

2003 SHRUG GIS Workshop Program Guide



Expanding Our Boundaries

The 2003 SHRUG GIS Workshop Planning Committee wishes to acknowledge the help of Marty Holland and Chris Fincher with the Agency for Health Care Administration in the printing of this program guide.

Expanding Our Boundaries

Tallahassee, Florida
November 19 – 21, 2003

The 2003 SHRUG GIS Workshop Planning Committee

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Welcome to the 2003 Seven Hills Regional User Group for GIS (SHRUG) Second Annual GIS Workshop.

On behalf of the 2003 Workshop Planning Committee, our sponsors, and all the members of SHRUG, we would like to warmly welcome you and thank you for joining us at our Second Annual GIS Workshop. If you are a returning attendee from last year, welcome back! We hope you will find new answers and opportunities that will help you expand the capabilities within your own GIS work groups. If you are a new attendee or novice GIS user, we sincerely hope the experiences and networking opportunities at the workshop this year will keep you coming back and participating with SHRUG again in the future.

This year's theme is *Expanding Our Boundaries*. It was chosen for its dual meaning. With all of the successes of last year's inaugural workshop, we have faced a myriad of new challenges. Admittedly, we discovered that last year was a tough act to follow. But immediately after the closing of the 2002 workshop, analysis of the attendee feedback forms helped us to set our goals for 2003. We wanted to increase awareness of SHRUG, increase the number of attendees, and even the length of the Workshop itself. We decided that the high quality and number of abstract submittals expected this year would require expanding the SHRUG GIS Workshop an additional full day, which is exactly what we have done.

Expanding Our Boundaries also reflects the rapid growth of GIS usage within all of our participating members' agencies. This year's theme reminds us that we must focus on the ever-growing demands for simple, effective, and custom GIS applications. Not satisfied with mere GIS implementation, most public and private agencies within the Southeast are looking to provide wide-ranging GIS tools to help support the integrity of their enterprise data. From municipal public works to federal census demography, GIS approaches and education are changing to meet the hardware and data needs of its users. We hope that this year's Workshop will be a showcase for these new methods and technologies.

Since SHRUG's inception in April 1999, the goal has been to form a broad network of GIS expertise, which bridges software and data gaps, in order to assist each other with solutions to common obstacles in spatial analysis. What started as a small, grass roots gathering of 30-40, has grown to an active membership of over 400! In its first four years, SHRUG has succeeded in highlighting the applications of GIS by over a dozen local public and private entities. Now this regional alliance hopes to build even more awareness through these annual GIS Workshops.

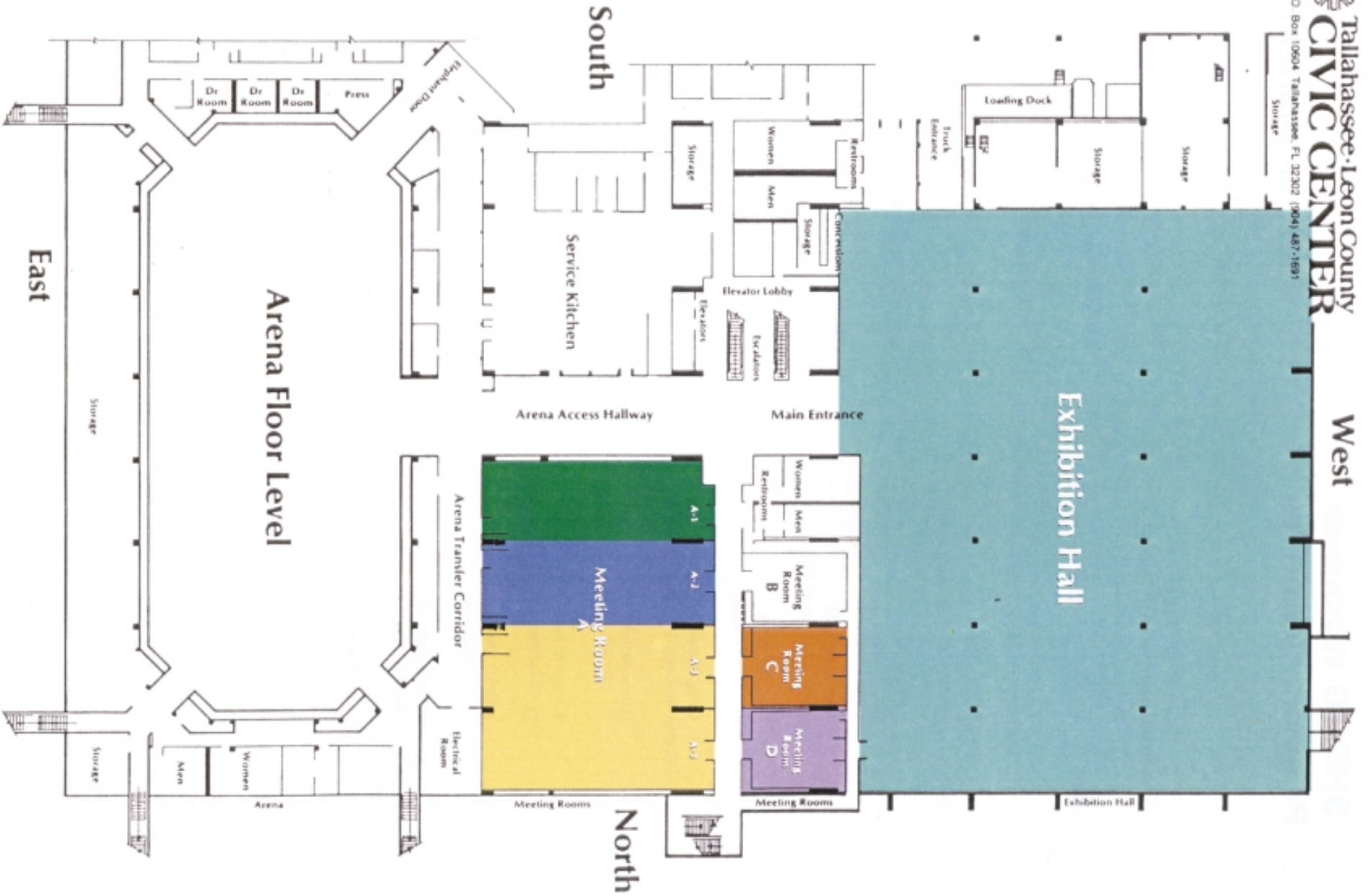
The Workshop Planning Committee is depending on *you* to help make each successive workshop better than the previous. Located in your conference packet is a Workshop Attendee Feedback form. Please take a moment to fill it out, telling us what you liked or disliked about this year's SHRUG GIS Workshop. *We can only correct problems that we are made aware of, and we want to utilize any ideas that help make us better next time.* Please make sure to help us improve for next year by submitting your feedback form!

