The Virginia Geospatial Newsletter

Showcasing GIS, Remote Sensing and GPS Supported Products and Services in the Commonwealth

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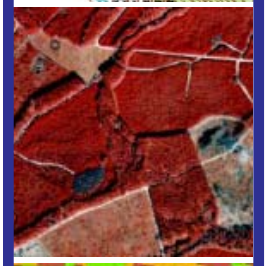
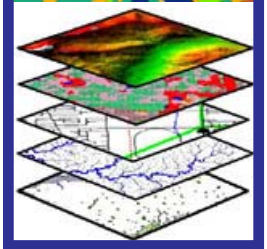
The Virginia Geospatial Extension Program is a partnership between the Virginia Space Grant Consortium and Virginia Cooperative Extension





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Building a Web-Based Forest Management Enterprise Information System with ESRI's ArcGIS Server

by: Mindia Brown
GIS Manager
Virginia Department of Forestry

There are more than 15 million acres of forest land in Virginia that require sound management if long-term protection and sustainability of this resource is to be ensured. To this end, the Virginia Department of Forestry (VDOF) regularly provides private landowners with professional forest management advice and assistance in implementing practices, such as aerial spraying assistance, prescribed burning, and tree planting. It also assists landowners with cost-share and through seedling sales. Last year alone, VDOF assisted landowners by developing management plans that covered more than 147,000 forested acres, and helped renew over 80,000 acres through tree planting.

Historically, however, the agency's mechanism for tracking information about these many activities has been to input very simple data (e.g. planting – pine – 50 acres) into a tabular database. Sometimes a paper map was drawn and stored at the county office in a filing cabinet as an accompaniment to the activity, but these maps were not readily available to anyone outside that office. This method has obviously limited efficiency and usefulness in terms of preserving the rich geospatial history of forest management in Virginia.

IFRIS will enable field staff to make better assessments of how landowners should manage their resources with respect to short- and long-term goals.

Recognizing this deficiency, VDOF began developing a centralized, Web-based enterprise information system in 2004 that integrates GIS functionality to map a time-series of forest management activity and forest stand conditions. This Integrated Forest Resource Information System (IFRIS©) makes it possible for VDOF field staff to perform Web-based editing of geodatabases that store geometry of forest management activity areas and existing forest stand type/condition attribution. Users navigate to the property of focus, and using the 2002 VBMP photography as a guide, map (heads-

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The Virginia Geospatial Newsletter is a quarterly publication developed through the Virginia Geospatial Extension Program, a partnership between the Virginia Space Grant Consortium (VSGC) and Virginia Cooperative Extension (VCE). The newsletter is published in conjunction with The Virginia Geographic Information Network (VGIN).

The purpose of the Virginia Geospatial Newsletter is to highlight innovative geospatial products and services throughout the commonwealth and to widely disseminate geospatial knowledge and awareness throughout Virginia.

If you have suggestions or comments, or if you would like to contribute to the newsletter, please contact John McGee at the Virginia Geospatial Extension Program (jmcg@vt.edu or [540] 231-2428).

What's Inside

The National Geospatial Technology Extension Network:

Linking End-Users With Geospatial Resources via the Web

by: Michelle Hertzfeld, Toby Torrey, Anne Thwaits and Barron Orr
Office of Arid Lands Studies, University of Arizona

The National Geospatial Technology Extension Network (NGTEN) is essentially what eXtension (http://intranet.extension. org/) calls a *community of practice* – an informal network that helps Geospatial Extension Specialists (GES) share ideas, leverage successful educational programs and geospatial applications, and ultimately identify the "best of the best" for implementation locally. Our mission is to facilitate the practical use of Earth systems science and technology, and help meet the growing demand for a spatially literate workforce. This is made possible through seeds sown by NASA, USDA and NOAA, and the science and education networks provided by Land Grant (Cooperative Extension), Space Grant, Sea Grant and other local partners.

...the website strategy and associated information architecture developed for NGTEN should facilitate communication and sharing among members of this community of practice, beginning with the Geospatial Extension Specialists themselves and in time growing to include engaged Extension Agents, other geospatial

Geospatial Extension Specialists can be found all across the United States—at latest count, fourteen different states have Geospatial Extension Programs operating at one or more of their universities, and several others have similar programs that are well suited to join this network. When the National Geospatial Technology Extension Network (NGTEN) was formed to link these state programs together, Geospatial Extension Specialists discovered a need for a place to easily share and store information that would be accessible from any one of their states. Naturally, the development of a website that is both easy to use and easy to maintain became a high priority. With an effective website, documents and resources that already existed in other parts of NGTEN would not need to be recreated, and the NGTEN process of seeking out "the best of the best" of available technology, educational programs, techniques, and geospatial applications, one of the main goals of the Geospatial Extension Program, would be greatly simplified.

Designing this Web resource, however, posed some unique challenges that inspired creative solutions. Since NGTEN is what its name proclaims—a network of fourteen separate Geospatial Extension Programs—the NGTEN website needed to be designed to reflect this. Each state was given a private area of the site dedicated to its specific needs. Also, the NGTEN logo itself was designed as a badge of association to the network rather than as a logo to replace each state's own branding. Another design challenge was the need for the site to reflect NGTEN's mission to serve three separate audiences: the Geospatial Extension Specialists themselves, their clients and their sponsoring agencies. To meet this need, part of the site was dedicated to the internal needs of the network, but other sections were designed to serve as repositories for information and resources for NGTEN clients while still others were portals for sponsoring agencies to learn how to take advantage of NGTEN programs.

