Re-Positioning Spatial Discovery

(oops....it’s gonna be a moon shot thing again)

Spatial Discovery 2015
Santa Barbara June 16-17, 2015

James Boxall
@jamesGIS

(unless otherwise noted, images are via Wikipedia or creative commons)
Insert obligatory old maps
MSC 1999: Libraries either at the heart or ignored

For libraries...discovery needs to be placed in the context of the data-info-knowledge path....therefore in a societal framework
The different methods of data collection for the Ocean Tracking Network

Shore station collecting data via fibre-optic cable

Underwater fibre-optic cable

"Daisy-chain" data flow

Acoustic receiver

Physical environment sensor

Ship collecting data

Robotic sub collecting data

Tagged fish transmitting data

Data being sent to satellite

OTN @Dalhousie

(image from Ocean Tracking Network, Dalhousie University)
The problem of spatial discovery of 100,000 space station photos from Cmdr Chris Hadfield

Digi.library.dal.ca

Also: Finding books by GIS
Library application to find book shelf via mobile Platform: spatial search and discovery of the item, not just the content
Column

Reflections on Ten Years: Small Steps, Giant Leaps, and a Geographic Future

JAMES BOXALL
Dalhousie University, Halifax, Nova Scotia, Canada

Anniversaries of all types are often celebrations, and sometimes memorials, in which we pause and reflect upon what the event is marking: what has come before to make this occasion special and where might we be the next time we stop the clock to think more deeply about how time does move on despite our best wishes.

What would Roger say?
“It’s still geography”

It began before ADL, but ADL began the “Spatial Moon Shot”
Mentioned in Gore’s “Digital Earth” speech

Moon shot in this context was first used by Goodchild at the ICA Congress in Ottawa in 1999
Catalog Search Results
Catalog search results for geographical locations.

Your query returned 6 result(s).
Maximum number of results is set to 100.

Your query was:
- Geographic datatype/form/genre keyword = Aerial photographs
- Geographic datatype/form/genre keyword = Remote sensing images
- File type (e.g., GIF) of browse graphic = GIF
- Within [34.448, 34.542, -119.764, -119.916]

(diagram from Nebert’s SDI Cookbook)

It doesn’t look so scary does it....
Public perception of science/STEM

You know it’s good/better when it is being made fun of...
SDI and Infrastructure: It’s only working when you can’t see it (imagine all the discovery and content issues resolved so the universe can be displayed, queried and applied to problems – spatial & temporal become obvious and automatic)
Internet of things could be either much ado about nothing (consumer/surveillance data at its worse) or a boost to spatial discovery and solutions.
Sensors and government probably not the issue

Spatial Discovery by Private sector may be The policy issue

Location privacy may become a human right
Managing your spatial footprint?
Little research in connecting geoliteracy with information sciences & Librarianship

We assume OR we are caught by speed and PR
Do we mentor? We had better!!!
What a difference a day makes?
Spatial is everywhere and very personal
Spatial success related to our capturing a geo-moment in time

Geography, geoliteracy and spatial
Does anyone fund curiosity?

After a few hundred years, what is essential?
What becomes the legacy? Do we recall how ideas became solutions.
The need for curatorial, archival, collections based viewpoints
Slow (as per Carl Honore) does not mean neoluddite

(I love tech; it’s inside me)

But be careful as technology without planning can bite back
We have found that “we” are a stable core of 10%, but the 90% geocommunity is growing
Rules we knew and still play by?

