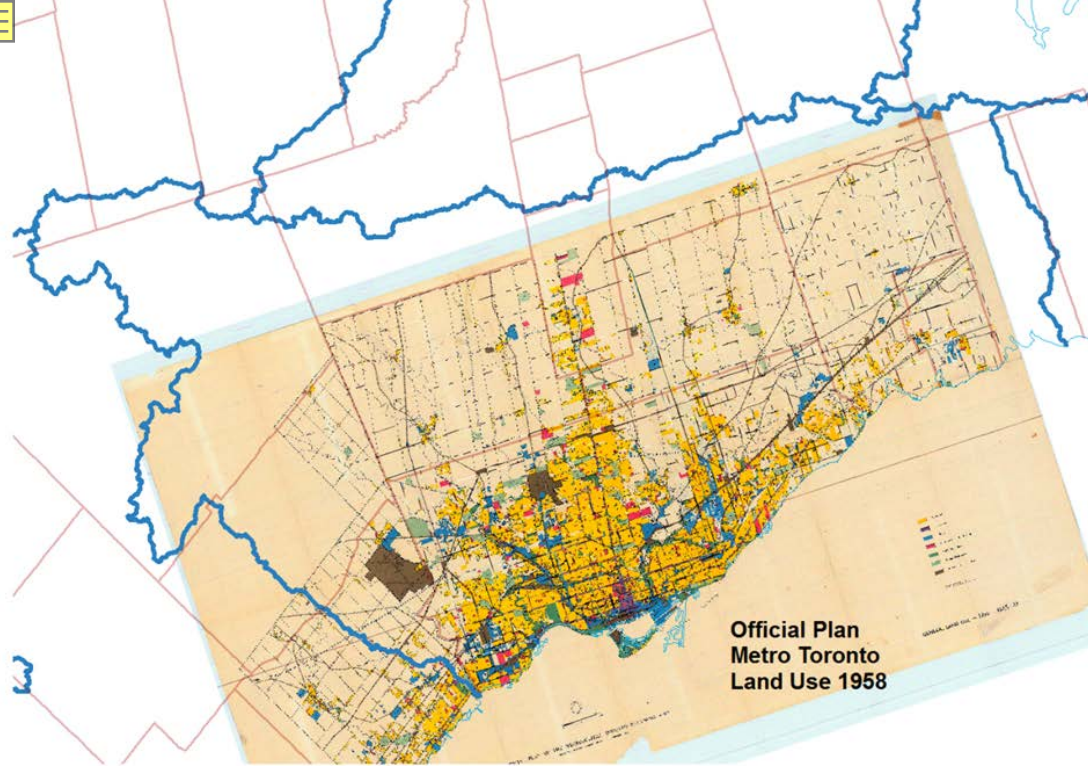
Historical GIS question?

[someone]... suggested you may have datasets for the Greater Toronto area relevant to research I am undertaking on hydrologic response to land use change and associated aquatic biodiversity decline. I am interested in GIS files that provide current and historic land use information in the Humber and Don watersheds...



Data on road density or land use change (e.g. proportions of forested, wetland, agricultural, residential, industrial, etc) would be very relevant. I am working with a hydrologic-climatic dataset that spans from mid-century to the present. So land use or road density information dating from the 1950's to the current day is of interest.

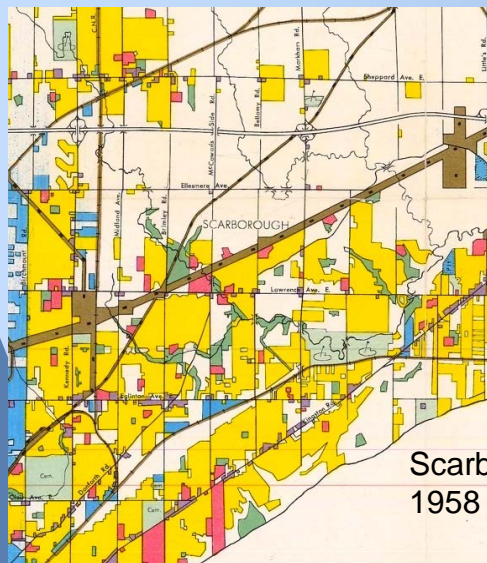
Historical Land use from Official Plans



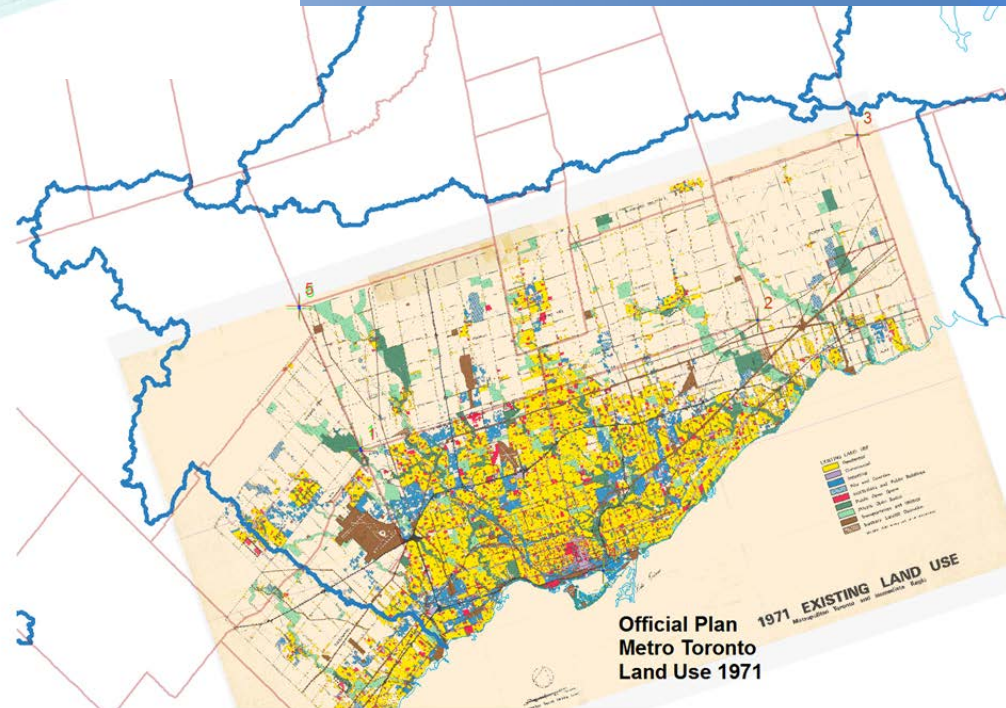
EXISTING LAND USE

- Residential
- Commercial
- Industrial
- Pits and Quarries
- Institutions and Public Buildings
- Public Open Space
- Private Open Space
- Transportation and Utilities
- Sanitary Landfill Operation