In order to make such a site, the NGTEN web development team sought out state-of-the-art web design techniques and an open source Content Management System (CMS). From a design perspective, the site is web standards compliant, created using a combination of XHTML and Cascading Style Sheets (CSS) that separates the structure of the site from its presentation.

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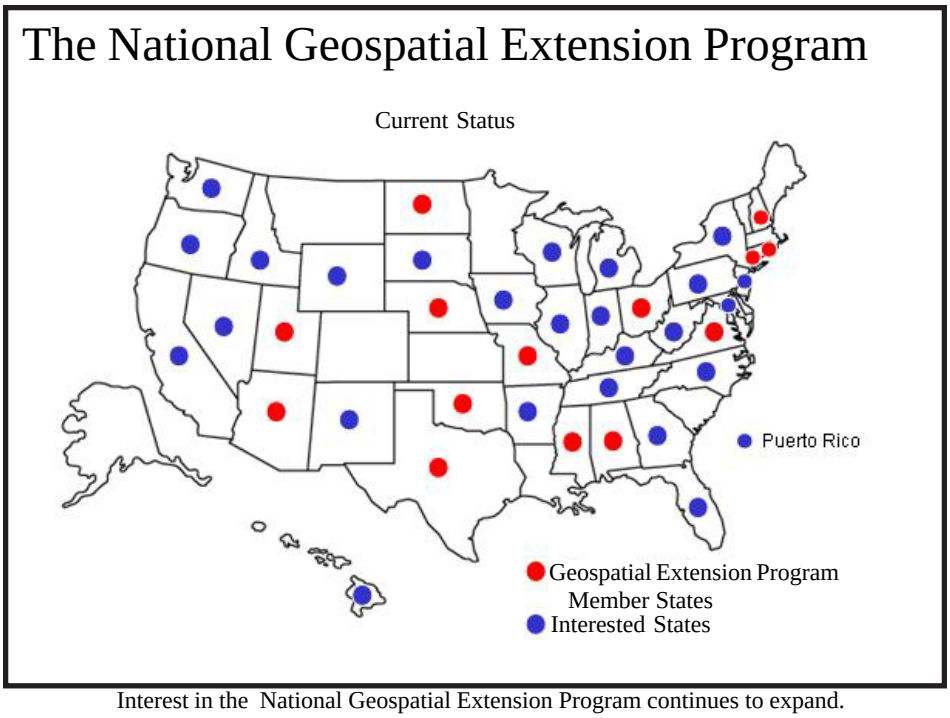

Interest in the National Geospatial Extension Program continues to expand.

NSF Grant Enables MECC to Spread GIS Education

by: Dr. Richard Phillips, Dean
Health Sciences Division
Mountain Empire Community College

Mountain Empire Community College, located in Big Stone Gap and serving the Counties of Dickenson, Lee, Scott, and Wise, and the City of Norton, is currently the only academic institution in the Commonwealth that offers a Geographical Information Systems program completely online. The program was initiated in 2001 using the recommendations of a college-appointed advisory committee that developed curricula based on the needs of local GIS employers. Students may obtain a Certificate in GIS through a 24-hour credit program, in which students obtain knowledge and skills to work with GIS mapping, 3D, and remote sensing. The certificate provides students with a recognized credential for a specialization in geospatial technologies.

Due to the positive response to the GIS Certificate, as well as the college's record of success in helping students gain entry into GIS careers, MECC is now working to increase GIS education, not only by training individuals at the college level, but by disseminating information about GIS within the college's service region and beyond. The work is aided by a National Science Foundation (NSF) Grant focusing on integrating GIS technologies curricula.

MECC has partnered with several other organizations to help promote GIS education. For example, geospacial experts from Virginia Tech are helping to train faculty at several higher education institutions such as MECC, Northeast State Community College, East Tennessee State University, the University of Virginia's College at Wise, and Radford University so they may integrate more GIS concepts into their programs. Faculty from area high schools and career centers are also receiving extended GIS training from Old Dominion University's OVERSpace Program, thus bringing more information about the field to high school students. Students at MECC also have the opportunity to participate in GIS internships through Wise County's DEVELOP program.

MECC also plans to use the funding to incorporate GIS concepts in the environmental science, forest science, and computer-aided drafting and design Associate of Applied Science curricula, increase the number of A.A.S. students who complete the GIS Certificate, develop laboratories for GIS instruction in community colleges and public schools, and articulate GIS curricula to provide seamless pathways for students to pursue advanced study in GIS, beginning in the public schools and continuing to baccalaureate programs at area four-year colleges and universities.

"There is a need to raise awareness about GIS in our area," states Dr. Richard Phillips, Dean of Health Science and Industrial Technology at MECC. "We need to raise awareness, so more people will understand what it is and use it."

Phillips points to a number of ways communities in MECC's service region are already using GIS. He says that in order to utilize time, money, and gas, the school system in Wise County uses a global positioning system to map out bus routes, while Dickenson County Schools use it to determine how much they will need to pay workers who have been contracted to mow school grounds. With GPS, they can calculate exactly how much square footage the workers have mowed.

Ultimately, MECC hopes that its work in raising awareness of GIS and its uses will increase the capacity of the technology workforce in southwestern Virginia. Through GIS education, students will be better prepared for a variety of science and technology careers, some that might finally be available a little closer to home for those in the MECC service region. This is good news for the people of Southwest Virginia, as well as for the greater economic well-being of the entire Commonwealth.

