A message from our Chairperson

by Dr. Mary Daum, LIGIS Chairperson, Brookhaven National Laboratory (516) 344-2066

Hello again to all of our loyal members, and welcome to you who are joining us for the first time.

Our Fall meeting at Hofstra was well attended. The Hofstra people were pleased to have us there and were very cooperative. Our particular thanks go to Laurie Harvey, the Associate Dean at the Business Development Center, and Madeline Mando, who works with her. The Spring meeting will be back at Brookhaven National Laboratory, but the Steering Committee is investigating other locations for future meetings, to make attending a little easier for our Nassau and Queens members.

The free ArcView training session was a huge success. We thank Joe Arma and Sherie Wilan of Spatial Solutions, who organized the session, and Chris Scheilein and the rest of the ESRI people who worked tirelessly to set up some very cranky computers and then walked the large number of participants through the exercises. That the session went so well is testament to their hard work.

Next month it's MapInfo's turn. Free training in MapInfo will be provided by Teqnical Services during the afternoon breakout session at our meeting on May 11. Current Map Info users and people who are potential new users are all invited to attend.

(Continued on page 2)

Mark Your Calendar....

The '99 Spring LIGIS Meeting will be at the Brookhaven National Laboratory beginning at 9:00 am on Tuesday, May 11, 1999. See enclosed flyer! FREE MapInfo training is available. See page 7.

LIGIS Members: Where do we come from?

by Tony Logallo, Suffolk County Police Dept.

LIGIS is a Long Island GIS users group. Long Island is comprised of four counties, Kings, Nassau, Suffolk, and Queens. Although we are immersed in GIS, I have never seen a map that displayed the loca-

(Continued on page 2)

LIGIS & ESRI OFFER FREE ArcView TRAINING TO MEMBERS

ESRI’s Chris Scheilein and Liz Olimpio helping LIGIS members learn ArcView at Hofstra’s computer lab during the Fall LIGIS Meeting.

Inside This Issue:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A GIS Lab at Dowling’s NAT Center</td>
<td>2</td>
</tr>
<tr>
<td>NYPIRG’s Community Mapping Assistance Project</td>
<td>3</td>
</tr>
<tr>
<td>GIS applications in South Africa</td>
<td>3</td>
</tr>
<tr>
<td>Nassau County’s GIS</td>
<td>4</td>
</tr>
</tbody>
</table>
The NAFTA Intermodal Transportation Institute (NAFTA ITI) has established a Geographic Information Systems (GIS) Laboratory at the Dowling College NAT Center on William Floyd Parkway in Shirley, NY. The NAFTA ITI was created by congress to provide technology solutions to trade opportunities and problems resulting from the North American Free Trade Agreement. The Dowling College National Aviation and Transportation (NAT) Center is one of two sites in the US participating in the NAFTA ITI.

There are two basic goals of the GIS Lab. at the Dowling NAFTA ITI Facility. The first is to provide the infrastructure and analysis capability for GIS oriented tasks that will be performed by the Dowling NAFTA ITI to analyze problems and develop transportation solutions to enhance Trade throughout North America. In order to fulfill this first goal, the GIS Lab. has a complement of hardware and related GIS software to support the activities of the NAFTA ITI Staff and assigned work-study students in performance of transportation oriented GIS Tasks. The lab also houses an initial Database of GIS Data on the transportation infrastructure and trade data for the NAFTA Countries (US, Canada, Mexico).

The second goal of the GIS Lab. is to offer academic GIS courses to Dowling students in transportation, business, computer, and social science curriculums. This will allow our students to graduate with specific skills in this advanced technology to enhance their job potential. GIS is used extensively today in many businesses for marketing and site selection, in Government at all levels, and especially in transportation for planning and management. The first course will be available this fall and will cover a general technical introduction to GIS with lab exercises using ArcView GIS with it's various extensions. With the addition of the GIS Lab. at the NAT Center, the Dowling community, as well as the eastern Suffolk area has a new resource to enhance everyone's growth. For information please contact Art Van Nostrand at 244-1344 or vanosta@dowling.edu.