SOURCE: Field survey and aerial photography

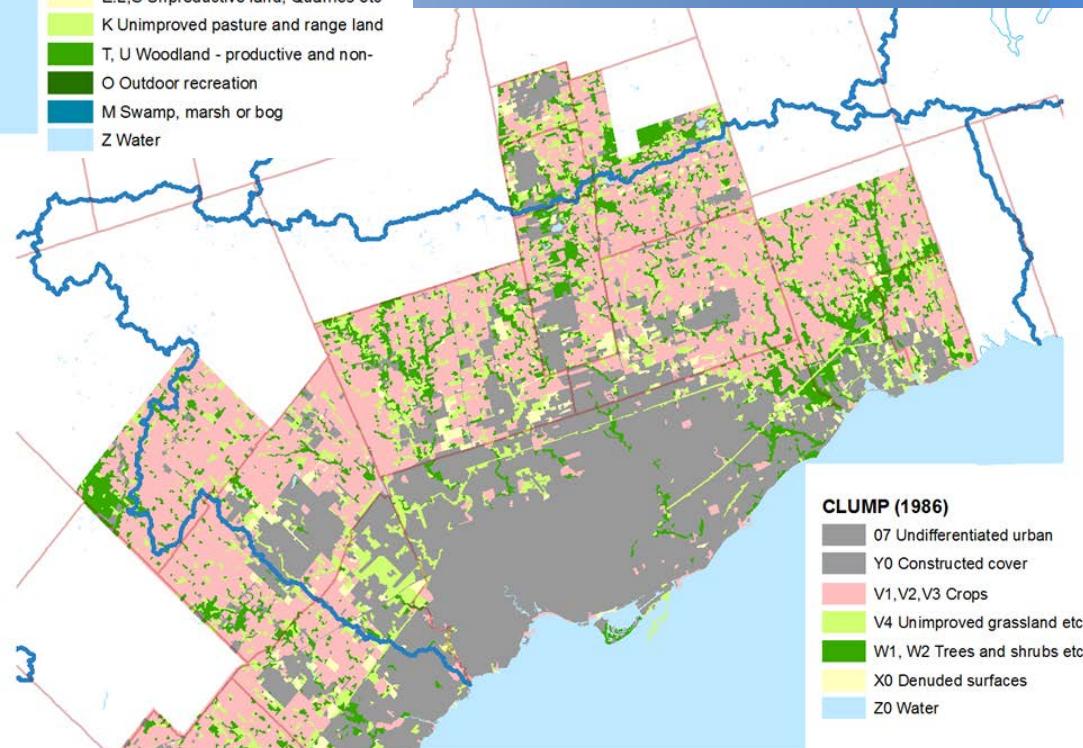
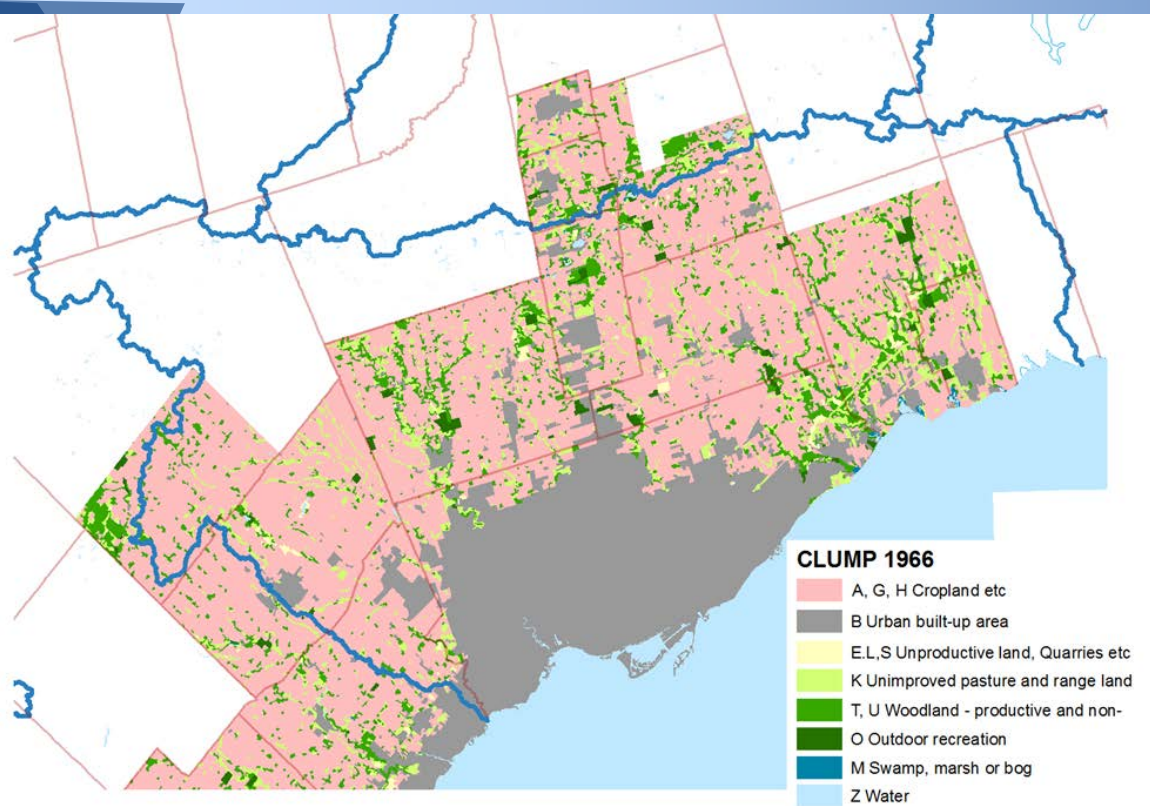