Left to right: Mr. Shuler Ringley, Professor, Computer Aided Drafting and Design; Dr. Chuks Ogbonnaya, Professor, Environmental Science; Mr. Jake Gilley, Instructor, Computer Drafting and Design; Ms. Rosa Moore, Instructional Technologist.

Loudoun County's Zoning Notification and Mobile GIS Projects

by: Larry Stipek
GIS Manager
Loudoun County

Loudoun County, Virginia has been the nation's fastest growing county since 2000, and everything associated with County government, including its Geographic Information System (GIS), is very dynamic. The parcel and address layers on the GIS are updated hourly and the street centerlines daily to keep up with the changes. Because of the growth, the GIS is constantly used in new ways to keep up with increased demands for government services and to improve service and efficiency.

As databases are maintained on the GIS, programs are run that send the new data to the County's Land Management Information System (LMIS). LMIS contains many related tables and provides a variety of tools for maintaining, querying, and manipulating the data. LMIS is used to issue building permits and track subdivision activity, and it supplies data to the county's assessment system. Both LMIS and GIS are critical to many activities, including zoning notification and the provision of mobile data to building inspectors and public safety personnel.

In January of 2003, the county did a comprehensive remapping of the entire county including the Rural Policy Area in western part of the county, most of which had been zoned for one house per three acres. The remapping in this part of the county created two large areas of one house per 20 acres and one per 50. In March of 2005, the Virginia Supreme Court overturned the zoning overlays and the remapping of the Rural Policy Area on a technicality. More recently, the Loudoun County Board of Supervisors voted to move ahead with a zoning proposal that would return larger lot requirements to the west.

The process this time will be similar to the one in 2003 and will include a mass mailing. Beginning in late 2002, the County began a notification process that included individual letters to each property owner. The letters informed each owner of their proposed zoning and whether there were any zoning overlay districts present on their property. An overlay district might be a floodplain, quarry notification, historic district, airport noise or similar type of district.

The letters were created using both LMIS and GIS. The first step was to confirm that the two databases were in sync with one another, that is carrying the same number of records with the same data. The proposed zoning layer was created on the GIS, and all of the overlay districts were checked to be sure that they were current. The parcel and address maintenance processes were temporarily frozen to make sure the data remained the same, and each parcel was overlaid on the existing zoning, proposed zoning, and all of the zoning overlays to produce a table containing the Parcel Identification Numbers (PIN's) and all the relevant zoning information. The data were then sent to LMIS using the standard data transfer processes.

...GIS is constantly used in new ways to keep up with increased demands for government services and to improve service and efficiency.

In LMIS, the data were married to the ownership information pulled from the assessment system using the PIN. LMIS was then able to twice generate approximately 64,000 personalized letters with detailed information for every parcel.

The 2005-06 mailing process will be identical, except that it will cover a smaller area. This time letters will only be created for properties in the western area subject to the remapping. The update process of the mapped layers began in September of 2005 with a target date for the mailing in February of 2006.

Two other major, interdepartmental projects are adding mobile computing with access to GIS to County vehicles. The first is a pilot project to place GIS and Automatic Vehicle Locator (AVL) in the County's emergency vehicles. The second will allow building inspectors to make reports, pick up assignments, and view maps using the County's network while in their vehicles.

E-911 dispatchers currently each have a computer screen in front of them that displays a map with all of the active incidents. As each 911 call comes in, it lights up on the map with a symbol that tells the dispatcher the type of call. The Computer Aided Dispatching (CAD) system tracks the incident as it progresses, and the dispatcher can query the map symbol to determine its status. Because of the number of roads being built, the CAD map is updated every two weeks.

The AVL application relies on a Global Positioning System (GPS) receiver and antenna in each vehicle. The GPS determines its latitude and longitude and the coordinates are transmitted through, via the County's radio network, to the 911 dispatch center where dispatchers see each vehicle's location. In the future, the software will then automatically route a vehicle to a call using the data stored for each street including surface type, speed limit, and one way roads. The shortest route may not be the fastest.

The mobile application in the emergency vehicle works with the CAD system to allow public safety personnel to receive

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Geospatial Activities at Old Dominion University

by:
Drs. James W. Wilson &
Thomas R. Allen
Department of Geography
ODU

Faculty and staff at Old Dominion University continue to be involved in a variety of geospatial related activities both on and off campus. In addition to offering bachelor degrees in geography, the University also offers undergraduate and graduate certificates in Geographic Information Science. Fifteen certificates have been awarded in the last twelve months, and additional students are working towards completion of their certificate requirements. The graduate certificate is being pursued by professionals in the community seeking to increase their skills and graduate students in various programs at ODU.

GIS Day events in November of 2005 were hosted by the Geographic Information Science certificate program, the Dept. of Political Science and Geography, and the Gamma Theta Upsilon honor society. The events included presentations and demonstrations by ODU faculty and staff, as well as GIS professionals in the community. Mary Gainer of NASA gave a presentation on GIS activities at NASA and discussed opportunities for student involvement. Brian Daniel of Loyola Spatial Systems discussed and demonstrated 3D laser scanning technology (see Figures 1 & 2).

