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NEOGEOGRAPHY AND THE STRUCTURAL EFFECT

What is Neogeography?

- Crowd source?
- Cloud GIS?
- Anything *not* from a “traditional” GIS vendor?
- Is it anything “web 2.0” that has a map in it?
 - And while we’re at it, what is “web 2.0”?



Is Neogeography GIS?

⦿ What is GIS?

- Analysis?
- Mapping?

⦿ Definitions of GIS

Wikipedia:

[GIS] captures, stores, analyzes, manages, and presents data that is linked to location.



Who Are These Neogeographers?

○ New Geographers?

- maps become a way for all of us to collect ground truth about our ecosystems; to participate and to care more
- maps may even become predictive modelling tools to help make argument
- maps become an equalizer between parties of vastly different scales when talking about land use policy

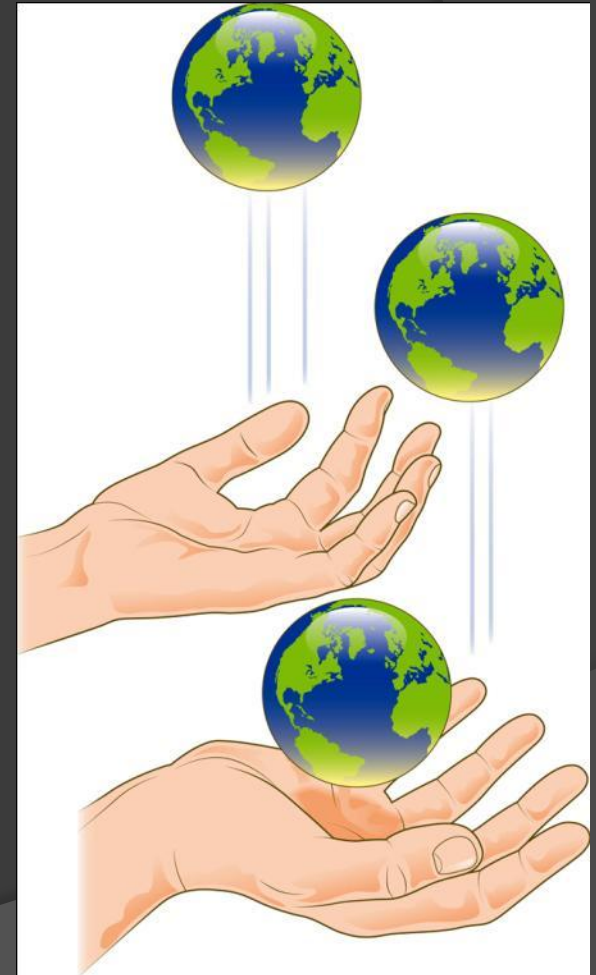
Are Neogeographers Only Doing Simple Things?

- ⦿ “Mapping” vs. “GIS”
- ⦿ GIS is complex Analysis
 - Like what?
 - Routing?
 - Interpolation?
- ⦿ What is “Complex” today will be “Simple” tomorrow