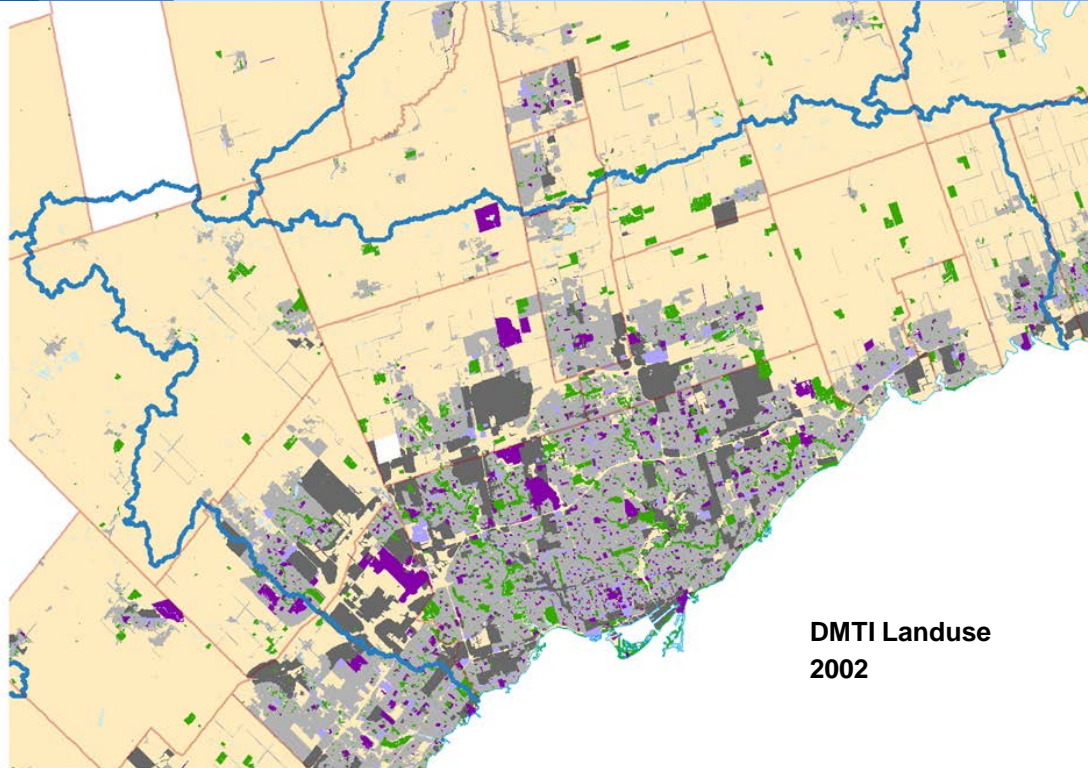
Scarborough
1958



CLUMP Canada Land Use Monitoring Program

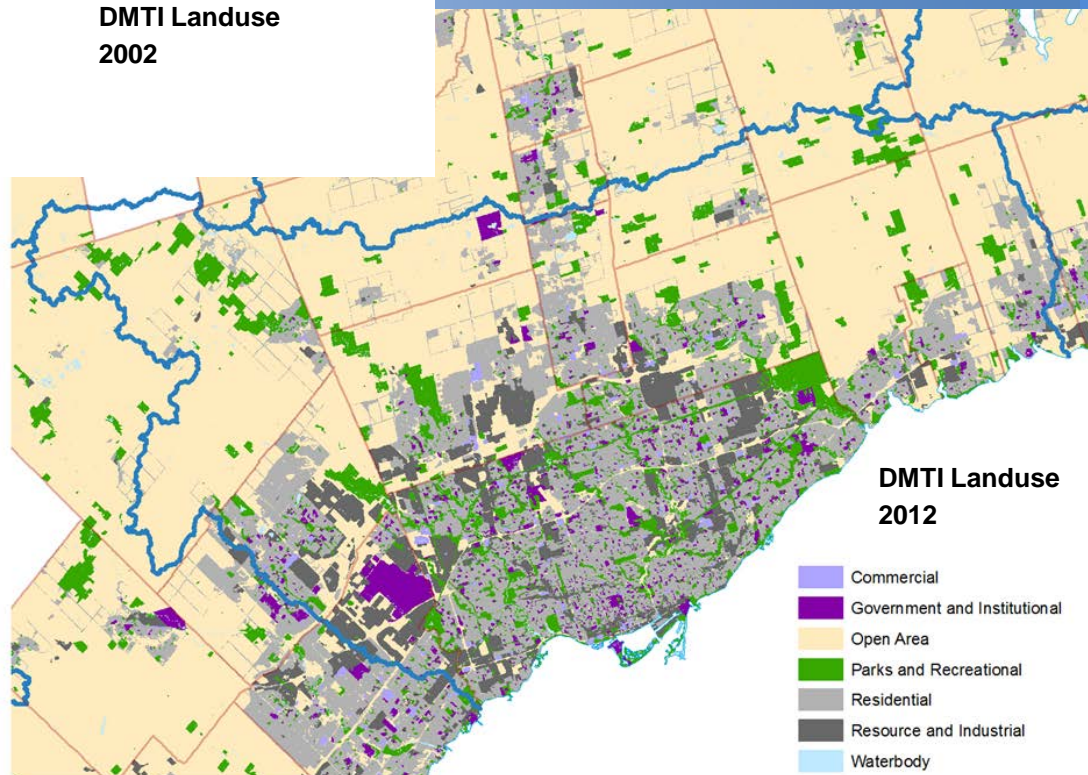
Methodological
changes
after 1981





DMTI Landuse
2002

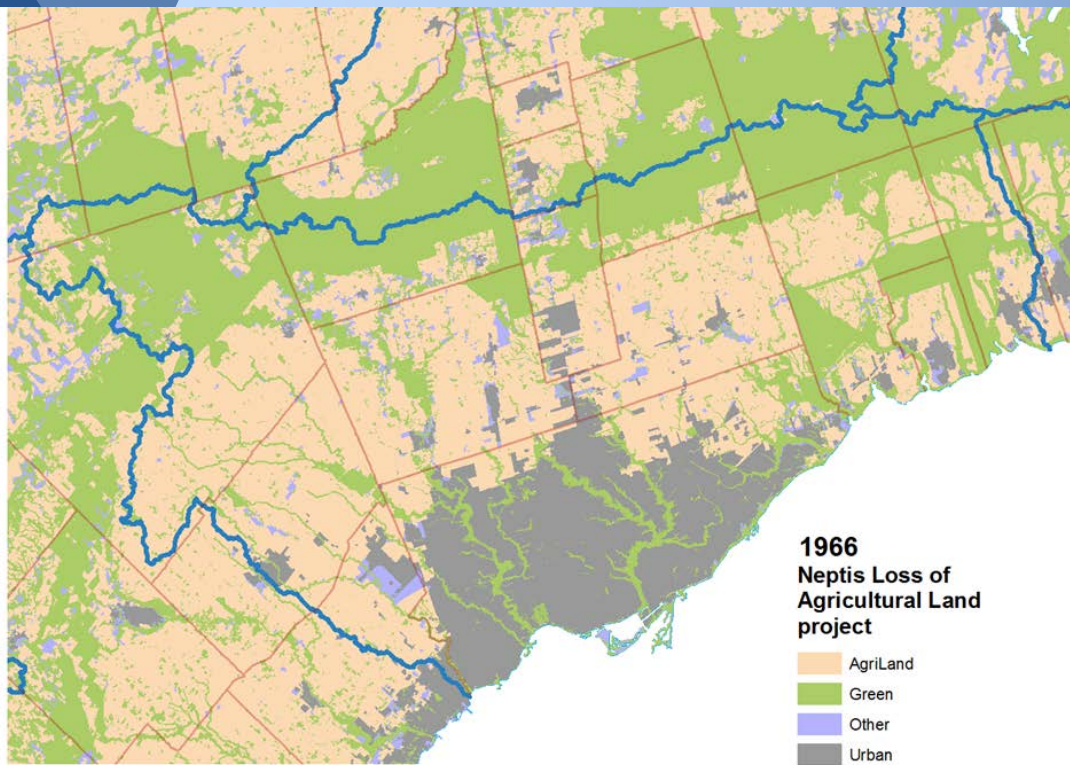
Landuse from
DMTI or other
commercial
data provider



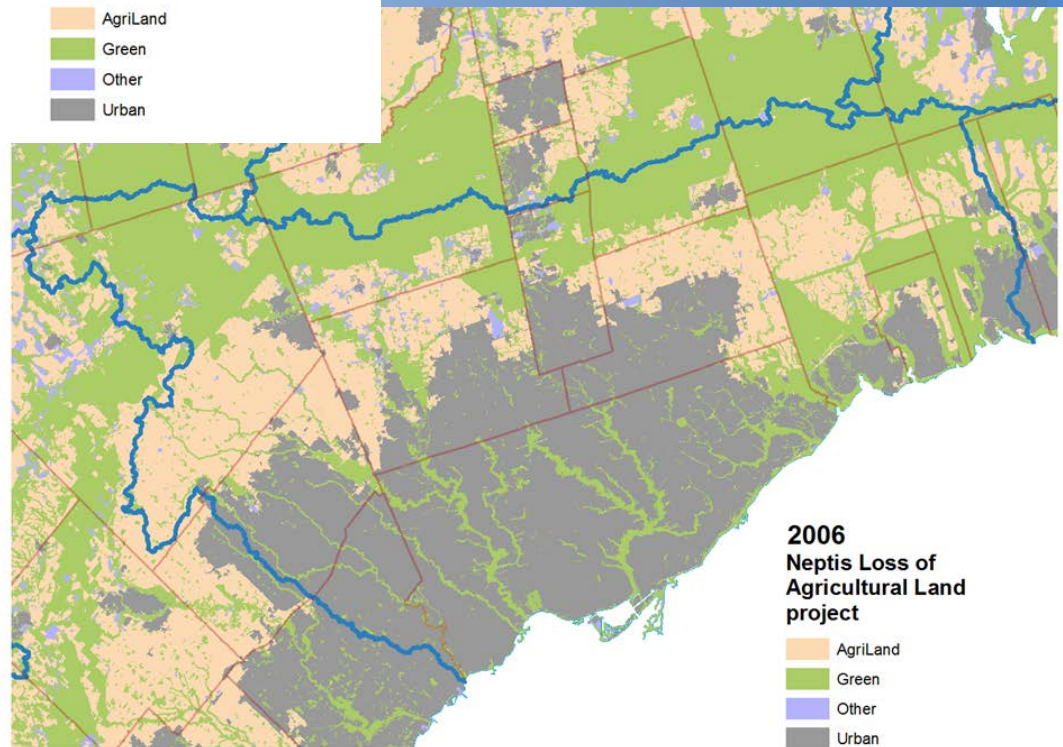


Remote sensed imagery and analysis





Project-
based
research
results



CURLUS Canadian Urban Land Use Survey

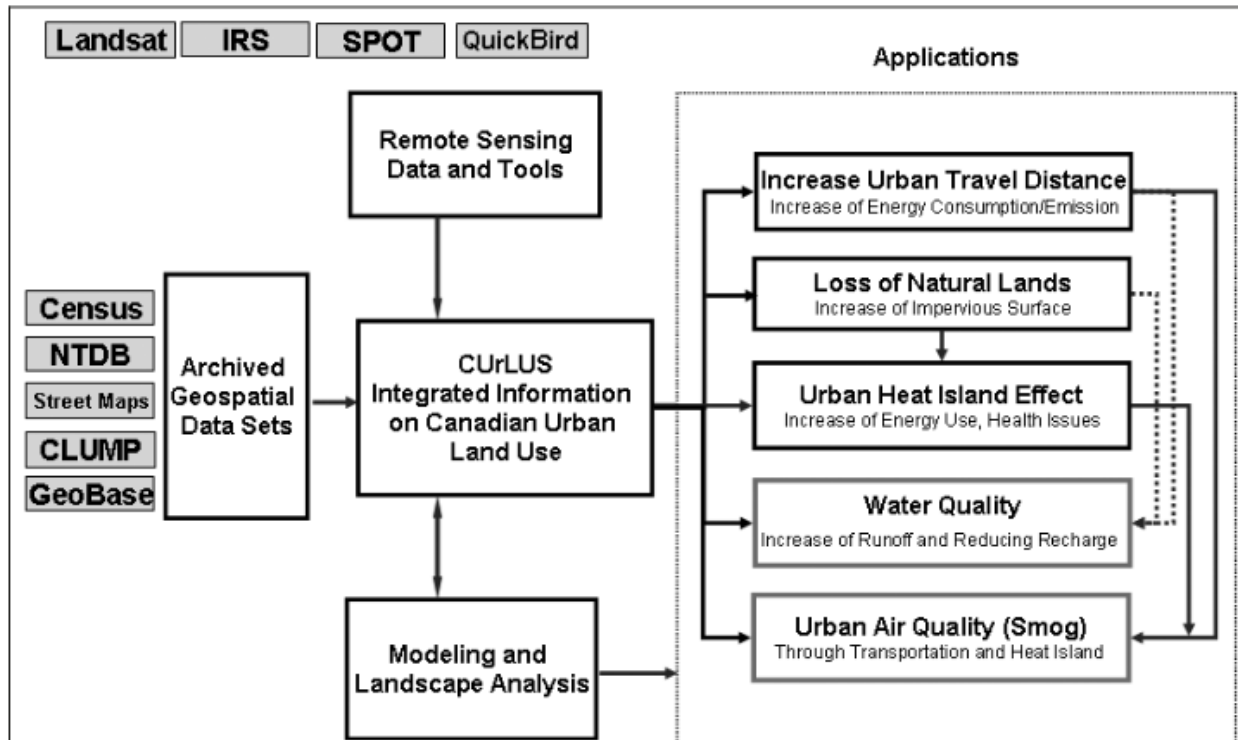
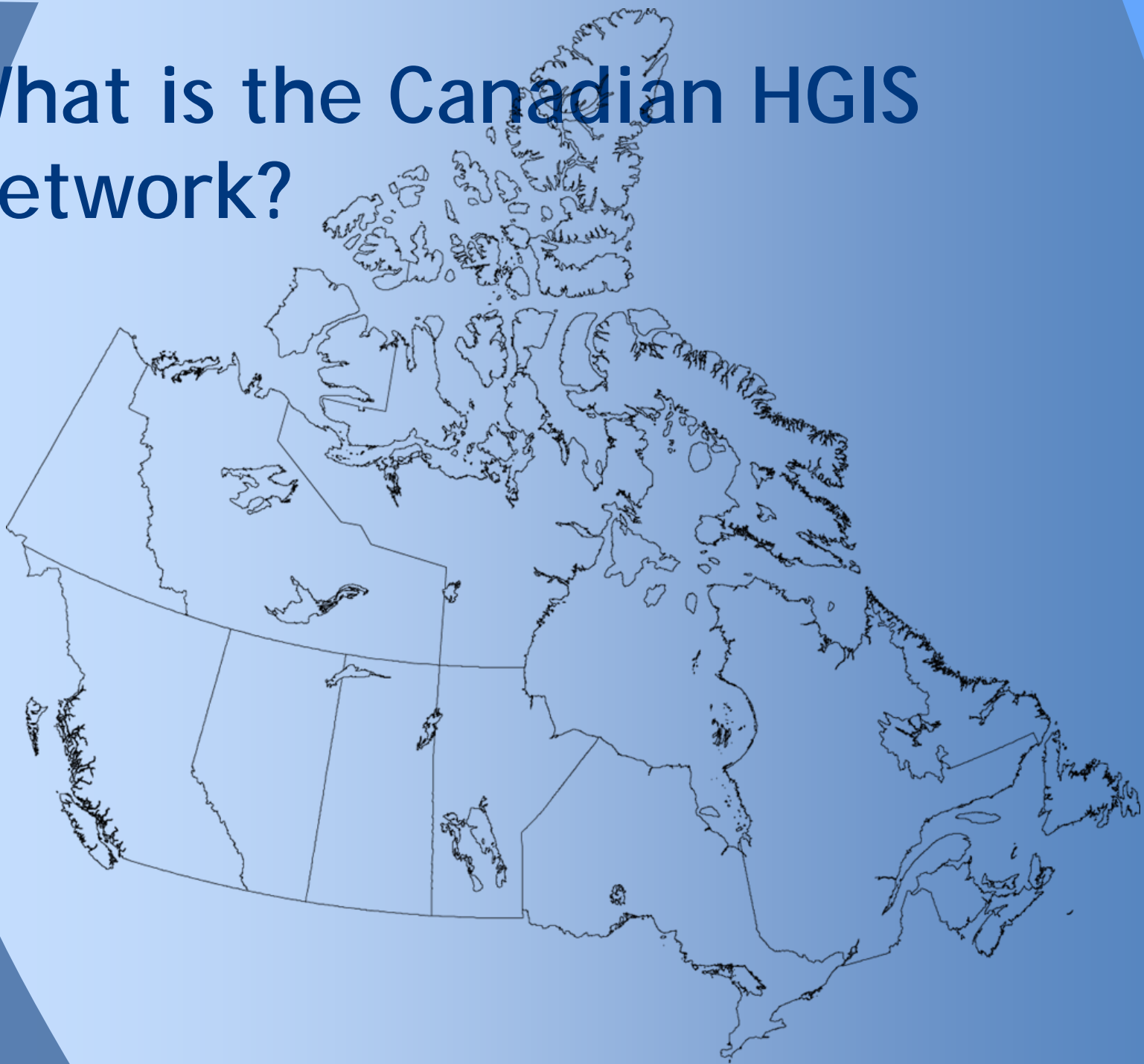