Now more complex but oh so much fun
Alignment of visions
Discovery & Innovation comes from tension
(no stress means it doesn’t work)
A single event and solitary person (lone voice in wilderness) can change everything
<table>
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<tr>
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</thead>
<tbody>
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<td>Duro Pen Co., of Brooklyn, New York</td>
</tr>
<tr>
<td>Model:</td>
<td>Rocket</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>5 1/8&quot; (130mm)</td>
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<td>approx 0.02 lb (10g)</td>
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<td>No. carried in LM:</td>
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<tr>
<td>NASA usage:</td>
<td>Apollo 9 onwards</td>
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</table>

$1.29 solution to save a $2 billion trip to moon...creativity matters
My risky 3am jet lag image testing an idea for a paper

200BCE

2100

Hours of Sun

Brain cc

Memory Intuition

K-12 (literacy in general?)

public-geo

Internet of things

ADL 1.0

Printing Press

Lib of Congress

Public Edu

Moon Shot

web

ADL 2.0

My risky 3am jet lag image testing an idea for a paper
When it is dark enough,

you can see the stars.

Ralph Waldo Emerson
Geography cannot save the World, however, without it we won’t find the answers.
Discovery without basic geography and geoliteracy may not mean much
Discovering the Complexity of Spatial Data: Evolution and Organization of the UCSB Maya Forest GIS

Anabel Ford
ISBER/MesoAmerican Research Center
Four Decades in the Maya Forest

- Research in Belize and Guatemala 1975 to the present
  - Archaeological survey and excavations
  - Environmental observation and assessment
- Rediscovery of El Pilar ~ 1 resource 2 nations ~ 1983
  - Site spans the disputed border Belize & Guatemala
  - Evokes political process & community contribution
  - Engages conservation of nature and culture
  - Questions the context of heritage management
  - Builds on ecotourism
El Pilar ~ Gathering Data
Archaeology Under the Canopy

- Archaeological and Environmental Data
  - Collaborating with nations and disciplines
  - Using methods from compass and GPS
  - Integrating maps from pencils and laser
  - Analyses from keypunch to GIS

- Data Sharing
  - Results to diverse audiences
  - Data shared with colleagues
  - Data contributed to governments
  - Next steps....... The world?
History of Data collection for the Maya Forest GIS

- Mapping in the 1980s and 90s
  - Paper maps ~ varied scales for geography & archaeology
  - Field observations coded and digitized
  - Computerized data of archaeological sites & collections
Opening the Digital Chapter

- Initiation of the Maya Forest GIS 1998-2002
  - Digital data collection for the GIS with Keith Clarke
    - Based on *regional* data of Paseo Pantera Consortium USAID
    - Acquired *local* data from Belize, Guatemala, and Mexico
    - Gathered *site specific* data related to our research
  - Distributed via ADL at UCSB
    - Created at the regional level
    - Focused on geographic data
    - Including archaeological sites
    - Archived with ADL
    - Distributed to management agencies
    - Shared with colleagues in the field
Developing the Maya Forest GIS 2002

- Regional data at >250k from Belize, Guatemala, & Mexico
  - Sets the research scene
  - Provides the data context
- Local data at ~50k
  - General basis of research
  - Working scale of comparative data
- Site specific data at ~10k
  - Detailed field data collection
  - Working basis of field work
- Connected with non-spatial data
  - Descriptive attributes
  - Photos and videos
  - Archaeological collections
- Student interns and projects
  - Research and training
  - Theses and Dissertations
Gathering Data on the Maya forest

- Regional data at >250k from Belize, Guatemala, & Mexico ~ The Context
  - DEM at 90 and 30m
  - Geography and boundaries
  - Geology and soil data
  - Volcanoes and hydrology
  - Place names and roads
  - Protected areas
  - Air photographs
  - Satellite coverage
  - Archaeological sites
Creating Local Area Data for El Pilar

- Local data at ~50k ~ The comparative scale
  - Topography and hydrology
  - Place names, roads, boundaries
  - Archaeological maps of the BRASS/El Pilar surveys
  - Archaeological collections attributes
  - Forest garden locations and attributes
  - Weights of Evidence
  - Soil data
El Pilar ~ The Original Source

- Site specific data at ~10k ~ The working basis
  - El Pilar Archaeological Reserve boundaries ~ 1998
  - Air photographs for the reserve ~ 1998, 2012
  - LiDAR for El Pilar Archaeological Reserve ~ 2013
  - Roads and trails of the reserve ~ from 1998
  - Control points for transit maps El Pilar ~ 1998
  - Archaeological monuments & residences ~ 2013-
  - Archaeological collections ~ 1983- present
Data Repository ~ Distribution & Access