Dr. Tom Allen of ODU spent the fall semester of 2003 as a Fulbright Scholar at the University of Turku, Finland, and returned with new ideas for RS/GIS research on the Eastern Shore and Chesapeake Bay. Since then he has been collaborating on coastal GIS and remote sensing projects in Chincoteague Bay with Dr. George Oertel in oceanography at ODU, Mr. Harri Tolvanen, a doctoral student at the University of Turku, Finland, and Mr. George McLeod, ODU GIS systems engineer. With the aim of improving our understanding of tidal flushing and water quality, they have been developing a detailed GIS for Chincoteague Bay, building spatial models of wave exposure and fetch to run within ArcGIS (Figure 3, page 9), and integrating methods for bathymetry, tidal range and prism, and sediment texture and turbidity (with data from the Maryland Department of Natural Resources.) In addition to the spatial models, Dr. Allen and his colleagues are using remote sensing to calibrate and validate the flushing of bay waters using NASA's Advanced Spaceborne Thermal Emission Radiometer (ASTER) (Figure 4, page 9).

Dr. James Wilson was a visiting lecturer at ODU for the 2004/2005 academic year and joined the faculty as an assistant professor in August of 2005. Dr. Wilson has been teaching a variety of GIS courses and has introduced a new course on Internet GIS. In addition to researching the scalability of distributed geospatial systems, Dr. Wilson continues to research historic land use and land cover change. His initial focus has been on deforestation and reforestation in the Eastern United States

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Figures 1&2: The Constant Convention Center at ODU (above) and an image produced from a 3D Laser Scan of the Constant Convention Center
(Image and 3D Laser Scan courtesy of Brian Daniel and Loyola Spatial Systems).

The National Geospatial Technology Extension Network

Continued from Page 2

A CSS design was also optimal because it meshed perfectly with the design team's decision to use Zope and Plone technologies to create its CMS. Zope and Plone are innovative technologies that provide a fully-functional CMS out-of-the-box that satisfies many of NGTEN's needs.

Zope is a web application server written in the Python programming language. It serves dynamic web pages from a built-in database. Plone is a web program built to run on the Zope application server, and it operates upon installation with many CMS features including users and groups administration, publication workflows, indexing and searching of uploaded content, internationalization, and RSS syndication. In combination with Zope's highly granular security settings, Plone delivers a powerful online portal for a group like NGTEN, whose members want to share content with one another.

Both Zope and Plone are open source software. Not only do they offer end users, such as members of NGTEN, a wide range of tools for sharing content, but they are also geared for customization behind the scenes. Developers are given an intricate object-oriented framework for changing and building on top of Plone and Zope. This framework allows for innovative structural designs that are created in a developer-friendly language. With documentation readily available and a helpful online community, Plone and Zope can be customized to fit NGTEN's specific needs for certain metadata or content types. Products, or "plug-ins," make it easy to share customizations with other Plone programmers by creating an online repository of useful tools that developers can add to or remove from their own Plone sites.

NGTEN switched in December 2005 from the original, largely static website to the new dynamic system running on Zope and Plone. The members of NGTEN are now able to develop a website community with the tools Zope and Plone provide. This collaborative effort will be the first true evaluation of Plone by members of NGTEN who have been looking for ways to facilitate customized content management. The NGTEN community will choose the standards it wants to impose for all content by customizing the Plone system; for example, the NGTEN community will be able to choose the number of steps that should be required for a piece of content to go from a private uploaded file to a published document for everyone to see.

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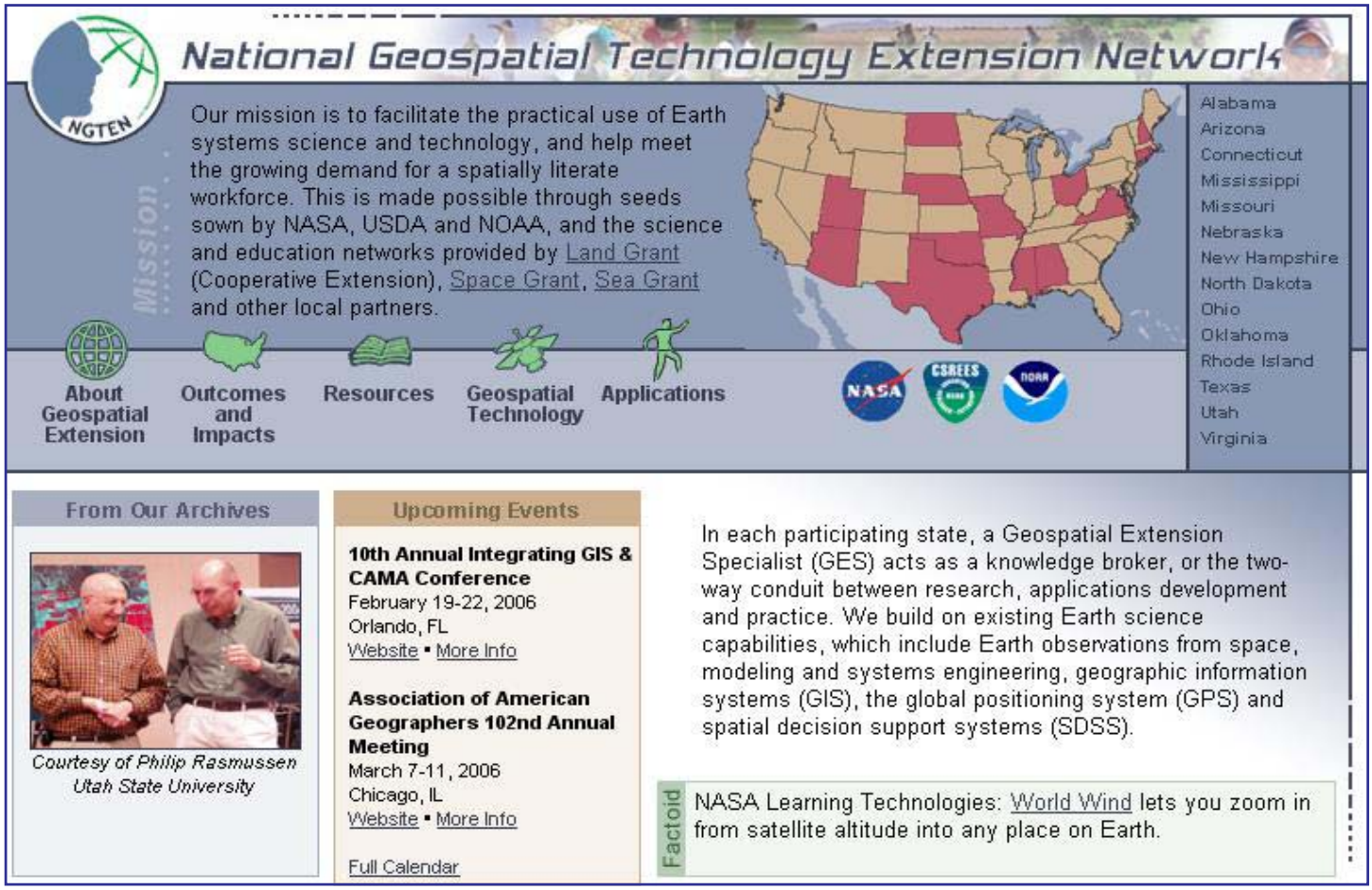

