Open Source Web Architecture + Proprietary Map/Data Software = Rich Interactive Mapping Experience

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Background
(pre-Google mapping experiences)

Community Mapping Assistance Project (based at NYPIRG)

• GIS services for nonprofits, mainly in New York but also nationwide
• Longtime ESRI partner (Conservation GIS, New York City office, helped showcase technology in nonprofit world)
• early developer of online mapping sites using ESRI technology
Evaluating options in a post-Google Maps world

• Early 2006, transitioned to CUNY Graduate Center to run CUNY Mapping Service – broader GIS mandate, greater focus on GIS research projects

• Long Island Index project asked us to develop interactive mapping feature for www.longislandindex.org
  o Index background – needed to make complex issues more understandable to public (esp. to visualize inter-relationships and multi-level spatial patterns) and to engage people via the Web

• Opportunity to leverage a mix of online technologies
  o New ArcGIS Server tools – caching, etc
  o But really driven by Google Maps/AJAX approach of ease of use and intuitive display

• Evaluated emerging open source landscape – Geoserver & Mapserver, OpenLayers, etc

• Also looked at then-recent implementations of innovative approaches:
A hybrid “geo stack”

Result is [www.longislandindexmaps.org](http://www.longislandindexmaps.org)

- ArcGIS Desktop (to create MXD files) and ArcSDE/SQL Server to manage the data sources.
- ArcGIS Server to generate web map services from MXDs. We also use ArcGIS Server to generate cached tiles for the land use map layer.
- OpenLayers consumes the WMS resources, manages and displays the map layers, and provides map navigation tools.
- Dynamic data feeds are also provided via REST web services (such as village-specific statistics and comparison statistics).
- Ext JS provides the overall web framework and enables us to relatively easily integrate AJAX-style tools such as dynamic transparencies.

With the exception of the satellite/aerial photos, we host all other map layers

- Simply too much data to simply mash it up with a basemap from Google Maps or Microsoft, for example, and we wanted control over the cartography.
When you select a village:
1. It’s highlighted in orange;
2. Local statistics and charts are displayed; and
3. The overview map shows where on LI you’ve zoomed to.
See population or housing patterns in and around your community.
Add transportation routes, schools, environmental sites, special districts, and more.
The transparency slider reveals what’s underneath.
Compare aerial photos with Census and land use patterns

Click on the red marker for a bird’s eye view

0% transparent

70% transparent

100% transparent
Explore regional views of key demographic indicators

You can zoom out to see the entire island, and then double-click on the list to zoom back in and see community-level detail.
For more info, contact:

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