(Continued from page 1: Chairperson)

Once again I'd like to remind you all that the main purpose of LIGIS is to share information and experience among its members. We strongly encourage you to drop us a line (better yet, a paragraph) about what you are working on, useful work-arounds you may have discovered, or new scripts you've written. As you can see, we can now publish color maps, too. Also, easel bulletin boards are provided at the semiannual meetings for you to display your maps and projects, to advertise available positions in GIS, and to post resumes.

See you in May!

(Continued from page 1: LIGIS Members)

The members that join us from beyond the four counties of Long Island enhance us, however this map was confined to the Long Island area. The membership database was geocoded by zip code and was divided into five equal 20-percentile categories. It is apparent that our highest concentration of members has a zip code on the border of the Townships of Smithtown and Islip in Suffolk County.

Tony Logallo is also a LIGIS Steering Committee member. E-mail Tony at: athonyl@suffolk.lib.ny.us

(Continued from page 1: Coordinates)

Did You Know...

The Geographic Names Information System (GNIS), developed by the USGS in cooperation with the U.S. Board on Geographic Names, contains information about almost 2 million physical and cultural geographic features in the U.S. The GNIS is our Nation's official repository of domestic geographic names information.

(Continued from page 1: LIGIS Members)

Wanted:
Your Article

Do you want other GIS professionals to know what you're up to? Why not tell us with a short article from you. It can be about anything related to GIS such as:

- Your current GIS project
- Hardware / Software
- A Website you like
- A new tip
- A pitfall to avoid
- A question to a problem
- Seminars / Classes
- Books / Videos
- Announcements
GIS applications at the Research Centre of the National Botanical Institute in Cape Town, South Africa

by Helga Pieper-Höweling
Brookhaven National Laboratory
Environmental Restoration Division

The National Botanical Institute (NBI) is an autonomous, statutory organization formed by the amalgamation of the National Botanic Gardens and the Botanical Research Institute in 1989. Both these organizations were founded early this century to conserve and study the exceptionally rich southern African flora.

With its head office and a research center in Cape Town, the Institute has eight gardens, situated throughout the country in five of South Africa’s six different biomes. (A Biome is a community of living organisms of a single major ecological region; see map right) The role of the NBI is to cultivate, protect, utilize and display South Africa’s plant wealth, whereas the purpose of research focuses on discovering, understanding and using southern Africa’s plant with regard to its socio-economic, ecological and informational importance. Geographical Information Systems are an essential tool for the purpose of research within ecology and conservation. Therefore GIS expertise was supplied to various scientists, primarily through ArcInfo (here GRID), but also ArcView. The following is a brief introduction to the main areas, where GIS was applied:

• Modeling and mapping the effects of South African solar ultraviolet-B radiation on the regeneration and biodiversity of fire- and drought-disturbed plant ecosystems, in past and future.

◊ Evidence of increasing solar ultraviolet-B (UV-B, 280-320 nm) radiation at the earth’s surface due to de-
powerful tool for analysis and advocacy. There are several ways that CMAP has already helped Long Island non-profits with GIS. For example, CMAP has:

- portrayed the patterns of poverty and population by age on the East End, so a local agency could improve their delivery of services to the poor and elderly;
- mapped the locations of child care providers throughout Suffolk County, along with local and state legislative districts. Child care advocates and parents can now work closely with policy makers as they decide budget issues and determine where the unmet child care needs are; and displayed the links (or lack thereof) between local bus routes in Nassau County and LIRR stations, so local groups can participate more effectively in Nassau’s master planning process.

Our work on Long Island would not be possible without the support of two local foundations: the Long Island Community Foundation and the Unitarian Universalist Fund. Their staff had the foresight to realize how helpful GIS can be to Long Island’s non-profit community, and have helped fund CMAP to provide dedicated mapping services to their grantees. Through our partnership with LICF and LIUUF, we expect to provide ongoing mapping services to a growing list of non-profit organizations, educational institutions, and others.