The NGTEN Webpage (http://geospatialextension.org) provides geospatial extension specialists, and the public with immediate access to state of the art geospatial resources.

NGTEN

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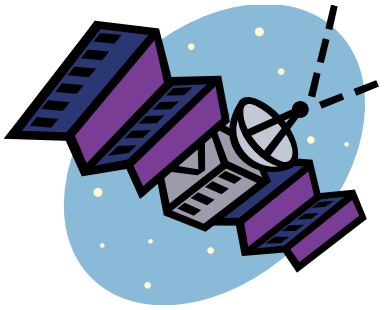
With feedback, the website developers can help the portal move towards being the ideal tool for addressing the national, regional and local needs of Geospatial Extension Specialists and their clientele.

In the long term the website strategy and associated information architecture developed for NGTEN should facilitate communication and sharing among members of this community of practice, beginning with the Geospatial Extension Specialists themselves and in time growing to include engaged Extension Agents, other geospatial specialists, and early adopter clientele. Interoperable content management is critical to our ability to leverage resources across the Earth science education and applications development community. To keep up with changing technology and evolving needs, the NGTEN website must have the capacity and flexibility to address the needs of those who could benefit from Earth science and geospatial technology breakthroughs. At the same time it must serve to communicate those needs and be a conduit for the science community, private sector interests, and sponsoring agencies. Extension Specialists are essentially knowledge brokers and it is our hope that the NGTEN website becomes one more tool which can help us bridge the divide between the latest Earth systems science, geospatial technology and the needs of our community of interest.



Loudoun County's GIS Projects

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incident information, update status, download images, and view maps. The map viewed by the deputies is the same that is used by the dispatchers. In the future, the deputies will also be able to run the mapping application in their vehicles to determine the fastest route to a call.

The mobile application runs on ruggedized notebook computers in the vehicles. The deputies complete their incident reports in the field and then send them via wireless either through the County's radio network or a wireless hot spot to their supervisors for review. When the report is approved, it is then sent via the wireless network to the Sheriff's records office. He or she automatically receives all communications from their supervisors at the same time.

The County's building inspectors also plan to get GIS in the field, though in a different way. In a process currently being developed, the County's fire marshals and building inspectors will be provided access to the County's network through the Virtual Private Network (VPN) using existing cellular broadband services. Once on the network, the inspectors will have access to all the functionality of the inspections functions in the LMIS system as well as applications available to every other employee on the Intranet including email and Web based GIS.

The inspectors currently must go to their offices at the start of the day to get their assignments and return at the end of the day to complete their reports in LMIS. With mobile VPN access, they will be able to do all of that from their vehicles anywhere in the County. The system saves travel time, vehicle maintenance, and desk space. Using the GIS access integrated into LMIS, the inspectors will have access to all the addresses and roads that were added the day before, and can quickly determine how to best organize the day's inspections to minimize travel and to find sites in the midst of new construction or in remote parts of the County. Animal Care and Control is considering a similar system for its officers.

Other projects with a GIS component that are planned or underway include a replacement of the Computer Aided Mass Assessment (CAMA) system, improvements to the Emergency Operations Center, and a Citizen Relationship Management System that will use GIS to locate and help track citizen complaints and comments. The system will help County agencies ensure that complaints and comments are addressed and will help them determine when two are about the same problem or issue. GIS has become a component of many of the new computer applications of the government.