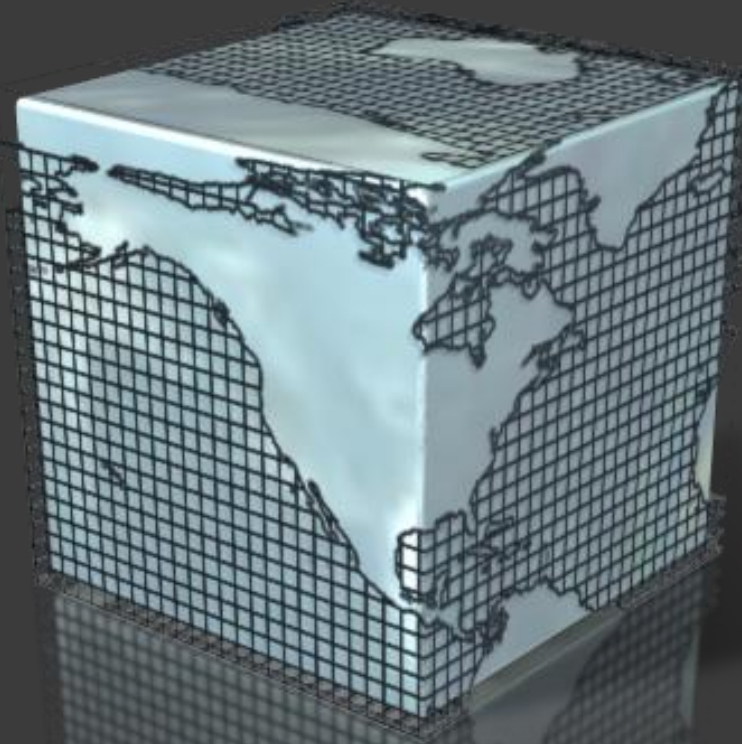


Or, Are Neogeographers Just Doing GIS in a Simple Way?

- ◎ Is Traditional GIS “Robust”?
 - Or is it just hard to use?
- ◎ Is it really that complicated?
- ◎ Imagine being unencumbered with all that...
 - Accuracy
 - Projections
 - Data models
 - Mind-numbing debates over the virtues of one spatial type vs. another....



Neogeography is Changing GIS



Structural Effect

- ⦿ Substitution Effect – First Wave
 - Do the Same thing with the new Technology
 - Technology is unreliable, evolving
 - Learn to Use the technology
- ⦿ Scale Effect – Second Wave
 - Improvements in efficiency, Affordability
 - Too much of a good thing
 - Struggle to Manage the technology
- ⦿ Structural Effect – Third Wave
 - Technology changes the ecosystem (for good or bad)
 - Learn to Master the technology

Example: The Automobile

- ◎ Substitution Effect – First Wave
 - Cars replace horse and buggy
 - Dangerous, unreliable
 - Elite – Automobile clubs.
- ◎ Scale Effect – Second Wave
 - Ford's Model T – Car for everyone
 - Traffic Jams, outstrip infrastructure
 - Rules, infrastructure (highways)
- ◎ Structural Effect – Third Wave
 - Evolution of the car culture
 - Suburbs, Drive Thru

GIS And the Structural Effect

- ◎ Substitution Effect – The First Wave
 - Digital Mapping
 - Cumbersome – Programming, Digitizing
 - Elite – The stuff of PhDs.
- ◎ Scale Effect – The Second Wave
 - Desktop GIS - For everyone
 - Data Management, Data Formats
 - Infrastructure, proprietary languages, standards
- ◎ Structural Effect – The Third Wave
 - IT standards
 - Enterprise Integration, SOA, **Web GIS**

Refine it: GIS on the Web

- ◎ Substitution Effect – The First Wave
 - Web Mapping sites with ugly maps
 - Plugins, Java based clients in browsers
 - Toolbars, TOCs – Desktops in a browser
- ◎ Scale Effect – The Second Wave
 - Proliferation of map Services and Sites
 - Evolution of complex GIS web standards “WxS”
 - Complex Portals, mountains of metadata
- ◎ Structural Effect – The Third Wave
 - Standard, easy to use APIs, simple tools
 - Web 2.0 - Neogeography

City of Quinte West GIS - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.quintewestmaps.com/imf/imf.jsp?site=quinte-west

Most Visited Getting Started Latest Headlines

City of Quinte West GIS

CITY OF QuinteWest

INVEST IN QUINTE WEST

MAP IT WEB PAGE

Leons

YOU IN QUINTE WEST

MAP IT WEB PAGE

LAYERS PRINTABLE VERSION LEGEND BOOKMARKS REGIONAL MAP

SEE ALL BUSINESS

Map Layers

- Public Facilities
- Economic Development and Planning
- Businesses *
- Residential Building Permits
- Building Permits (not Residential)
- DBIA Boundary
- Tourism Points Of Interest
- Major Residential Developments
- Commercial Industrial Lands *
- Roads
- Quinte West Chamber of Commerce *
- North Murray Industrial Park *
- Soils Maps
- Northumberland Soils
- Hastings Soils
- Base Map Data
- Properties
- Frankford Properties *
- Trenton Properties *