Figure 1. Schematic diagram illustrating the conceptual framework of CURLUS, encompassing both an information source on urban form and a suite of analysis tools to address a broad spectrum of sustainability issues.

Concepts and application of the Canadian Urban Land Use Survey
Can. J. Remote Sensing, Vol. 36, No. 3, pp. 224-235, 2010
Y. Zhang, B. Guindon, K. Sun CCRS/NRCan

What is the Canadian HGIS Network?





Goals of a Canadian Historical GIS Network?

- enable research and communication (between researchers and public)
- share resources
- avoid duplication / “re-digitizing the wheel”

Goals of a Canadian Historical GIS Network

Don Valley Historical Mapping Project Background

Toronto's Don River Valley is arguably the city's most significant feature. As a provider of water, power, sustenance, and transportation, it has played an important role in the city's development. The river valley has changed dramatically since European settlement, particularly during the late nineteenth century, when the Lower Don River was straightened and the huge marsh at its mouth drained. The Lower Valley forms the foundation for one of the most important areas in Canada, outlining as it does the eastern portion of the downtown core and radiating residential areas.

This project documents historical changes in the land use of the Don River Valley. Drawing from the wide range of geographical information for the Don River watershed (and the Lower Don in particular), historical maps, geological maps, fire insurance plans and city directories, the project uses Geographic Information System software to place, compile, synthesize and interpret the information, making it more accessible as geospatial data.

The project is a part of the

Historical GIS Research in Canada

EDITED BY
JENNIFER BONNELL
AND
MARCEL FORTIN

Ontario County Maps Project

Nineteenth Century County Maps of Canada are considered an invaluable source of settlement history for eastern Canada. These large wall maps usually covered one, but sometimes two or three counties, and included such features as the survey grid, roads, railroads, towns, buildings, and most importantly the names of the rural residents. They also contained agricultural, cultural, and natural features and information.

Fifty-four counties are known to have been mapped between 1856 and 1888, although 45 of these were produced between 1859 and 1869. Thirty-two are of Ontario and the rest were spread throughout eastern Canada. Five Ontario county maps were revised to produce second editions.

Of the few original maps still in existence, most are held in libraries and archives across the country. Many of these maps are being digitized for this project we shall compile and create a comprehensive database of all land use information.

Research Infrastructure de recherche sur le Canada au 20e siècle

Textual Data, Geography, Recensement du Canada, Sources contextuelles and Cadre géographique

Welcome to the User Guide

The CCRI represents an infrastructure that facilitates research on the transformation of Canadian society in the twentieth century. The CCRI's mandate is to provide researchers with a body of data and information that can be used to acquire a better understanding of how modern-day Canada has developed. The CCRI is composed of microdata, namely, data created from Canadian census enumerations between 1911 to 1951, a geographical framework constructed to enable the location, selection, aggregation, and analysis of census data, and contextual data, namely the textual data used to situate the census in time and to enhance appropriate analysis of the data.

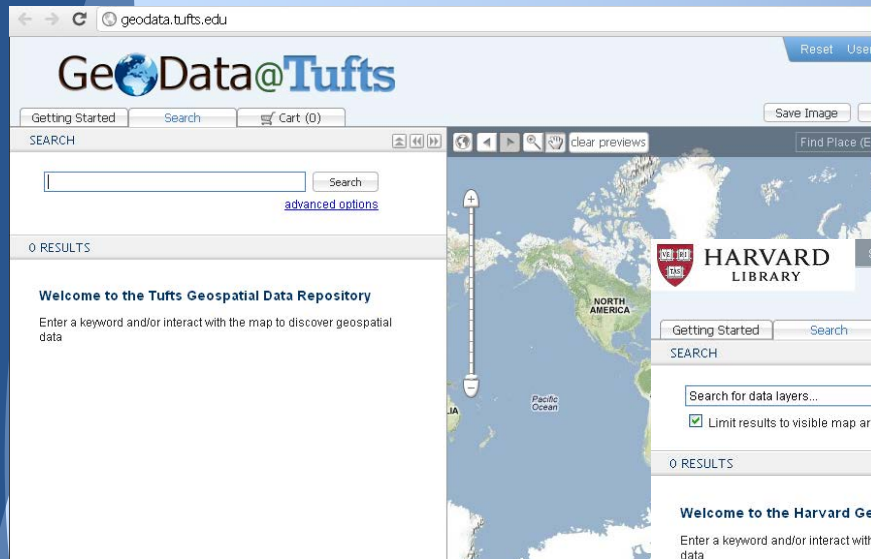
Organization of the User's Guide

- 1) 1911 Census located on the left of this web page provides researchers with the 1911 database, 1911 codes, 1911 data entry manual, 1911 enumerator instructions, 1911 geography component, Contextual Data (1911 to 1951), and 1911 Nesstar Webview.
- 2) CCRI Overview provides general information concerning the project for the years 1951.
- 3) The Database provides detailed information for census years 1911 to 1951.

* A few of our recent historical GIS projects are described below. Contact Dr. Gilliland if you would like to learn more about how you might work with us.

FIRE AND URBAN MORPHOGENESIS
The built environment of a city is extremely durable and long-lasting; however, a single street layout can be completely transformed.