Ruggedized notebook computers will be placed in emergency vehicles

DOF's Enterprise Information System

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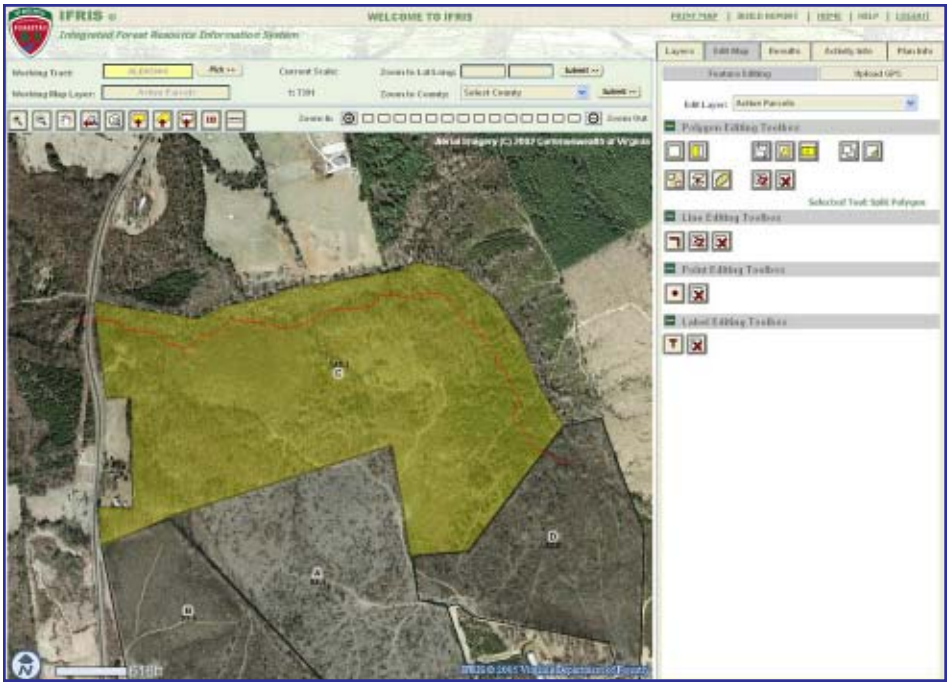
up digitize) what forest management work is being, or is to be, performed. The information feeds the agency's need to track employee accomplishments toward individual, strategic, and grants-matching goals.

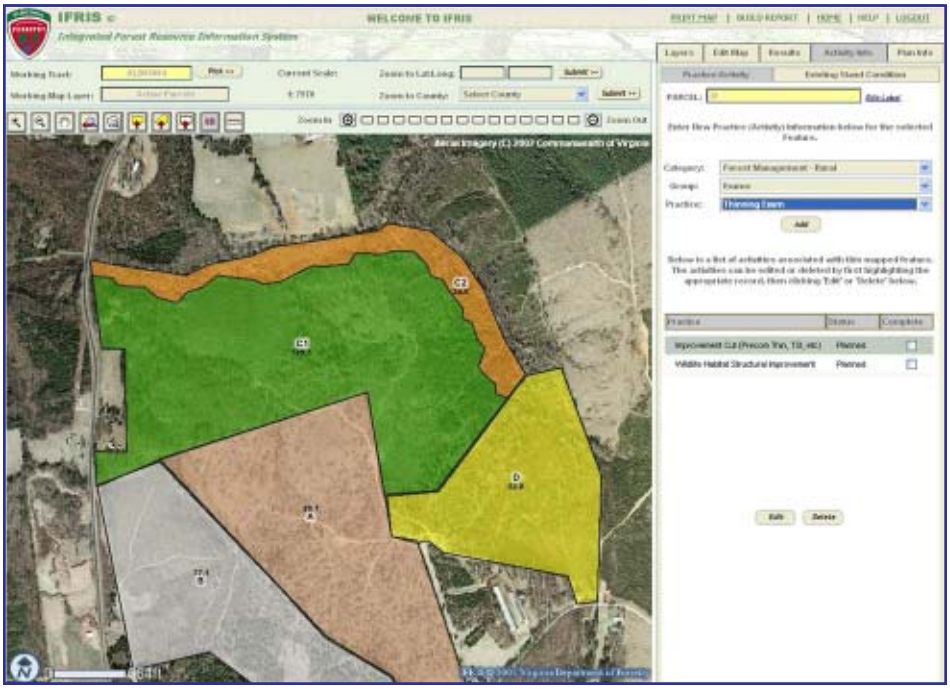
Over time, the extent, occurrence and types of forest management activities will change. As users modify the mapped features, IFRIS© preserves geospatial history through automatic archival of "parent" features and their attributes. This will enable VDOF to re-create not only the forest management activity history, but also the change in forest types and conditions through time.

Feature editing tools for polygons include adding/deleting, splitting, merging, appending to and cutting from features. There are also more advanced tools that include "exploding" a multi-polygon feature into its component pieces, creating a "convex hull" to derive a polygon boundary from selected polygons, and buffering. Basic point and line-based editing was also developed. In addition to mapping areas that represent work performed, users have access to a library of annotation layers that they can add to, like roads, streams, structures, and labels. And, to complement heads-up digitizing data entry, IFRIS© was built to allow data captured in the field using GPS to be uploaded into the IFRIS© geodatabases.

IFRIS© uses Microsoft SQL Server, and ESRI's ArcSDE, ArcIMS, and ArcGIS Server to facilitate the creation, editing, validation, storage and management of spatial data elements. VDOF contracted with Timmons Group (Richmond, VA) for the application development, infrastructure design and configuration. VDOF has chosen to host the system at the Virginia Information Technologies Agency (VITA) facilities, and has undergone a thorough security review as part of this arrangement.



(above) ESRI's ArcGIS Server allows IFRIS users to split polygons by simply selecting the feature to be edited, then drawing the split line. All editing tools were kept simple because most IFRIS users have had little, if any, exposure to GIS.



(above) IFRIS makes it possible to map the forest management history of properties in Virginia, which 1) helps DOF's local foresters track activities on their customers' land, 2) allows DOF to track accomplishments for matching grants and against strategic goals, and 3) builds a rich spatial-temporal dataset that supports decision-making both inside and outside the agency.