Scale: 1: 49,961

Locations in Quinte West: Select a location

Tourism/Points Of Interest: Select a location

Map Tool: Zoom In

Done

Identify Results


Roads

DIRTRAFFIC: Both
ROADCLASS: Collector
LANES: 2
SURFACE: Paved
NAMEBODY: Curtis
TYPESUFFIX: Road
FULLNAME: CURTIS ROAD
ABBRNAME: CURTIS RD
ID: 0
LENGTH: 0.41988922771
area: 0
len: 420.732385255145

Coordinate Position

UTM Zone 17N: 774976, 4889925

The page at http://www.quintewestmaps.com says:

 You cannot identify features from the Businesses layer unless the layer is visible and within scale range.

OK



Overview Map

Layer List

- General
- Parcels/Addresses
- Transportation
- Planning Layers
- Hydrology
- Political Boundaries
 - City Council Districts
 - CONB City Limits
 - CONB City Limits (shaded)
 - CONB ETJ
 - Counties
 - School Districts
 - Voter Precincts
 - Census Tracts
 - Census Block Groups
 - Census Blocks
- Background (Imagery)
 - Imagery (2009)
 - Quad Tiles (2009)
 - Geronomo.sid
 - Hunter.sid

Toolbox

in Out Pan Full Back Forward Identify Measure Magnify Grid Coord

Report

Major Streets Streams Lakes/Ponds CONB City Limits (shaded) CONB ETJ Counties

Displaying results for 1 features in the CONB City Limits (shaded) layer.

#	Feature Actions	OBJECTID	Id	Jurisdicti	Shape.area	Shape.len
1		1	0	City limits	1233892969.6528	530761.378730833

Show Legend

Done

Projection: NAD 1983 StatePlane Texas

Scale 1: 170870

Jump to Extent:

2.5 1.25 0 2.5 Miles

x=2243603.707 y=13818979.973

Here's an Idea:

What if GIS Didn't Have to Look Like GIS?



DOTHOMES the real estate search engine

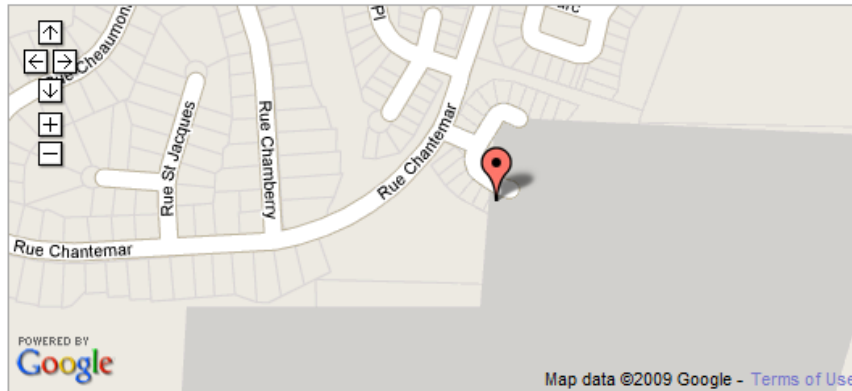
san diego homes

Search

e.g. Fremont, CA, 3 bedrooms for under 650K

San Diego Homes — 36,000 homes for sale MAP SAT RSS

12717 Rue Vincennes \$699,000



kurtmyers1.point2agent.com - 81 days ago - Save - Add Video - Street - Map

4020 Sunnyhill \$999,000



California Ranch Home on over half acre of land with sweeping ocean views in Olde Carlsbad Highlands! Gorgeous lot has plenty of room to move on, build on or just live on! Fantastic landscape to stroll on, sit and meditate in any one of the reflective garden vignettes, listen to love birds and take in that view! Custom kosher kitchen with Visit us for more information on san diego homes.

