The Art and Science of Map Making: Using Geographic Information Systems

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Cornell University
Thompson Real Estate Consultants

March 2006
The Art and Science of Map Making: Using Geographic Information Systems

Workshop Agenda  11:30am – 1:30pm

✓ Introductions
✓ The Art & Science of Map Making
✓ Exercise 1: ArcMap, The Basics
✓ Exercise 2: Life on the Edge (optional)
✓ Roundtable: Applying GIS to the Disciplines
✓ Workshop Evaluation & ArcGIS 9.1 license
What is GIS?
GIS for Education


Source: Environmental Systems Research Institute
The Montgomery County Arts and Humanities Council requested DTS-GIS to develop location service applications to search for places of public art and to find performing art facilities. During the first phase of the project, two layers (public art and performing arts) will be added to the County's places of interest (PLOI) database. Web visitors will soon be able to find an art/cultural site, access an interactive location map, and generate travel directions.
24 Burrell Street

Site Front
<table>
<thead>
<tr>
<th>PRIZM NE Household Segments</th>
<th>84 5th St, Atlanta, GA 30344</th>
<th>84 5th St, Atlanta, GA 30344</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00 - 1.00 mi</td>
<td>0.00 - 3.00 mi</td>
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<tr>
<td>Households by PRIZM NE Segment</td>
<td>Households</td>
<td>%</td>
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<td>3,098</td>
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Top 10 PRIZM NE Segments

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Ranked PRIZM NE Social Groups

<table>
<thead>
<tr>
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<th>84 5th St, Atlanta, GA 30344</th>
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<tbody>
<tr>
<td></td>
<td>0.00 - 1.00 mi</td>
<td>0.00 - 3.00 mi</td>
</tr>
<tr>
<td>S4 - Inner Suburbs</td>
<td>87.27%</td>
<td>S4 - Inner Suburbs</td>
</tr>
<tr>
<td>S3 - Middleburbs</td>
<td>27.24%</td>
<td>S3 - Middleburbs</td>
</tr>
<tr>
<td>S2 - The Afluentials</td>
<td>5.00%</td>
<td>S2 - The Afluentials</td>
</tr>
<tr>
<td>S1 - Elite Suburbs</td>
<td>0.48%</td>
<td>S1 - Elite Suburbs</td>
</tr>
<tr>
<td>U1 - Urban Uptown</td>
<td>0.00%</td>
<td>U1 - Urban Uptown</td>
</tr>
<tr>
<td>U2 - Midtown Mix</td>
<td>0.00%</td>
<td>U2 - Midtown Mix</td>
</tr>
<tr>
<td>U3 - Urban Cores</td>
<td>0.00%</td>
<td>U3 - Urban Cores</td>
</tr>
<tr>
<td>C1 - Second City Soci...</td>
<td>0.00%</td>
<td>C1 - Second City Soci...</td>
</tr>
<tr>
<td>C2 - City Centers</td>
<td>0.00%</td>
<td>C2 - City Centers</td>
</tr>
<tr>
<td>C3 - Micro-City Blues</td>
<td>0.00%</td>
<td>C3 - Micro-City Blues</td>
</tr>
<tr>
<td>T1 - Landed Gentry</td>
<td>0.00%</td>
<td>T1 - Landed Gentry</td>
</tr>
<tr>
<td>T2 - Country Comfort</td>
<td>0.00%</td>
<td>T2 - Country Comfort</td>
</tr>
<tr>
<td>T3 - Middle America</td>
<td>0.00%</td>
<td>T3 - Middle America</td>
</tr>
<tr>
<td>T4 - Rustic Living</td>
<td>0.00%</td>
<td>T4 - Rustic Living</td>
</tr>
<tr>
<td>Unclassified</td>
<td>0.00%</td>
<td>Unclassified</td>
</tr>
</tbody>
</table>
01 Upper Crust
The nation's most exclusive address, Upper Crust is the wealthiest lifestyle in America—a haven for empty-nesting couples over 55 years old. No segment has a higher concentration of residents earning over $200,000 a year or possessing a postgraduate degree. And none has a more opulent standard of living.