Shared Data discovery tools



geodata.tufts.edu

GeoData@Tufts

Getting Started Search Cart (0) Save Image

SEARCH

0 RESULTS

Welcome to the Tufts Geospatial Data Repository

Enter a keyword and/or interact with the map to discover geospatial data

advanced options

HARVARD LIBRARY

Search & Find HOLLIS HOLLIS Classic Citation Linker Get It Find a Library Hours My Accounts / Renew Tell Us

Getting Started Search Cart (0)

SEARCH

Search for data layers... Search

☒ Limit results to visible map area advanced options

0 RESULTS

Welcome to the Harvard Geospatial Library

Enter a keyword and/or interact with the map to discover geospatial data



arrowsmith.mit.edu/mitogp/

MIT GIS SERVICES GEOWEB

Reset User Guide Login

Getting Started Search Cart (0) Save Image Print Basemap

SEARCH

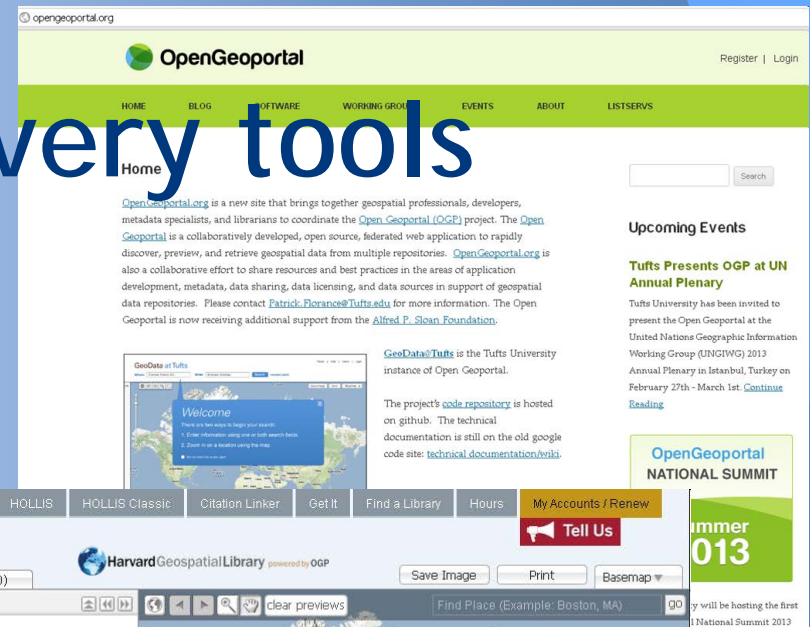
0 RESULTS

Welcome to MIT GeoWeb

Enter a keyword and/or interact with the map to discover geospatial data

advanced options

5000 km 2000 mi



opengeoportal.org

OpenGeoportal

Register | Login

HOME BLOG SOFTWARE WORKING GROUP EVENTS ABOUT LISTSERVS

Home

OpenGeoportal.org is a new site that brings together geospatial professionals, developers, metadata specialists, and librarians to coordinate the [Open Geoportal \(OGP\)](#) project. The [Open Geoportal](#) is a collaboratively developed, open source, federated web application to rapidly discover, preview, and retrieve geospatial data from multiple repositories. [OpenGeoportal.org](#) is also a collaborative effort to share resources and best practices in the area of application development, metadata, data sharing, data licensing, and data sources in support of geospatial data repositories. Please contact [Patrick Boerwase@Tufts.edu](#) for more information. The Open Geoportal is now receiving additional support from the [Alfred P. Sloan Foundation](#).

Upcoming Events

Tufts Presents OGP at UN Annual Plenary

Tufts University has been invited to present the Open Geoportal at the United Nations Geographic Information Working Group (UNGIG) 2013 Annual Plenary in Istanbul, Turkey on February 27th - March 1st. [Continue Reading](#)

OpenGeoportal NATIONAL SUMMIT

Summer 013

will be hosting the first National Summit 2013

GeoData@Tufts

Welcome

Find Place (Example: Boston, MA)

Save Image Print Basemap

Search & Find HOLLIS HOLLIS Classic Citation Linker Get It Find a Library Hours My Accounts / Renew Tell Us

Getting Started Search Cart (0)

SEARCH

Search for data layers... Search

☒ Limit results to visible map area advanced options

0 RESULTS

Welcome to the Harvard Geospatial Library

Enter a keyword and/or interact with the map to discover geospatial data

5000 km 2000 mi

Shared Discovery tools...

www.oldmapsonline.org/#bbox=-123.5289,49.028864,-122.722778,49.4850788;q=8;datefrom=1000&date

OLD MAPS ONLINE

Search Collections Blog About

1000 1250 1500 1750 2010

Map of Vancouver area showing locations like Lions Bay, Coquitlam, Burnaby, Richmond, and Steveston. A red box highlights the central Vancouver area.

Map data ©2013 Google - Terms of Use

JISC University of Portsmouth KLOKAN TECHNOLOGIES

NOVA HELVETIAE TABULA GEOGRAPHICA

View this map



Date: 1712
Date of publication: 1712
Map scale 1:290 000

Creator: Scheuchzer, Johann Jakob
Contributor: Huber, Johann Heinrich
Publisher: Scheuchzer, Johann Jakob

[More in the catalogue](#) or on the [website](#)



Old street map of Vancouver.
1:50 000
1951 - Shell Oil Company

Southern Vancouver Island, British Columbia, Canada. Coal Resources of the World.
1:250 000

FRANCE.

View this map



Date: 1861
Date of publication:
Map scale 1:2 232 000

Creator:
Contributor:
Publisher: Johnston, Alexander Keith, 1804-1871

[More in the catalogue](#) or on the [website](#)



The Coast of N.W. America.
1:1 030 000
1798 - Vancouver, George, 1757-1798

Cote NO, l'Amerique 3.
1:1 500 000

Tying in existing systems

The screenshot displays the University of Toronto GIS Data Library interface. On the left, a search sidebar shows 'Found 28 results' for 'property data maps'. The results list includes 'Toronto Property Data Maps (PDMs)', 'City of London Mapping Data Distribution', and 'Toronto Property Data Maps (PDM)' (repeated). Each entry provides details on the producer (City of Toronto or City of London), publication date, and data layer type. The main content area shows a map of Canada with a search bar at the top. The search results for 'property data maps' are displayed on the right, including a list of items with their creation dates, creators, access methods, and resource types. The first item is 'Digital Property Data Maps (1998)' and the second is 'Toronto Digital Property Data Maps (PDM) (2002)'.

University of Toronto
GIS DATA LIBRARY

Search results for "property data maps"

Found 28 results
Showing results 1 to 10

Sort by: Relevance

Define: Keywords

Property Boundaries

Results (18)

Use (13)

Boundaries (12)

s (12)

to (12)

s (11)

g Outlines (10)

rs (10)

(8)

s - Footprints (7)

(7)

s (6)

(6)

(6)

s

Emergency

of Toronto

(4)

auga (4)

of

es (2)

Ontario)

Toronto Property Data Maps (PDMs)
Access resource Details
Producer: Works and Emergency Services, City of Toronto
Date published: 2008-01-01 (publication)
Type of data layer: Vector

City of London Mapping Data Distribution
Access resource Details
Producer: City of London (Ontario)
Date published: 2006-01-01 (publication)
Type of data layer: Not specified

Toronto Property Data Maps (PDM)
Access resource Details
Producer: Works and Emergency Services, City of Toronto
Date published: 2004-01-01 (publication)
Type of data layer: Vector

Toronto Property Data Maps (PDM)
Access resource Details
Producer: Works and Emergency Services, City of Toronto
Date published: 2006-01-01 (publication), 2007-01-01 (revision)
Type of data layer: Vector

Toronto Property Data Maps (PDMs)
Access resource Details
Producer: Works and Emergency Services, City of Toronto
Date published: 2008-01-01 (publication)
Type of data layer: Vector

1 **Digital Property Data Maps (1998)**
Creation Date: 1998-01-01
Creator: City of Toronto
Access: CD-ROM [023]
Type of Resource: Geospatial Data / Air Photos
More ...

2 **Toronto Digital Property Data Maps (PDM) (2002)**
Creation Date: 2002-01-01
Work & Emergency Services, City of Toronto

Standards - Metadata

org/iso/catalogue

Standards About us Standards Development

Standards catalogue Online collections Publications

Store > Standards catalogue > By TC > ISO/TC 211 Geographic information/Geomatics >

ISO 19115:2003

Geographic information -- Metadata

Media and price

	Price	Language	
 PDF	CHF 224,00	English 	
 Paper	CHF 224,00	English 	

Abstract

ISO 19115:2003 defines the schema required for describing geographic information and services. It provides information about the identification, the extent, the quality, the spatial and temporal schema, spatial reference, and distribution of digital geographic data.

ISO 19115:2003 is applicable to:

- the cataloguing of datasets, clearinghouse activities, and the full description of datasets; geographic datasets, dataset series, and individual geographic features and feature

and metadata elements and applications

Home Library Calendar Contact Us

you are here: home → metadata → geospatial metadata standards

Geospatial Metadata Standards

Most NSDI stakeholders have long utilized the Content Standard for Digital Geospatial Metadata. Geospatial metadata standards are emerging in the community. FGDC policy states that non-Federal status as FGDC developed standards. Since ISO 19115 and the associated standards are endorsed metadata as their agencies are able to do so. While the selection of appropriate standards is dependent, ISO metadata should be considered an option now. It's recognized that the transition to ISO metadata

- FGDC Endorsed ISO Metadata Standards 
 - Which ISO Metadata Standards Do Organizations Utilize?
 - Should Our Agency be using ISO Metadata?
 - ISO Metadata Implementation is Happening
- The Content Standard for Digital Geospatial Metadata (CSDGM)
 - CSDGM Resources
 - CSDGM Profiles and Extensions
- The North American Profile (NAP) of the ISO 19115: Geographic Information - Metadata
 - Status of the North American Profile (NAP)
 - Preparing for the North American Profile (NAP)
 - North American Profile (NAP) Resources
 - Purchasing the North American Profile

Standards - conversion/reconstitution

data1b.chass.utoronto.ca/major/spmapag.htm

Off-campus University of Toronto users login to [myaccess](#) first!