4 bedrooms 4 bathrooms 3,264 sq.ft. \$306 per sq.ft.

robinborrelli.point2agent.com - 67 days ago - Save - Add Video - Street - Map

Refine

- » Price: Any
» Bedrooms: Any
» Bathrooms: Any
» Square Feet: Any
» Date: Past 6 Months

Ads by Google

Homes for Sale Barbados

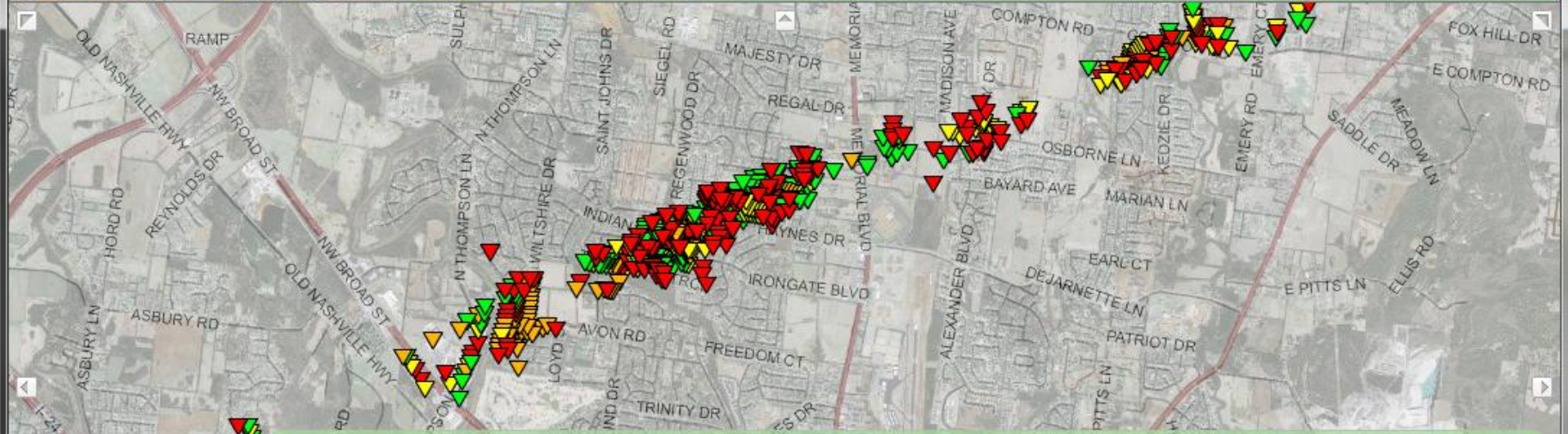
Buy, sell, rent homes & condos BDS great discounts & savings all serves www.juliedash.homemove.t

Whitby Starter Homes

Why Pay Rent? Get a Free List Of Homes with pictures for New Buyers claringtonhomesales.com

La Quinta Golf Homes

Find La Quinta golf homes 24/7 Search MLS online yourself anytime www.La-Quinta-Golf-Homes



Damage Locations ▼ Points X

Agency All Building Type All Building Purpose All Damage Type All

Address	Building Type	Building Purpose	Damage Type	Agency
1171 Bushnell Dr	Brick	Residential	Major	EOC
1148 Bushnell Dr		Residential	Affected Habitable	EOC
1138 Bushnell Dr		Residential	Affected Habitable	EOC
1135 Bushnell Dr	Brick	Residential	Destroyed	EOC
1128 Bushnell Ct		Residential	Affected Habitable	EOC
3412 Lakebrook Dr		Residential	Minor	EOC

City of Boston.gov

Projects Layers Tools About



Residential

Location : Allston / Brighton
Type : Solar - Photovoltaic
kW Rating : 2.91
Installer : Self
Note :



TOOLS

Find Your Address

Enter Street Address, (Zipcode)

Go

Calculate Your Solar Potential

Select Building

Draw Area



- OR -



Solar Potential

Chart Calculations Assumptions Next Steps



Comments to : Solar@CityofBoston.gov

What Does It Mean for GIS?