Some of these Long Island groups who have benefited from CMAP’s services are:
- Child Care Council of Suffolk, Inc.;
- Community Development Corp. of Long Island;
- Dominican Sisters Family Health Service;
- La Union Hispanica en Suffolk County, Inc.;
- Long Island Pine Barrens Society; and
- Neighborhood Network Research Center.

Regionally, CMAP has prepared customized maps and spatial analysis for:
- Brooklyn Chamber of Commerce;
- Industrial Technical Assistance Corp.;
- The Salvation Army;
- UJAFederation of New York; and others.

CMAP also has received generous in-kind assistance through ESRI’s and Hewlett-Packard’s Conservation Technology Support Program. NYPIRG’s service began as a MapInfo shop, but has expanded substantially into ESRI’s world of ArcView and its various extensions. Through CTSP, we are now able to print large-format graphics, plot poster-size maps, and serve interactive maps over the Web. For example, we are expanding our services in the coming months to give local non-profits the ability to access their GIS maps directly, through CMAP’s soon-to-be-launched website at <www.cmap.nypirg.org>.

For more information about CMAP, contact Steven Romalewski or Marty DeBenedictis at: NYPIRG – CMAP; 9 Murray Street; New York, NY 10007 212-349-6460 (ph) 212-349-1366 (fax) cmap@nypirg.org (e-mail)

THE NASSAU COUNTY GIS
by Joseph T. Jones, CDP
GIS Coordinator

The County’s GIS project is about to begin its ninth year. The eight Phase I departments continue to find an increasing number of uses for the system while the project team is moving forward with the expansion to the next series of County departments. A major upgrade of the central GIS server has been completed to accommodate this growth. Plans are now being completed for upgrading all of the GIS software to the latest versions which will include incorporating newer ESRI products for web based GIS access and improved database management within SDE. Some of the recent accomplishments include:

**December 1998 User Group Meeting**

On December 7, 1998, 127 individuals from NCGIS multi-participants, including County agencies gathered for the first Nassau County GIS User Group meeting. This half-day event featured four sessions:

- Presentation by the project team on data sharing;
- Demonstration of the system’s features and data;
- Planning discussion to define the user’s goals for future meetings;
- Presentation by representatives from the NYS Archives and Records Administration (SARA) about financing GIS and how State grants can be obtained to assist local governments.

Two meetings are planned for 1999 which will include special interest group sub-sessions to discuss issues of interest in more detail.

**Police Department Incident Management**

The GIS project team is now working in conjunction with the Police Department to develop a universal incident mapping and analysis system. The application will take incident data extracted from the Department’s Record’s Management Sys-
Completion of the earth’s protective stratospheric ozone mantle caused by industrial emissions of atmospheric pollutants has raised concerns for global plant ecosystem biodiversity and function.

◊ Long-term experimental studies in South Africa have already demonstrated that anticipated increased levels of UV-B radiation in the next century could cause increased incidence of genetic mutations and substantially diminish plant reproductive output and capacity for regeneration in ecosystems regularly stressed by drought and fire.

• Calculate current distributions of past vegetation types, based on possible range limits relative to selected environmental parameters such as summer/winter rainfall, min/max temperature, evaporation and/or altitude.

◊ Plot distribution ranges according to the environmental parameters.

• Model future distributions for various plant species based on Global Climatic Change Scenarios.

◊ Even though one might understand some of the effects climatic change might have on certain plant species, we know very little about impacts climatic change might have on ecology.

◊ Will any of South Africa’s plant species disappear forever? Do we need to collect plants and breed them in captivity?

◊ Will fynbos, a fire-prone shrubland vegetation, characteristic for the Western Cape Province, be forced out into the Atlantic Ocean?

◊ With the basic assumption that a plant growing in its natural environment is in equilibrium with the current climate, this project investigated the broad-scale effects of climatic change. Such investigations required three basic elements: ecological knowledge of the vegetation, environmental knowledge (primarily climate), and scenarios of change.

• Calculate future regional rainfall scenario for South Africa with altitudinal correction.