- Making the UCSB Maya Forest GIS accessible
  - File management in the field and Lab
    - Naming conventions and version management
      - Initially created by year and developed over years
      - Named according to use and practice of the moment
      - Now named with a specific nomenclature with creation year
  - Include geospatial and non spatial data
    - Spatial datum points for locations
    - Attributes and photos that are linked to the spatial data
  - Recognizing confidentiality
    - General vs specific information
    - Sensitive locational data and evidence of looting
Field Data Collection Example:

File Organization
Naming Conventions

- From informal to formal conventions
- Development of Data Dictionary
- Reflect status and creation
Current Archaeological Data Collection

- Using the GPS for our “Go-To” points..
  - Field forms to sketch and to make observations
  - Map sketches are drawn and GPS waypoints are taken around features
  - Observations of vegetation and canopy are recorded
Field Data at 1:1500 scale
The Orientation Map

Remote LiDAR

And on the Ground
LiDAR is Archaeology Under the Canopy!
Data Collection using LiDAR
Compiling the Spatial Data
Discover of Downtown El Pilar

A work in Progress
Spatial Data Discovery and Support in a Library Setting

Marcel Fortin
Map and Data Library
University of Toronto

Expert Meeting on Spatial Discovery
Santa Barbara
June 2015
Student Enrolment:

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<th>Total</th>
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<td>Graduate</td>
<td>11,894</td>
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<table>
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<th>16,442</th>
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<tr>
<td>Domestic</td>
<td>13,927</td>
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<tr>
<td>International</td>
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</table>
Student Enrolment: | Fall 2014-15

Total

- Undergraduate: 80.0% (68,114)
- Graduate: 19.4% (16,442)

UNDERGRADUATE

- Domestic: 56,220
- International: 11,894

GRADUATE

- Domestic: 13,927
- International: 2,515

Faculty and Staff | Fall 2013

- Faculty Members*: 13,239
- Staff Members: 6,470
- Librarians: 141

* Faculty Members includes all active faculty members with teaching/research responsibilities but excludes Research Fellows, Sessional Lecturers and 4,778 Teaching Assistants.
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U of T has international students from 161 countries and regions.

The top five countries/regions of origin are China, India, United States, Brazil and South Korea.

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Students</th>
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<td>India</td>
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<td>United States</td>
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<td>Brazil</td>
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<td>Korea (South)</td>
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<td>Hong Kong</td>
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<td>Saudi Arabia</td>
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<tr>
<td>Malaysia</td>
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</table>
Data acquisitions (purchase, license, store, etc.)
• Data acquisitions (purchase, license, store, etc.)

• Data management
Geospatial support in libraries - U of T - (data)

• Data acquisitions (purchase, license, store, etc.)

• Data management

• Data dissemination
Geospatial support in libraries - U of T (support)
• Instruction & teaching (workshops / credit courses)
• Instruction & teaching (workshops / credit courses)

• Literacy skills
Geospatial support in libraries - U of T (support)

• Instruction & teaching (workshops / credit courses)

• Literacy skills

• Software / technology support
Geospatial support in libraries - U of T (support)

• Instruction & teaching (workshops / credit courses)

• Literacy skills

• Software / technology support

• Reference / Research Consultations
GIS Consultations breakdown
GIS Consultations breakdown

- increasing number of questions
- increasing level of difficulty
GIS Consultations breakdown

- Finding/acquiring data
- Data use
- Data licensing
- Software installation
- Software licensing
- Data access

Increasing number of questions

Increasing level of difficulty
GIS Consultations breakdown

- GIS basics
- finding/acquiring data
- software installation
- software licensing
- data access
- data licensing
- data use
- transformations
- advanced GIS
- data analysis
- advanced cartography
- mapping
- geoprocessing
- data creation

increasing number of questions

increasing level of difficulty
Challenges - demand
Challenges - demand
Challenges - increased demand
A new data culture?
“The ability to gather and reproduce data has far outstripped our ability to present it.”