- Is it free software?
- Is it free data and content?
- Is it free GIS?
- Are we all out of a job?

The GIS Professional Says:

“Why do I need an expensive GIS software package when Google is free?”

The Mayor Says:

“Why do I need an expensive GIS department when Google is free?”



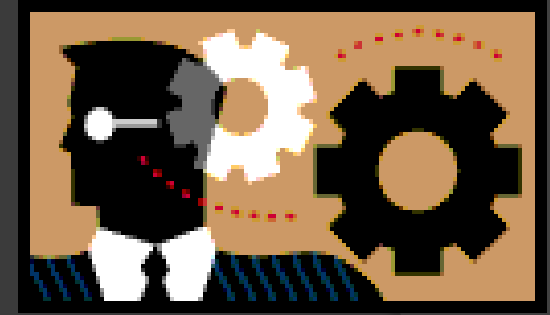
What Does It Mean for GIS?

We can learn from neogeography

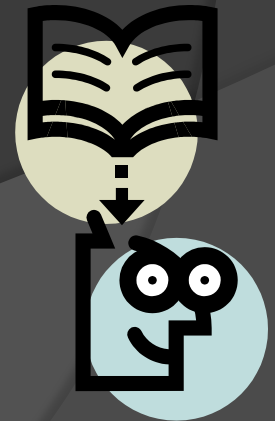
- ⦿ GIS doesn't have to be complicated
- ⦿ Web Maps don't have to be slow or ugly
- ⦿ Keep it simple – tie it to the needs of the user
- ⦿ Don't build a GIS on the web
- ⦿ Leverage Core GIS Capabilities repeatedly