22 Young Influentials
Once known as the home of the nation's yuppies, Young Influentials reflects the fading glow of acquisitive yuppies. Today, the segment is a common address for young, middle-class singles and couples who are more preoccupied with balancing work and leisure pursuits. Having recently left college dorms, they now live in apartment complexes surrounded by ball fields, health clubs and

30 Suburban Sprawl
Suburban Sprawl is an unusual American lifestyle: a collection of midscale, middle-aged singles and couples living in the heart of suburbia. Typically members of the Baby Boom generation, they hold decent jobs, own older homes and condos, and pursue coothing versions of the American Dream. Among their favorite activities are jogging on treadmills, playing trivia games and renting videos.

36 Blue-Chip Blues
Blue-Chip Blues is known as a comfortable lifestyle for young, sprawling families with well-paying blue-collar jobs. Ethnically diverse—with a significant presence of Hispanics and African-Americans—the segment's aging neighborhoods feature compact, modestly priced homes surrounded by commercial centers that cater to child-filled households.

46 Old Glories
Old Glories are the nation's downscale suburban retirees, Americans aging in place in older apartment complexes. These racially mixed households often contain widows and widowers living on fixed incomes, and they tend to lead home-centered lifestyles. They're among the nation's most ardent television fans, watching game shows, soaps, talk shows and newsmagazines at high rates.
Percent of small business loans received by women owned businesses
Boston, FY1998-FY2002

% of loans received by women owned businesses

- 0 - 6%
- 6 - 23%
- 23 - 29%
- 29 - 35%
- 35 - 45%

City average: 25.5%

Source: Small Business Administration
2000 Census Tracts - Median Earnings: Age 16+ Full Time

http://www.socialexplorer.com
West Court, Acropolis
GIS@Cornell

GIS@CornellListserve
CUGIS-L@cornell.edu

Cornell Atlas
http://atlas.geo.cornell.edu/

Cornell Ornithology
http://www.birdsource.org

Cornell Geospatial Data Information Repository
http://cugir.mannlib.cornell.edu/

Olin Library: Map & Geospatial Information Collection
http://www.library.cornell.edu/olinuris/ref/maps/map.htm
GETTING STARTED WITH GIS
A GUIDE FOR MUNICIPALITIES

PROVIDED BY THE
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION
(MassGIS)

October 2002
Revised Version of Guide Originally Published with the
Department of Housing and Community Development
Free Training

To get you started, the Campus offers 71 free training options. This list includes courses with free modules, along with courses, workshops, and training seminars that are entirely free.

Results 1 - 15 out of 71

- **Cartographic Design Using ArcGIS 9**
  - First module FREE
- **Conservation GIS Using ArcView 3.x**
  - First module FREE
- **Creating, Editing, and Managing Geodatabases for ArcGIS 8.2**
  - $130.00 USD
  - First module FREE
- **Creating, Editing, and Managing Geodatabases for ArcGIS 8.3**
  - $100.00 USD
  - First module FREE
- **Creating, Editing, and Managing Geodatabases for ArcGIS 9**
  - $75.00 USD
  - First module FREE
- **Exploring the VBA Environment**
  - FREE
- **Exploring Marine Science with ArcGIS**
  - $100.00 USD
  - First module FREE

http://campus.esri.com
GIS in Education

The mission of the U.S. Geological Survey’s Education and Communications Program is to educate data users in the use and application of USGS products and services. In support of that mission, the program:

- Instructs educators in the use of teaching with and about geographic information systems (GIS) and other geographic technologies (remote sensing, Global Positioning Systems (GPS) in the K-12 community college, and university curricula through the use of online guidelines, online courses, and hands-on training events.

- Provides spatial data to support the teaching with geospatial technologies in the curriculum.

- Provides lessons that use geospatial technologies in the curriculum.

- Provides guidelines as to how to use USGS and spatial data from other organizations in educational lessons.

http://rockyweb.cr.usgs.gov/outreach/giseduc.html
http://www.nap.edu/catalog/11019.html

‘read for free’

http://www.esri.com/industries/k-12/education/teaching.html
Exercise 1
Introduction to ArcGIS9.1: Using ArcMap

Exercise 2 (optional exercise)

Navigating to ArcGIS9.1 exercise:

My Computer > C:\MapWorld9\Mod2 > click on ‘Region2.mxd’ which will automatically open up ArcGIS9.1.

If you need to re-open ArcGIS go to: Start > All Programs > Class files > ArcGIS > ArcMap

C:\MapWorld9
Questions?