Arthur Robinson, 1966
Increase in geospatial collection size: datasets
Increase in geospatial collection size: datasets

Datasets
Increase in geospatial collection size: GB

Size of Collection (GBs)
**CanMap RouteLogistics Toronto (CMA) Subset v2013.3**

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<td>Contact</td>
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<td>Data Creator</td>
<td>DMTI Spatial Inc.</td>
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<td>Edition</td>
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<td>Datum</td>
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<td>Description</td>
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<td>Copyright Owner</td>
<td>DMTI Spatial Inc. dmtispatial.com</td>
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<tr>
<td>Required to Use?</td>
<td>None</td>
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<td>Acknowledgement</td>
<td>None</td>
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<tr>
<td>Who Can Use?</td>
<td>FACULTY STAFF STUDENTS</td>
</tr>
<tr>
<td>Entry Date</td>
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</tr>
<tr>
<td>Geography Covered</td>
<td>/ TORONTO, CENSUS METROPOLITAN AREA</td>
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<td>Formats</td>
<td>SHAPEFILE</td>
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</table>
U of T vector layers only (approximate)

Scholars Portal raster & vector layers

- 12 in 1999
- 0 in 2007
- 4,000 in 2007
- 16,747 in 2012
- 23,000 in 2015

- 700 in 2015
Research Data Management

...[T]he general preservation problem for geospatial data will simply compound over time with increasing quantities of data being produced by collection systems such as satellites and sensor networks. Historical geospatial data is of great value in understanding and modelling climate and land use change, for example, and hence future users and archivists are likely to want to use and curate increasing quantities of increasingly older geospatial data.

Technology Watch Report, 2009

• LAC can acquire government and ministerial cartographic material considered of historical or archival value

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• Section 12: no government or ministerial geospatial data or maps shall be destroyed or disposed of without the consent of the Librarian or Archivist

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- Section 12: no government or ministerial geospatial data or maps shall be destroyed or disposed of without the consent of the Librarian or Archivist.

- LAC has responsibility to work with institutions to identify information that should be transferred to the LAC.
Auditor general's fall 2014 report: $15M Library and Archives Canada system never used

Archives backlog includes 98,000 boxes of records — almost one-quarter of them military files, dating to 1890


Future generations may not be able to enjoy Canada's recorded heritage — including photos, maps and important documents — because Library and Archives Canada is not collecting all of the material it should from federal agencies, the auditor general says.
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From Data to Records: Preserving the Geographic Information System of the City of Vancouver

Glenn Dingwall, Richard Marciano, Reagan Moore, and Evelyn Peters McLellan

Retaining Geospatial Data Stored in the LIO Warehouse
## Census of Canada - Aggregate Statistics

Off-campus University of Toronto users login to **myaccess** first!

This table contains links to indicate the availability of aggregate statistics in computer-readable form from population censuses and disseminated by Statistics Canada.

**Note:** Documentation linked here is public access. Most of the census tables, however, are restricted access. If you are a member of a DLI member institution, contact your local DLI contact. Restricted links here are for the most part available only to University of Toronto, Brock University, York University, and Ryerson University faculty, students, and staff.


### Comparative table of Canadian census questions since Confederation

<table>
<thead>
<tr>
<th>Geographic level</th>
<th>Canadian overview tables (COTs)/ Nation series</th>
<th>Special interest tables (SITs)/ Dimensions series</th>
<th>Profile series</th>
<th>Basic cross-tabulations (BCTs)/ Basic summary tabulations (BSTs)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Detailed subject matter, less detailed geography.</td>
<td>Detailed subject matter, less detailed geography, Additional detailed tables on special topics, and containing one or more characteristics (e.g. age by sex by marital status). (Aggregate, multi-variate distributions.)</td>
<td>Less detailed subject matter, more detailed geography, Distribution of individual census characteristics (e.g. age or sex or marital status), by large and small levels of geography. (Aggregate, univariate distributions.)</td>
<td>Less detailed subject matter, more detailed geography, Tables containing one or more characteristics (e.g. age by sex by marital status), by large and small levels of geography. (Aggregate, multivariate distributions.)</td>
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</table>