It Doesn't have to be Complicated

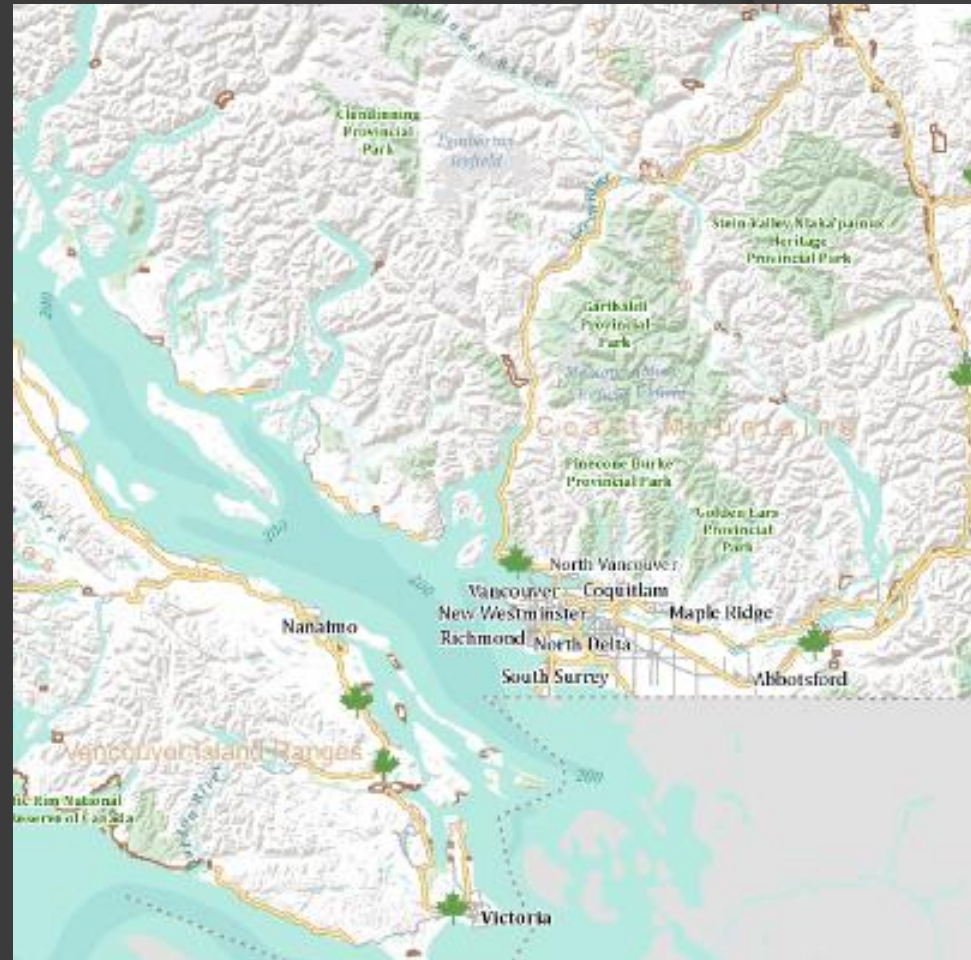


- Organize the components of your solution
 - Basemap – Geographic Context
 - Operational Layers – Interact with relevant data
 - Simple Tools – Focus on what's needed to get the job done
- Be a minimalist
 - Ask yourself “Do I really Need this?”



Web Maps can be fast and Beautiful

- ⦿ Tiling technologies
 - Just as pretty as a paper map
- ⦿ High performance
- ⦿ Visualization
 - 2D maps in Web 2.0
 - 3D visualization tools



Tie it to User Needs



- Focus on the End user
 - What do they need to get their job done
- Don't guess – ask!
- Avoid the “Spray and Pray” approach
 - “If I put enough toolbars on the interface I’m bound to have at least one they’ll use.”
- Design, Design, Design
 - Dust off your cartography text books
 - Think about UI design



Don't Build a Desktop GIS in a Browser...

- ⦿ Build focused applications that leverage GIS
- ⦿ Understand your users needs
- ⦿ Tie the solution to a “business value”
- ⦿ Don't turn the roads off!



Leverage Core GIS Capabilities



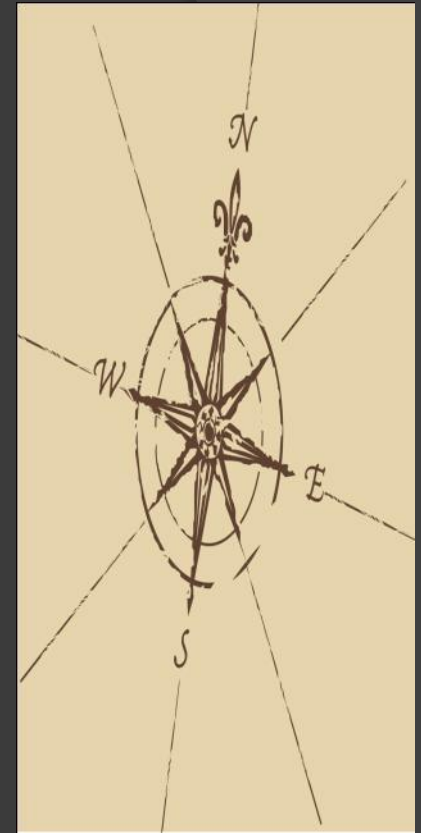
- ◎ Build Upon a foundation of GIS Services
 - Publish your own Operational Services
 - Leverage Online Services and Toolkits:
 - Bing, Google, ESRI, DMTI...
- ◎ Multiple focused, simple applications are better than one multi-purpose application
 - Focus on maintaining your core infrastructure
 - Stand up simple, loosely coupled applications
 - Tied to user needs and business processes

Keep It Simple



In Closing...

- Neogeography approach has much to offer GIS
 - Complementary – learn from it
- GIS needs to add value to the organization
 - Tie GIS to the values of the organization
- GIS Professionals need focus on the core
 - Consume and leverage the core with simple, focused applications



Thanks!

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