Availability of spatial (vector) map data for Canadian census geography in the University of Toronto Data Library Service

	2006	2001	1996	1991	1986	1981	1971	1851-1961	1871
Census agricultural regions (CAR)		X	X						
Census consolidated subdivisions (CSD)	X	X	X	X					
Census divisions (CD)	X	X	X	X	X	X	X	contact GEORGINA	All Canada, Quebec, Ontario, Maritimes [ATLAS GIS format]
Census division ecumene files	X	X							

Abstraction Library

NE -> NONE - FML Workbench

Insert Readers Transformers Writers Inspection Tools

Workspace Properties
Name: <not set>
Category: <not set>
Description: <not set>
Usage: <not set>
Requirements: <not set>
Requirements Flag: <not set>
History: <not set>
Last Save Date: <not set>
Last Save Build: <not set>
Legal Terms and Conditions: <not set>
[Workspace Search](#)

Transformer Gallery

- GeometryFilter
- GeometryInstantiator
- GeometryOGCValidator
- GeometryPropertyExtractor
- GeometryPropertyRemover
- GeometryPropertyRenamer
- GeometryPropertySetter
- GeometryRefiner
- GeometryRemover
- GeometryReplacer

Start Main

GMLFeatureExtractor

Constructs GML2 documents from the input features and stores the specified attribute for the features that are output by the GML2 port. GML2 documents written under the attribute conform to the GML Schema.

Select language: [English][Russian][Portuguese]

GDAL is a translator library for raster geospatial data formats that is released under an X/MIT style Open Source license. It is an **abstract data model** to the calling application for all supported formats. It also comes with a variety of useful **command line utilities**.
April 2013 GDAL/OGRE 1.10.0 release.

The related OGR library (which lives within the GDAL source tree) provides a similar capability for simple features vector data.

Website: <http://www.gdal.org>
Download: <ftp://remotesensing.org>, <http://download.osgeo.org>

For Oriented Documentation

- Wiki - Various user and developer contributed documentation and hints
- Downloads - Ready to use binaries (executables)
- Supported Formats : GeoTIFF, Erdas Imagine, SDTS, ECW, MrSID, JPEG2000, DTED, NITF, ...
- GDAL Utility Programs : gdalinfo, gdal_translate, gdaladdo, gdalwarp, ...
- GDAL FAQ
- GDAL Data Model
- GDAL/OGRE Governance and Community Participation
- GDAL Service Provider Listings (not vetted)
- Donors, Acknowledgements and Credits
- Software Using GDAL

For Oriented Documentation

- Getting GDAL From Source
- Downloads - source code
- Reference Documentation
- API Tutorial
- Driver Implementation Tutorial
- Warp API Tutorial
- Virtual SRS Reference Tutorial
- API Tutorial
- Algorithms C API
- Dataset C++ API
- RasterBand C++ API
- Windows CE

Mailing list subscription is a low volume way of keeping up to date with the latest news. The [osgeo.org](#) mailing list can be found at [http://osgeo.org/mailman](#). It is also available in French at [http://osgeo.org/mailman](#).

Standards - Licensing

Government Licence
for public sector information

delivered by
The National Archives

[Back to The National Archives](#)

Creative Commons

[About](#)

[Licenses](#)

[Public Domain](#)

You are encouraged to use and re-use the Information that is available under this licence, the Open Government Licence, freely and only a few conditions.

Using information under this licence

www.geobase.ca/geobase/en/licence.jsp

Use of copyright and database right material expires under the terms and conditions below.

The Licensor grants you a worldwide, royalty-free

This licence does not affect your freedom under fa

You are free to:

- copy, publish, distribute and transmit the Information;
- adapt the Information;
- exploit the Information commercially for exar

must, where you do any of the above

acknowledge the source of the Information;

visit the

GeoBase

Building on common ground

[Home](#) [About](#) [Partners](#) [GeoBase in Action](#) [News](#) [Events](#) [Français](#)

[Data](#)

GeoBase Unrestricted Use Licence Agreement

This is a legal agreement between you (*Licensee*) and Her Majesty the Queen in Right of Canada (*Canada*) as represented by the Minister of Natural Resources Canada. BY ACCESSING, DOWNLOADING, PRINTING OR USING THE DATA, INFORMATION AND MATERIALS BEING PROVIDED WITH, OR ACCESSIBLE PURSUANT TO THIS AGREEMENT, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, YOU MUST IMMEDIATELY DISPOSE OF ANY SUCH DATA, INFORMATION, MATERIALS AND ANY DERIVED PRODUCTS.

- I. **WHEREAS** Canada is the owner of or has rights in the data (the *Data*) addressed by the terms and conditions of this Agreement;
- II. **AND WHEREAS** the Licensee wishes to obtain certain rights to the Data, on terms and conditions herein contained;
- III. **AND WHEREAS** Canada represents that it has full authority to grant the rights desired by the Licensee on the terms and conditions herein contained;
- IV. **AND WHEREAS** the parties hereto are desirous of entering into a licence agreement on the basis herein set forth.

NOW, THEREFORE, in consideration of the covenants contained in this Agreement, the parties agree as follows:

1.0 DEFINITIONS

1. **Canada's Data** means any and all Data, the Intellectual Property Rights of which vest with Canada.
2. **Canada's Licensed Rights** means those rights conferred upon Canada by third parties over the use of Data which is not Canada's Data.
3. **Data** means any digital data, meta-data, or documentation subject to the terms and conditions of this Agreement.
4. **Derivative Products** means any product, system, sub-system, device, component, material or software that incorporates or uses any part of the Data.
5. **Intellectual Property Rights** means any intellectual property right recognised by law, including any intellectual property right protected through legislation, such as that governing, but not limited to, copyright and patents.

2.0 LICENCE GRANT

1. Subject to this Agreement, Canada hereby grants to the Licensee a non-exclusive, fully paid, royalty-free right and licence to exercise all Intellectual Property Rights in the Data. This includes the right to use, incorporate, sublicense (with further right of sublicensing), modify, improve, further develop, and distribute the Data; and to manufacture and / or distribute Derivative Products derived from or for use with the Data.
2. The Intellectual Property Rights arising from any modification, improvement, development or translation of the Data, or from the manufacture of Derivative Products, effected by or for the Licensee, shall vest in the Licensee or in such person as the Licensee shall decide.

SCHOOL OF OPEN LAUNCHES

School of Open is in session.

Register now for a facilitated course or take self-directed courses whenever you like.



a School of Open course!

Explore

LOOKING FOR CREATIVE WORKS?

Looking for music, video, writing, code, or other creative works?

Creative Commons has got you covered. Search for creative work through sources like Google and Flickr right here.

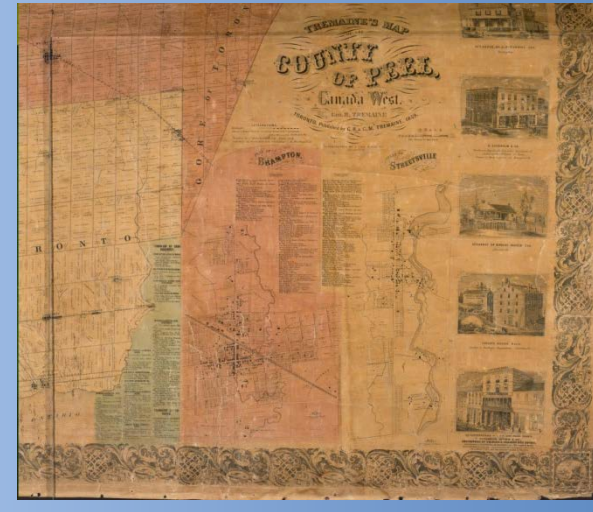
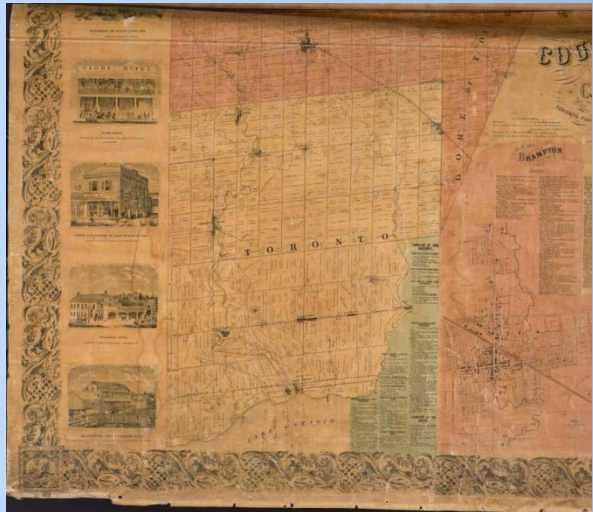
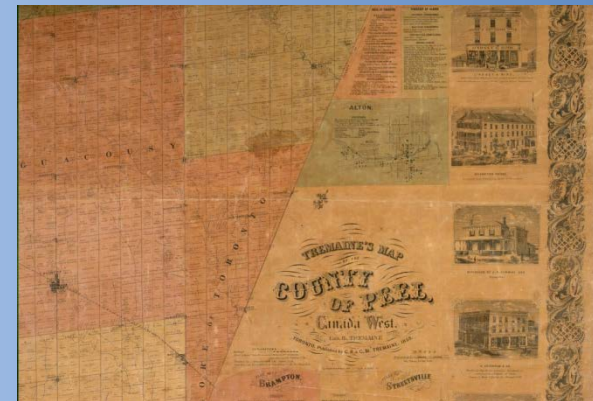
Find CC-licensed works