### 2006 Census

2006 Census homepage at University of Toronto: <http://datalib.chass.utoronto.ca/cc06/cc06.htm>

<table>
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<tr>
<th>Geographic level</th>
<th>Topic-based tabulations (TBTs)</th>
<th>Topic-based tabulations (TBTs)</th>
<th>Profile series</th>
<th>Topic-based tabulations (TBTs)</th>
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</thead>
<tbody>
<tr>
<td>Canada, provinces, territories</td>
<td>Highlight tables tbt06.htm</td>
<td>tbt06.htm</td>
<td>CHASS census analyzer E-stat profile06.htm Included in C/D/CSD, FSA, FED &amp; DA profiles</td>
<td>tbt06.htm Included in DA-level files.</td>
</tr>
</tbody>
</table>
Expand Market Reach and Increase Profits
Unlock the Power of Location Economics

READ MORE
Policies and Guidelines

Open Access

Tri-Agency Open Access Policy


NSERC, the Canadian Institutes of Health Research (CIHR) and the Social Sciences and Humanities Research Council of Canada (SSHRC), are pleased to announce a harmonized policy on access to research publications. The Tri-Agency Open Access Policy on Publications builds on the 2010 endorsement of open access principles by all three agencies and reflects the feedback we received from over 200 respondents through our online consultation in fall 2013.

NSERC and SSHRC researchers will be required to comply with the new policy for all grants awarded from May 1, 2015 onward. While CIHR-funded researchers will now refer to the new, harmonized policy, compliance requirements will not change for the health research community.

To learn more about the policy, and for answers to frequently asked questions and the Open Access Toolbox, please visit the tri-agency Open Access page on Science.gc.ca.

In the coming months, we will be hosting an open access webinar series to elaborate on the policy and answer your questions. More details will be available on the tri-agency Open Access page in the coming weeks.

We encourage you to visit NSERC’s Open Access page regularly for the latest information and updates on open access. Please send any questions or comments to openaccess@nserc-crsng.gc.ca.
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FREE!
FREE free! Free
Free Free
Free Stuff Free
University of Toronto Library  
130 St. George Street  
Map Library  
Toronto, ON  
M5S 1A5  

Attention: Marcelle Fortin  
Map Librarian  

RE: Quotation for Digital Mapping Products and Services  

Dear Marcelle:  

Further to our discussion, below are the prices for the DigiMap products and services in which you have expressed an interest:  

<table>
<thead>
<tr>
<th>Qty.</th>
<th>Product #</th>
<th>Description</th>
<th>Unit Price</th>
<th>Subtotal</th>
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<tbody>
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<td>$2,882.45</td>
<td>$2,882.45</td>
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</tbody>
</table>

Total  

$2,882.45  

If you have any questions about these products or our services, please contact us. Thank you for your interest in DigiMap.  

DigiMap Data Services Inc.  

Marc R. Curtis  
Sales Manager
University of Toronto Library  
130 St. George Street  
Map Library  
Toronto, ON  
M5S 1A5  

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Sales Manager
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data we thought we’d never see
Map Services

Web Map Services

Owner: Geospatial Competency Centre
Currency: Current
Format: Web Service
Refresh rate: As Available - Publish or refresh
Attributes: There are three published OGC compliant WMS services to facilitate access to live geospatial data from the City of Toronto.

City Geospatial Web Service
Data mashups are great, but ......
Web Map Services

Owner: Geospatial Competency Centre
Format: Web Service
Refresh rate: Continuously - Real time refresh
Contact: gcc@toronto.ca

There are three published OGC compliant WMS services to facilitate access to live geospatial data from the City of Toronto.