• Design and production of thematic maps as a result of the above projects.

Helga Pieper-Hoeweling
GIS Analyst
Brookhaven National Laboratory
Tel. 516-344 5919
email: helgaph@bnl.gov
http://www.bnl.gov/

The Spring 1999 LIGIS Meeting is Tuesday, May 11 at the Brookhaven National Laboratory!

Update Your LIGIS profile

Our LIGIS database needs updating and only you can help! Please let us know your:
◊ Name, Address,
◊ Company
◊ Phone and Fax
◊ E-mail / Website
◊ Hardware / Software Used
◊ Current Project(s)

Please E-mail Vin Lautato at spcdust@li.net. Look for our ‘On-Line Member Form on the LIGIS Homepage!’
General
Long Island Geographic Information System Users Group
http://www.ligis.org

Lizardtech, Seattle Washington
http://www.lizardtech.com
The MrSID Imaging Environment is a revolutionary, wavelet-based image compressor, viewer, and file format specifically designed for massive, high resolution, raster imagery. Compression is a significant capability of MrSID, but is by no means the most important feature. What sets MrSID apart from other raster image compressors are the powerful image handling features unique to the MrSID Imaging Environment.

Mapinfo Corp. Troy New York
http://www.mapinfo.com
MapInfo now delivers on its Web site Horizons Technology Inc.'s Sure!MAPS Raster maps, which feature seamless, full-color, georeferenced data that can be imported into GIS and image processing software.

Government
New York State GIS Clearing House
http://www.nysl.nysed.gov/gis/
Long Island South Shore Project Digital Orthoimages
All photography in this data set are based on NAPP imagery from spring 1994 and is at a scale of 1:40,000. About 500 square miles of Long Island is covered.
New York State DOT Digital Raster Quadrangles
These files are at a scale of 1:24000 and are in raster format. The files are large in file sizes, but are suited for a backdrop layer. The files can be download from this site.

Academic
The Perry-Castañeda Library Map Collection
The University of Texas at Austin
http://www.lib.utexas.edu/Libs/PCL/Map_collection/map_sites/map_sites.html
Has links to cartographic and mapping links, which are broken down by different categories.

Dowling College
The National Aviation and Transportation (NAT) Center®
Long Island, NY 11967-1822
http://www.natcenter.org/
The NAT Center® is a national leader in education, research and training in the field of intermodal transportation, or how people, products and ideas can move faster, smarter and safer by interconnecting vehicles on the land, sea, air and electronically. The NAT Center® is also creating prototype solutions to many of the nation's transportation problems such as the Continuous Flow Intersection built at the facility's entrance and designed to reduce traffic congestion and improve environmental quality.
ANNOUNCEMENTS

Free MapInfo Training
LIGIS is planning to provide free training to its members. The date for the training is at the next open meeting on May 11, 1999. The location is Brookhaven National Laboratory. The training will commence at 1:45 P.M. and end at 5:00 P.M. What is needed to accomplish this task is your commitment to attend.

There will be 12 computers with two students at each machine. The training will be in one-hour blocks with a different topic each hour. The training is inclined to current MapInfo users with the exception of one suggested topic. The available seats are going fast so don’t hesitate to register.

Technical Services, Inc. (TSI) will conduct the training. TSI is a Strategic Partner of MapInfo and operates the Authorized Training Center (ATC) for the metropolitan area.

Please review the suggested topics. Rate them in importance to you. Add any other topics to the list. The top three desired topics, if feasible, will comprise the agenda. If you know of a LIGIS member who would be interested, please pass this on.

The list of suggested topics are: Selected MapBasic tools; Crystal Reports; Universal Translator; MapInfo for users of other platforms; Data bundled with MapInfo; SQL Queries.

Let’s not let a good thing fail for lack of response, hope to here from you soon. Submitt your response to Tony LOGALLO, anthonyl@suffolk.lib.ny.us. For those that do not have e-mail, fax to (516) 852-6610. For information call (516) 852-6387.