Support CC

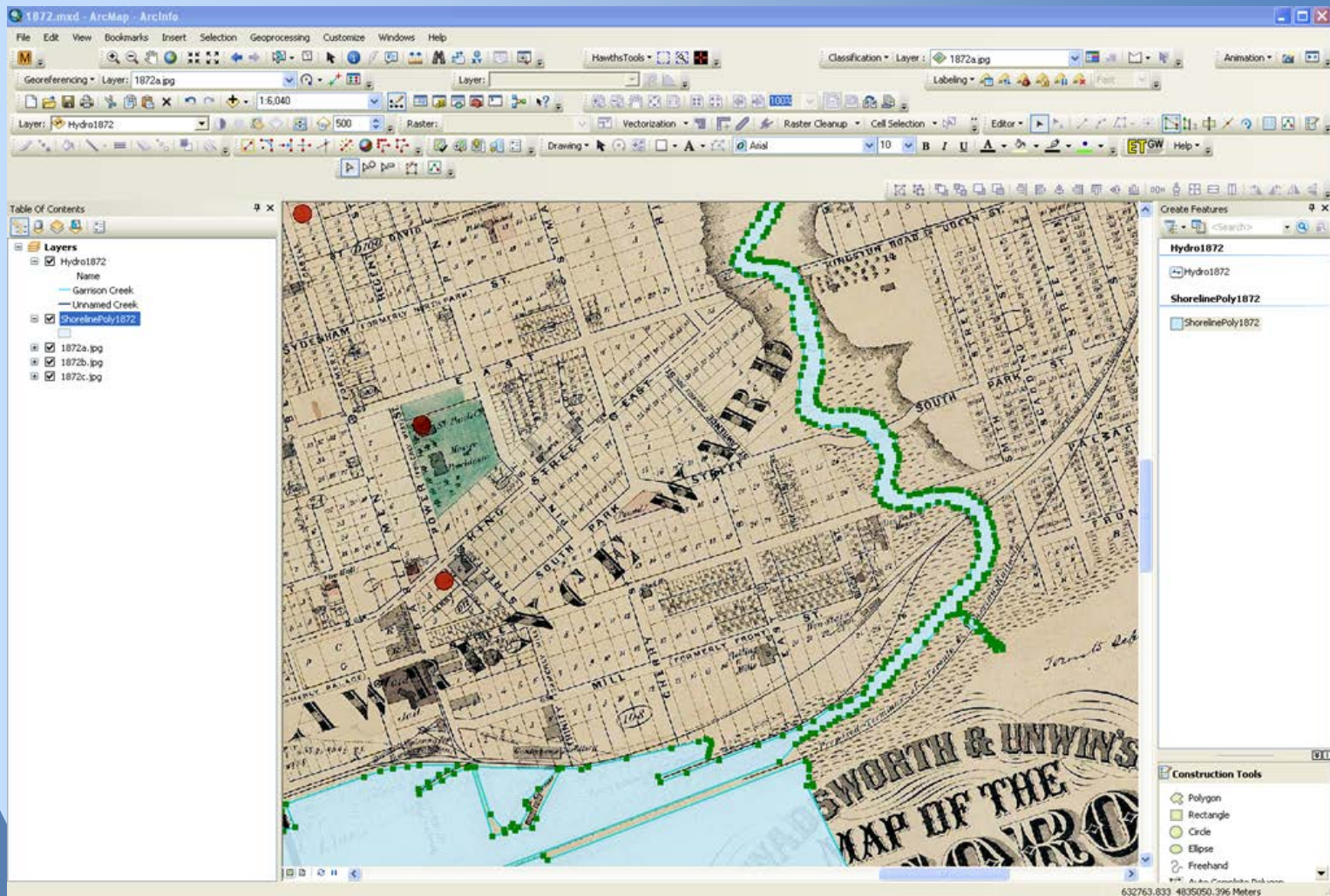
Best Practices - Georeferencing



Best practices - mosaicing



Best practices - vectorization



Best practices - software choice

MapTiler - Tile Generator for Map Makers

Selection of the tile profile

MapTiler generates tiles for fast online map publishing.

What kind of tiles would you like to generate?

☒ Google Maps compatible

Mercator tiles
mashups and

☐ Google Earth (KML)

Tiles and KML
browser plugin.

☐ WGS84 Plate Carée

Compatible with
other applications

☐ Image Based Tiles

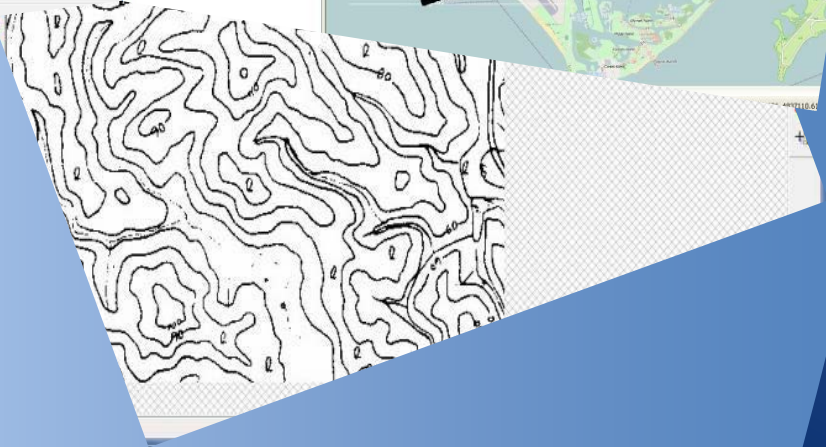
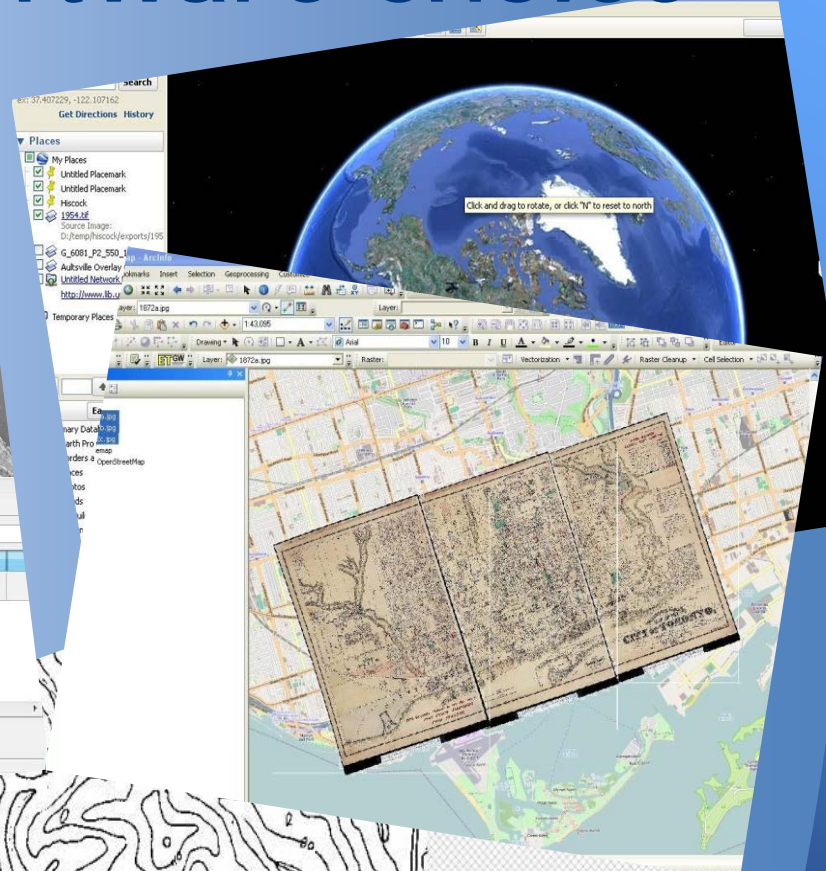
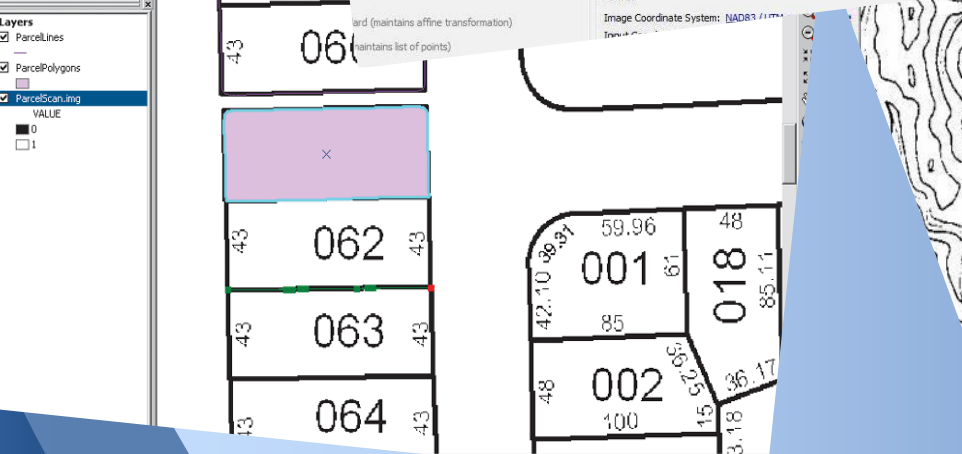
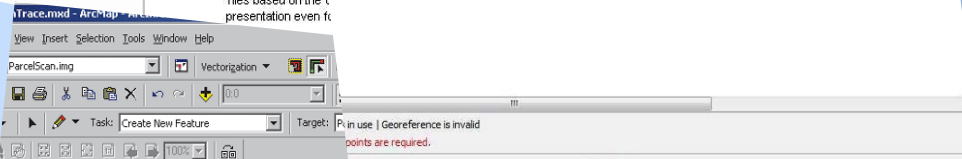
Tiles based on the
presentation even if