City Geospatial Web Service
http://map.toronto.ca/servlet/com.esri.earmap?ServiceName=CityGeoSpatial

This service includes parks regions and districts, various school board boundaries, various Toronto Police Service’s boundaries, City wards, property parcels, concession blocks, provincial ridings, address points, street centrelines and ortho imagery.

CitySPAR Web Service
http://map.toronto.ca/servlet/com.esri.earmap?ServiceName=CitySPAR

This service provides access to a series of socio-demographic data. Layers in this service include faith organizations, dissemination areas, census tracts, city wards, neighbourhoods, priority neighbourhoods. Additional thematic layers include Income Inequality by Neighbourhood, Incidence of Low Income Households by Dissemination Area, and Couple Family Median Income by Census Tract.

Ortho Imagery Web Service
http://map.toronto.ca/servlet/com.esri.earmap?ServiceName=OrthoImagery

This service provides access to geometrically corrected (“orthorectified”) aerial photography for the City of Toronto.
Ortho Imagery Web Service


This service provides access to geometrically corrected ("orthorectified") aerial photography for the City of Toronto.
Open Data - Issues - WMS
CanMap® Streetfiles and CanMap RouteLogistics

Leveraging Canada’s #1 digital street network, complete with detailed attribution and a wealth of additional content, CanMap Streetfiles and CanMap RouteLogistics provide an exceptional map fabric for business applications that support location-based services, market analysis, target marketing, site location analysis, customer insight and service, asset management, vehicle routing and personal navigation. As a full product solution with hundreds of attribute fields, you can use CanMap Streetfiles or CanMap RouteLogistics as the foundation for your enterprise decision support systems or customer-facing location services.

Build a Solid Foundation with the CanMap Product Suite

DMTI is the industry leader in Canadian mapping data. Companies like Garmin, Google, Apple, GM OnStar, Department of National Defence, RCMP, Rogers, Bell...

What do you get?

<table>
<thead>
<tr>
<th>Key Features</th>
<th>CanMap Streetfiles</th>
<th>CanMap RouteLogistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant Roads</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Licensing & Copyright Challenges

Difficult and confusing terms that can’t be followed

“If you are accepting on behalf of your employer or another entity, you represent that you have full authority to bind your employer or such other entity to the Terms of Use.” http://www.toronto.ca/open/terms.htm#licence
“If you distribute or provide access to these datasets to any other person, whether in original or modified form, you agree to include a copy of, or this Uniform Resource Locator (URL) for, these Terms of Use and to ensure any such person agrees to, and is bound by, them …”
Fear

If, as a result of your breach of these Terms of Use, the City gets sued … you agree to protect the City and reimburse the City for everything which you cause the City to suffer…. you agree to defend, indemnify and hold harmless the City and all of its officers, employees, representatives and agents from any and all liabilities incurred in connection with any claim arising from any breach by you of these Terms of Use, including reasonable legal fees and costs. You agree to cooperate fully in the defence of any such claim.
"You shall not use the data made available through the GC [Government of Canada] Open Data Portal in any way which, in the opinion of Canada, may bring disrepute to or prejudice the reputation of Canada."
Which License?

Geogratis Licence Agreement For Unrestricted Use Of Digital Data

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.

1. WHEREAS Canada is the owner of the data (the "Data") accessible pursuant to the terms and conditions of this Agreement;

2. AND WHEREAS the Licensee wishes to obtain certain rights to the Data, on terms and conditions herein contained;

3. AND WHEREAS Canada represents that it has full authority to grant the rights desired by the Licensee on the terms and conditions herein contained;

4. 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. Data means any digital data, meta-data, or documentation subject to the terms and conditions of this Agreement.

3. Derivative Products means any product, system, sub-system, device, component, material or software that incorporates or uses any part of the Data.