At this writing, IFRIS© is on the verge of operational deployment of its first phase of development. VDOF expects that statewide mapping of forest management activities by its field foresters will result in a much richer dataset than the agency and its customers have ever had access. It will enable field staff to make better

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ODU

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and how our understanding of spatial and temporal patterns is influenced by the data and methods used. A detailed case study of the North River watershed in the Shenandoah Valley showed that "maximum clearance" of the forests in the region occurred 30 – 50 years later than has been reported in studies conducted at coarser scales (e.g. Virginia, the Chesapeake Bay, and the Eastern United States). The detailed analysis included comparing textual information with more spatially explicit sources (i.e. maps and digital products derived from remotes sensing data). (see Figure 5 for an example of the woodlands reconstructions)

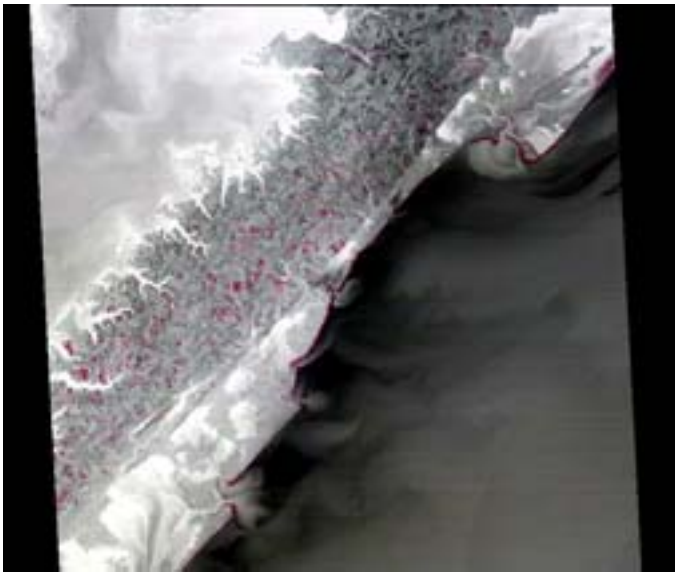

Figure 3 (left): ASTER Quicklook image of the Eastern Shore and Chesapeake Bay (3:00a.m. LST, 16 May 2004) showing band 10 thermal emissivity for Chincoteague Inlet (northeast corner) to the southern Virginia Barrier Islands (bottom) and Chesapeake Bay (left.) This is one of a time series of nighttime images used for modeling tidal flushing. The thermal signature of Chincoteague Inlet dramatically shows the ebb tidal plume of relatively warm lagoon waters exiting the inlet. Inside the lagoon, the extent of maximum tidal penetration of marine waters is also evident.

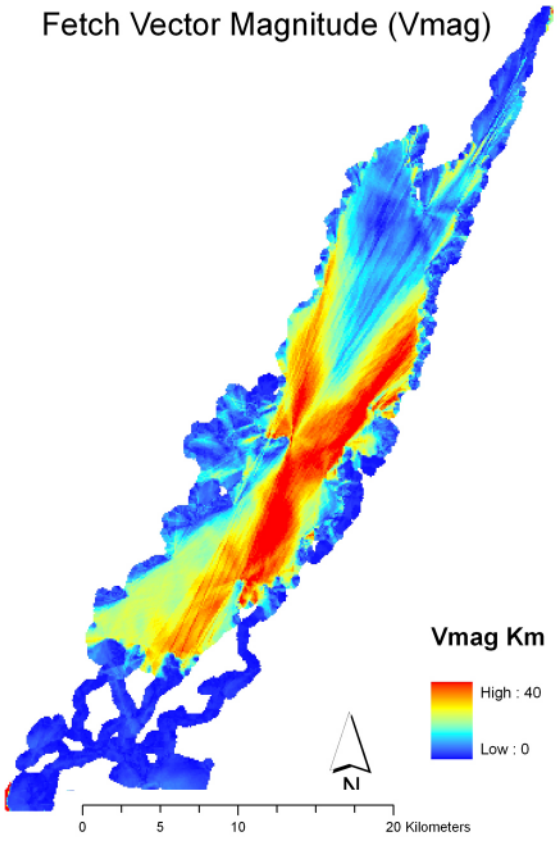

Figure 4 (above): Within Chincoteague Bay, Allen and Tolvanen have developed a GIS model of wave exposure, or "Fetch," to use in environmental models to predict the distributions of turbidity, water quality, or ecological features, such as seagrasses. This model output represents the total exposure (vector magnitude, Vmag) of a grid cell in 360 degrees. Using vector statistics, this research is also developing indices of directional variation and net effective exposure of open waters in the lagoon.