ESRI Training Courses
Sherie Willan,
GIS Specialist/Director of Training Services,
Spatial Solutions, Inc.
(516) 435-1692 or e-mail: saps@gps-gis.com

In ARC/INFO version 8.0 (due for release at ESRI’s Annual July User Conference), there will be a parcel editing application created by one of their business partners, NovaLIS. It comes free with ARC/INFO 8.0, but has a yearly maintenance fee for tech support and upgrades. It’s an easy to use, window driven parcel editing application. We will probably offer training for it sometime this fall or in the new year. But need to contact the NovaLIS people to work something out.

GIS COURSES:
GIS Course at L.I.U - C.W. Post (Fall 1999)
ERS 501. Mapping Environmental Data with GIS
A hands-on introductory geographic information system course on managing spatial data using a computer, based on NCIGA introductory curriculum and ArcView software. Addresses GIS principles, creating and querying spatial views and themes, importing and exporting data, map projections, geocoding, attribute tabular data, charts, layouts and applications, Lecture and laboratory. Course is designed for the practitioner and as an introduction to practical GIS applications. Prerequisite: Knowledge of Windows. (This course has ESRI’s Introduction to ArcView GIS 3.1 embedded within it and it is taught by an ESRI Authorized Instructor. Students successfully completing the course receive the ESRI ArcView certificate.)

GIS Courses at Spatial Solutions, Inc., Hauppauge, NY
May 17 - 18 Introduction to ArcCAD
May 12 - 13 Introduction to ArcView GIS (Location: LIU - C.W. Post)
July 15 - 16 Introduction to ArcView GIS
August 16 - 17 Image Analysis
September 27 - 28 Introduction to ArcView GIS
September 29 - 30 Introduction to Avenue
November 15 - 16 Introduction to ArcCAD
November 17 - 18 Image Analysis
December 1 - 2 Introduction to ArcView GIS

ESRI-Boston. Course Schedule for Long Island Location, July-December 1999
Course Location: Spatial Solutions, Hauppauge - Long Island, NY
July 12 - July 14: Programming with Avenue - HLI
August 18 - August 20: Advanced ArcView - HLI
September 13 - September 15: Programming MapObjects with Visual Basic - HLI
September 16 - September 17: Working with MapObjects Internet Map Server - HLI
October 26 - October 29: What’s New in ARC/INFO Version 8.0 - HLI
November 29 - November 30: Introduction to Avenue - HLI
December 6 - December 10: Introduction to Desktop ARC/INFO - HLI

For a list of GIS courses offered on Long Island go to: www.gps-gis.com
To have a course listed, contact Sherie Willan
The coordinating committee members represent the principal agencies and organizations within LIGIS as a whole.

The coordinators are:

Dr. Mary Daum  
Chairperson

Brookhaven National Laboratory  (516) 344-2066

Jeff Altorfer,  Suffolk County Water Authority  
(516) 563-0310

John Blodorn,  Suffolk County Dept. of Real Property  
(516) 852-1553

Bob Bornhold,  Suffolk County Dept. of Public Works  
(516) 852-4085

Jim Daly,  Suffolk County Dept. of Planning  
(516) 853-6045

Dave Fallon,  NYS Dept. of Environmental Conservation  
(516) 444-0464

Ron Green,  Suffolk County Mngmnt. Information Services  
(516) 853-3269

Peter Hoffman,  Suffolk County Dept. of Health Services  
(516) 852-2083

Dennis Jackson,  Suffolk County Dept. of Health Services  
(516) 853-3085

Joseph T. Jones,  Nassau County  
(516) 571-4096

Vin Lautato,  Suffolk County Water Authority  
(516) 563-0309

Carl Lind,  Suffolk County Dept. of Planning  
(516) 853-5795

Tony LoGallo,  Suffolk County Police Dept.  
(516) 852-6387

Rich Monahan,  Nassau County Police Dept.  
(516) 573-7400

Jack Rice,  Suffolk County Community College  
(516) 451-4025

Larry Stipp,  Suffolk County Dept. of Health Services  
(516) 853-3078