Geospatial Training Program (GTP)

Overview

Geospatial technologies include geographic information systems (GIS), satellite and airborne remote sensing (RS), global positioning systems (GPS) and other automated technologies that use and/or create spatial information. The Center's Geospatial Training Program focuses on introducing these state-of-the-art technologies to new and potential users through seminars, workshops, and hands-on training classes. The program helps municipal agencies, businesses, non-profit organizations and others determine how geospatial technologies can be integrated into their day-to-day operations to improve information management, planning, analysis and decision making.

What GTP Does

The Geospatial Training Program (GTP) serves as a bridge between the university's research community and everyday users of geospatial technology and data. Program staff work in a variety of capacities with community land use decision makers, businesses and non-government officials and learn through direct involvement about end user needs. This knowledge in turn helps inform faculty researchers about end user needs and helps direct research towards real-world applications.

Hands-on training courses also are an important component of the program. Training, while designed to teach how to use specific hardware and software, also focuses on how to apply geospatial technology and data to address typical application needs—from address matching for emergency response to natural resource assessments for municipal land use planning. The two main training courses offered by GTP are:

A group of students learning how to use GPS receivers to collect field data.

- **Geospatial Technologies at Work** - An intensive three-day course that teaches students how to use ArcGIS (a desktop GIS) and that introduces many of Connecticut's public domain GIS datasets.

- **Pictures, Points and Places** - A two-day course that teaches students how to use a global positioning system (GPS) to acquire data for use in GIS applications and how to link digital photographs to GPS locations in a desktop GIS and on the Internet.

Geospatial Training Program

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CLEAR researchers using a GPS receiver to determine the center of a field inventory site in the Ragged Rock Creek tidal marsh.

Screen capture of image processing software being used to classify plant communities from satellite remote sensing imagery of the Ragged Rock Creek tidal marsh, Old Saybrook, CT.

Additional course offerings include *Introduction to ModelBuilder*, *Introduction to Python Scripting*, and *Mashup Madness: Introduction to Putting Maps on the Web*. Visit the GTP website for a complete listing of current course offerings.
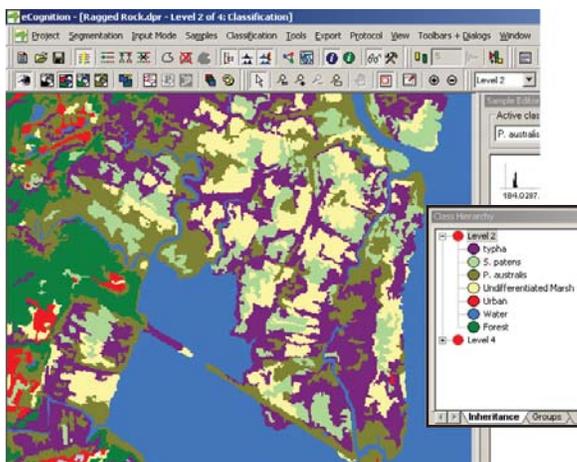
The program hosts the website and operates an email-based discussion list for the Connecticut GIS User to User Network, a volunteer organization of GIS professionals in the state. Visit **ctgis.uconn.edu** for more information about the User to User Network.

GTP staff actively participate in research into the use of geospatial technology in a variety of topical areas. Past research includes investigating methods to integrate satellite and airborne multispectral imagery, LiDAR elevation data and field vegetation inventories in brackish tidal wetlands to detect and map the highly invasive plant *Phragmites australis*. Other focus areas include GIS-based techniques to conduct community build-out analyses, development of maps to depict land type associations, and automated tools to characterize and describe watershed conditions.

How GTP Makes a Difference

Geospatial technologies are powerful tools that dramatically can improve how organizations acquire, use and benefit from spatial data. Through GTP educational activities, local land use officials, planners, commission members and others are learning how these systems work and how they can be used to improve a wide variety of activities. They also are learning about new sources of data, such as high-resolution satellite imagery, and how they can be used for basic data acquisition, regular data updates and new interpreted datasets.

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