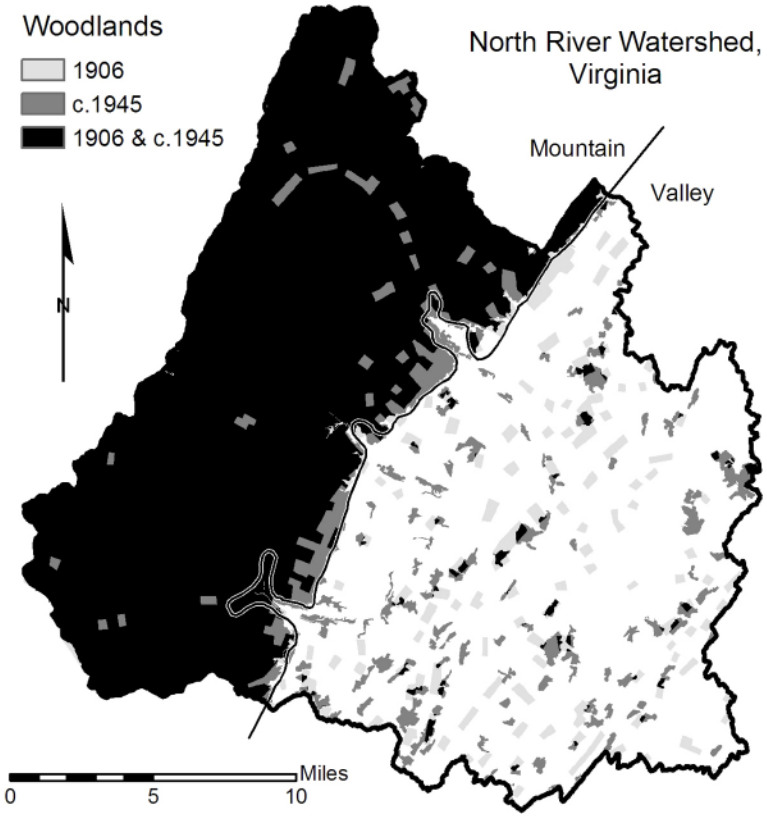

Figure 5 (above): Woodlands for the North River watershed were derived from maps dated 1906 and c. 1945. The mountainous area of the watershed remained predominately wooded from one time period to the next, and most of the interior and eastern areas that had been cleared by 1906 had reverted back to woods by c. 1945. Wooded areas in the valley portion of the watershed shifted locations and declined from 1906 to c. 1945. (Source: Wilson, James W., "Historical and Computational Analysis of Long-Term Environmental Change: Forests in the Shenandoah Valley of Virginia," *Historical Geography* 33 (2005): 33-53)

DOF's Enterprise Information System

(Continued fromPage 8)

stewardship priority areas, economic impact zones, and others.

Future IFRIS© development will incorporate field-based mapping and data collection using personal data assistants (PDAs) with integrated GPS. This technology will make it easier for field staff to capture data describing the location and nature of wildfire incidents, water-quality harvest inspections, forest health observations and other critical data. The timely, accurate and readily-available database that will evolve via IFRIS© will help VDOF communicate the state of Virginia's forests to all those who need or want to know.

Free Software!

ESRI has announced a promotion to offer free copies of ArcGIS (ArcView) 9.1 software to any student enrolled at a college or university in Virginia that is part of a state-wide or campus-wide site license.

This is a one year license that will expire 365 days from the day it was installed. It includes Spatial, Network, Geostatistical and 3D Analyst extensions.

To find out more about the program go to: http://www.esri.com/industries/university/education/student_faqs.html

Save the Date

VAMLIS GIS Conference

The Virginia Association for Mapping and Land Information Systems is pleased to announce its 2006 GIS Conference. The Conference, which is scheduled for May 1&2, will be held at the Sheraton Reston Hotel in Reston, Virginia. The final program is still being compiled, but it is expected that there will be four concurrent tracks that will include presentations from ESRI, VDOT, various Northern Virginia localities, and numerous other entities. In addition, all of the major GIS vendors are expected to have booths at the conference.

The regular two-day full conference rate is $175, but a special full conference presenter rate has been established at $130, so if you are interested in making a presentation at the conference or would like more details on the conference, please visit the VAMLIS web page at www.vamlis.org.

The ESRI User Conference

Will be held August 7-11, 2006, at the San Diego Convention Center in San Diego, California. See http://www.esri.com/events/uc for more information.

The Virginia PDC GIS Conference

The 2006 Virginia GIS Conference will be held October 23-24, 2006 at the Hotel Roanoke and Conference Center. Sponsored by the Virginia Association of Planning District Commissions, the conference typically draws over 400 attendees, 40 speakers and 30 vendors. If you are interested in making a presentation, exhibiting, or attending, visit http://www.rvarc.org/vagis for more information; or call Matt Miller at 540-343-4417 (mmiller@rvarc.org).

Movin' On

We wish you the best...

Chris Adkins is not actually moving on, but he is moving up. Chris has accepted a new position with the Virginia Department of Health as the GIS Supervisor.

Yanli Gong was previously with the Virginia Geographic Information Network (VGIN). Yanli is now on staff with Montgomery County, Maryland.

Lyle Hornbaker served as the Information Services Coordinator for Isle of Wight County. Lyle is now the Local Goverment GIS Manager with the Virginia Geographic Information Network (VGIN).

David Nabers was previously a GIS Specialist / Developer with F&W Forestry Services, Inc in Albany, Georgia. David is now on staff with the Virginia Department of Forestry (VDOF) as the GIS Specialist.

John Owens was previously with the Deparment of Motor Vehicles. John is now the Geospatial Enterprise Services Manager with the Virginia Geographic Information Network (VGIN).

Jim Pugh was formally on staff with the Conservation Management Institute (CMI) at Virginia Tech. Jim is now on staff with the Virginia Department of Forestry (VDOF). Jim serves as VDOF's GIS/remote sensing specialist.

Melanie Seigler was recently on staff with the Virginia Department of Health (VDOH). Melanie is now on staff at the Virginia Department of Transportation (VDOT).

Michael Vojta was previously with the Virginia Department of Emergency Management (VDEM). Michael is now working for a consulting firm at the Virginia Department of Transportation (VDOT).

The Virginia Geospatial Newsletter is published by the Virginia Geospatial Extension Program, a partnership between the Virginia Space Grant Consortium and Virginia Cooperative Extension.

The newsletter is developed in conjunction with the Virginia Geographic Information Network (VGIN).

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