4. 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
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.
Canada’s revised Open Government Licence encourages the reuse of federal government information, in clear, concise, and plain language.
Free Downloads - Canadian Postal Codes, US Zip Codes and US & Canada City Centroids

This data is provided under the Open Database License (ODbL) You haven't made it until you get sued Donate to geocoder.ca's legal defense fund to keep our data free

Submit your email address:  Submit
Copyright Issues

Canadian Federal Crown Copyright

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Due to maintenance, Publications.gc.ca will be unavailable on January 23, 2014 from 1:00 p.m. until 11:59 p.m. ET.

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Some departments and agencies have provided specific contact points to request copyright clearance related to their material. If you are unable to find an organization in the list of departmental contact points provided below, please consult the links on the Canada site’s list of Government of Canada Departments and Agencies.

Quicklaw Social Media:
Ontario Rolls Out New Government Initiative
Maps, under copyright, remain the same
6. The term for which copyright shall subsist shall, except as otherwise expressly provided by this Act, be the life of the author, the remainder of the calendar year in which the author dies, and a period of fifty years following the end of that calendar year.

R.S., 1985, c. C-42, s. 6; 1993, c. 44, s. 58.

6.1 Except as provided in section 6.2, where the identity of the author of a work is unknown, copyright in the work shall subsist for whichever of the following terms ends earlier:

(a) a term consisting of the remainder of the calendar year of the first publication of the work and a period of fifty years following the end of that calendar year, and

(b) a term consisting of the remainder of the calendar year of the making of the work and a period of seventy-five years following the end of that calendar year,

but where, during that term, the author’s identity becomes commonly known, the term provided in section 6 applies.

1993, c. 44, s. 58.
FIPs and 90 years
Shifts in use - Spatial History / HGIS / GeoHumanities
Data Creation
Aerial photographs 1947

Click an area of the map to see it in more detail.

To view and print these maps, you will have to download the free ExpressView Browser Plug-in (DAVS) for Windows, from LantaraTech.

This plug-in is compatible with Microsoft Windows using Firefox 2 or 3 or Internet Explorer 7 or 8 web browsers.

1947 aerial maps index
Changes - Library/Faculty relations

Don Valley Historical Mapping Project Background

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

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

The project is in progress. To date, we have scanned several dozen historical maps of Toronto and the Don River watershed, and compiled the following geospatial datasets: 1) changes to the river channel and shoreline of Toronto harbour, 1858-1918; 2) industrial development in the Lower Don River Watershed, 1857-1951 (as points, and in some cases polygons); 3) historical mill sites in the Don River Watershed, 1825-1832; land ownership in the watershed, 1860 and 1878; and 4) points of interest in the watershed. In the future, we hope to expand the project to include data from other Toronto area watersheds and other parts of the city.
hgis partnership/network -
two year funding to develop a community/partnership/network of hgis/spatial history researchers

applicant
marcel fortin, university of toronto

cooplicants
léon robichaud is director of the history department, university of sherbrooke
donald lafreniere is assistant professor of historical geography and gis at michigan technological university
john lutz is an associate professor of history at the university of victoria

collaborators
coleen beard is head of the map, data and gis library, brock university
geoff cunfer is an environmental historian of agriculture and associate professor in the department of history at the university of saskatchewan
jim clifford is an assistant professor of environmental history in the department of history at the university of saskatchewan
josh macfadyen – assistant professor, arizona state university
jennifer bonnell is an l.r. wilson fellow in canadian history at mcmaster university
larry la liberté is a gis librarian at the university of alberta
ken sylvester is research associate professor, inter-university consortium for political and social research, university of michigan

project manager
byron moldofsky, university of toronto
HGIS Partnership/Network - Goals

- White papers
  - Visualization methods
  - Survey of Canadian HGIS Datasets
  - Existing and Emerging Technologies
  - Standards for Data and Research Data Management and Preservation
  - HGIS Education
- Build a pilot version of an open, accessible Historical GIS Data Portal
- Build a pilot accessible interactive mapping application for HGIS
New Challenges to come?
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• Spatial History / Digital Humanities
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• Web mapping support
New Challenges to come?

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• Technology changes
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