Image Size: 19588 x 4352 px | Zoom

Use	Name	PX	PY	WX	WY	PXY Error
<input checked="" type="checkbox"/>	Point 1	15572	3585	0.000 m	0.000 m	

Method: Affine



Best practices - Data Curation



The screenshot shows a web browser window with the URL https://www.archivemata.org/wiki/Main_Page. The page features the Archivemata logo, which consists of an orange circle with a white 'a' followed by the word 'archivemata' in a dark blue serif font. Below the logo, there is a navigation sidebar on the left and a main content area on the right. The sidebar includes sections for 'Navigation' (Main page, Recent changes, Random page) and 'Toolbox' (What links here, Related changes, Special pages, Printable version, Permanent link). The main content area has tabs for 'Page' and 'Discussion', with 'Page' selected. The title 'Main Page' is displayed in a large, dark blue serif font. Below the title, the section 'What is Archivemata?' is followed by two paragraphs of text. The first paragraph states that Archivemata is a free and open-source digital preservation system designed for digital objects. The second paragraph describes its micro-services design, compliance with the ISO-OAIS functional model, and its use of METS, PREMIS, Dublin Core, and other metadata standards for file format analysis. A third paragraph mentions the 'overview' section and a 'screencast' link.

← → ↻ https://www.archivemata.org/wiki/Main_Page

archivemata®

Navigation

- [Main page](#)
- [Recent changes](#)
- [Random page](#)

Toolbox

- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Printable version](#)
- [Permanent link](#)

Page Discussion

Main Page

What is Archivemata?

Archivemata is a free and open-source [digital preservation](#) system that is designed to digital objects.

Archivemata uses a [micro-services](#) design pattern to provide an integrated suite of so ingest to access in compliance with the ISO-OAIS functional model. Users monitor and Archivemata uses METS, PREMIS, Dublin Core and other best practice metadata sta analysis of the [significant characteristics](#) of file formats.

The [overview](#) section provides a detailed description of Archivemata's functionality and [screencast](#)  gives a demo of the core features in the current release.

Project data dissemination for "Orphan" data, lost or inaccessible





Other Goals and Objectives

- Create a community
- Foster conversations
- Prevent duplication
- Promote literacy
- Build teaching tools

Other examples

GIS National Historical
Geographic Information System

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 2011.

NHGIS News

[2011 GIS Boundaries now available](#)

[Streamlined NHGIS shapefiles now available](#)

[New time series tab](#)

Leading Minority* of Women <https://patsil.scholastic.org/project/>

by State, 2006-20



The Historical GIS Research Network

Latest: European Social Science History Digital History network: The conference took place in April 2014. The deadline for papers is through the [conference website](#).

The Historical GIS Research Network

The Historical Geographical Information System (NHGIS) is a project of the Institute for Enabling Geospatial Scholarship, with funding from the Economic and Social Research Council's *Research Seminars Competition*.

The Network has four main aims:

1. To provide a focus for Historical GIS research
2. To advance our understanding of Historical GIS at applied levels.
3. To encourage the adoption of GIS amongst a broad audience of researchers who have an interest in the past.
4. To investigate the setting up of an international association to act as a focus for historical GIS research.

This website describes the events organised by the Network or relevant to it, and provides a portal for a wide variety of links and resources relevant to Historical GIS Research including details of training events, a large bibliography, and lists of projects, websites, organisations and software relevant to historical GIS and historical maps.

(c) Ian Gregory, 2007

Portsmouth

Home | Site map | Accessibility

Courses

Why Portsmouth?

Application, Fees and Funding

Research

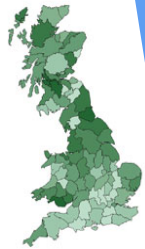
Explore

About the GB Historical GIS
About the project
About historical GIS
Media resources
Contact us

Go back to: [Research](#) > [Great Britain Historical Geographical Information System \(GBHGIS\)](#)

Great Britain Historical Geographical Information System (GBHGIS)

The Great Britain Historical Geographical Information System is a unique digital collection of information about Britain's localities as they have changed over time. Information comes from census reports, historical gazetteers, travellers' tales and historic maps assembled into a whole that is much more than the sum of its parts. This site tells you more about the project itself and about historical GIS.



The website, created by funding from the UK National Lottery and extended and re-funded with funding from the Joint Information Systems Committee, makes this resource available in-line to everyone, presenting our information graphically and cartographically. It is called *A Vision of Britain through Time* and presents the history of Great Britain's localities. It can be found at www.visionofbritain.org.uk.

© Portsmouth © 2012

023 84 8484 Email: info.centre@port.ac.uk

100, Winston Churchill Avenue, Portsmouth

Spatial Humanities | Projects & Groups

a project of the Institute for Enabling Geospatial Scholarship

How can I contribute?

NYPL Map Rectifier



The New York Public Library Map Rectifier lets users explore the NYPL's rich historical map collection and digitize artifacts with modern maps. [Learn more.](#)

Want to list your organization or group? Click "how can I contribute?" and get involved.

[View All Projects](#)

[View All Groups](#)

Spatial Humanities made possible by a generous grant from the [National Endowment for the Humanities](#) to the [Scholar's Lab at the University of Virginia Library](#). It does not necessarily represent the views of the NEH. Learn more about the [Institute for Enabling Geospatial Scholarship](#).

The Spatial History Project



The Spatial History Project at Stanford University, a part of the Center for Spatial and Textual Analysis (CESTA), is made possible by the generous funding of the Andrew W. Mellon Foundation.

RECENT UPDATES

18 March 2013

Student Opportunities

We are now accepting applications for paid undergraduate Research Assistants for the Spring Quarter and Summer Session to work on one or more of our research projects. We seek independent and motivated students to engage in original research, and who can support a variety of projects in our lab.

Ideal candidates will have previous skills in - or willingness to learn - spatial analysis, data visualization, web or app design, statistics, writing, graphic arts, library research, or computer programming. Our data visualization projects span the digital humanities and include a wide range of projects in cartography, GIS, and related fields. Please see below of a brief summary of current research projects in the lab.

Publications
About Us
Gallery
Resources

SEARCH

OUR TEAM

RESEARCHERS

NICHOLAS BAUCH - (Researcher) Nicholas Bauch is a geographer who, today, often works at the intersection of history and geography.

CAMERON BLEVINS - (Researcher) Cameron Blevins is a PhD candidate studying Digital and Ancient History.

ANDREW GERHART - (Researcher) Andrew Gerhart is a PhD candidate in the Stanford History Education Group.

ALLYSON HOBBS - (Researcher) Allyson Hobbs is an assistant professor of American Studies and History.

MICHAEL LEVIN - (Spatial Historian) Michael Levin is a documentary filmmaker and geographer in the Spatial History Project at the lab.

MARIA J. SANTOS - (Researcher) Maria J. Santos joined the Spatial History Project at the lab.

SCOTT SAUL - (Researcher) Scott Saul is an associate professor of English and American Studies.



Next steps

- Community creation (librarians, archivists, historians, geographers, cartographers, etc.)
- Assembly of collaborators (pitching in)
- Discussion of terms of reference



Next steps - collaborator decisions

- data portal?
- discovery?
- data archive?
- best practices / knowledge base?
- data creation / enhancement?




Next Steps

- Funding

- SSHRC - Partnerships/Dev't Program?
- SSHRC - Connections Program?

"Guidelines and support for tools for research and research-related activities are under development, to be announced during fiscal year 2012-13."

- Canadian Foundation for Innovation (CFI) - Research Infrastructure Development?
- Joint applications with Partners?



Potential collaboration / partnerships?

- NRCan
- Statistics Canada
- Provincial agencies
- NiCHE
- OCUL Scholars Portal
- Library and Archives Canada
- Individual HGIS researchers

Canadian Historical GIS Network so far



<http://www.hgis-sigh.ca>



Canadian Historical GIS Network so far

hgis-sigh-l@listserv.utoronto.ca

subscribe by sending email to:
listserv@listserv.utoronto.ca

"subscribe hgis-sigh-l
yourmail@youraddress.ca
Firstname Lastname"

What's missing?

Let us know what you think of the concept, and let's start the conversation.