Again, welcome to the 2003 SHRUG GIS Workshop. If you have something you need, a question or any comments, please come find a Volunteer or Planning Committee Member. We'll be glad to provide assistance.

The 2003 SHRUG GIS Workshop Planning Committee

Workshop Map

Tallahassee Leon County
CIVIC CENTER
P.O. Box 10604 Tallahassee, FL 32302 (904) 437-1591



November 19

8:00 A.M. – 9:00 A.M. Exhibit Hall

Registration & Continental Breakfast

9:00 A.M. – 10:00 A.M. Exhibit Hall

Keynote Speaker

10:00 A.M. – 12:00 P.M. Exhibit Hall

Project Showcase:

10:00 *Public Facility Planning*, Chad Thurner

Dr. Shop
Poster Session
Vendor Booths

10:30 A.M. – 11:30 A.M.

Concurrent Speaker Sessions

11:30 A.M. – 12:00 P.M.

Break

12:00 P.M. – 1:30 P.M. Exhibit Hall

Lunch & GIS Panel Discussion

1:30 P.M. – 9:00 P.M. Exhibit Hall

Project Showcase:

1:30 *Geographic Business Intelligence Solutions*, Vanessa Akins

2:30 *Space and Facilities Management Using GIS*, Rich Walker

3:30 *Implementing Web GIS, Case Studies in Successful Implementation*, Aaron Zwiefelhofer

Dr. Shop
Poster Session
Vendor Booths

1:30 P.M. – 3:00 P.M.

Concurrent Speaker Sessions

3:00 P.M. – 3:30 P.M.

Break

3:30 P.M. – 5:00 P.M.

Concurrent Speaker Sessions

5:00 P.M. – 6:00 P.M.

Open

6:00 P.M. – 9:00 P.M. Exhibit Hall

Social Mixer

November 20

8:00 A.M. – 8:30 A.M. Exhibit Hall

Registration & Continental Breakfast

8:30 A.M. – 12:00 P.M. Exhibit Hall

Project Showcase:

9:00 *GIS-Centric Rural Lands*, Chad Thurner

10:00 *MapDotNet*, Mark Alexander

11:00 *Florida's Domestic Security Website*, Gary Watry

Dr. Shop
Poster Session
Vendor Booths

8:30 A.M. – 10:00 A.M.

Concurrent Speaker Sessions

10:00 A.M. – 10:30 A.M.

Break

10:30 A.M. – 11:30 A.M.

Concurrent Speaker Sessions

11:30 A.M. – 12:00 P.M.

Break

12:00 P.M. – 1:30 P.M. Exhibit Hall

Lunch

1:30 P.M. – 6:00 P.M. Exhibit Hall

Project Showcase:

1:30 *Lee County Parks and Recreation Department*, Chad Thurner

2:30 *Maintenance Matrix/Data Catalog*, John Marquez

3:30 *Infectious Disease Reporting and GIS for Health Decisions*, Cyndy Loomis

Dr. Shop
Poster Session
Vendor Booths

1:30 P.M. – 3:00 P.M.

Concurrent Speaker Sessions

3:00 P.M. – 3:30 P.M.

Break

3:30 P.M. – 4:30 P.M.

Concurrent Speaker Sessions

4:30 P.M. – 6:00 P.M. Exhibit Hall

Ice Cream Social

November 21

8:00 A.M. – 8:30 A.M. Exhibit Hall

Continental Breakfast

8:30 A.M. – 12:00 P.M. Exhibit Hall

Project Showcase:

9:00 *Infectious Disease Reporting and GIS
for Health Decisions*, Cyndy
Loomis

10:00 *Florida's Domestic Security Website*,
Gary Watry

Dr. Shop

Poster Session

Vendor Booths

8:30 A.M. – 10:00 A.M.

Concurrent Speaker Sessions

10:00 A.M. – 10:30 A.M.

Break

10:30 A.M. – 11:30 A.M.

SHRUG Meeting

11:30 A.M. – 12:00 P.M.

Poster Prizes, Raffle Winners,
Closing Announcements

12:00 P.M.

End of Workshop

2:00 P.M. – 5:00 P.M.

Phipps-
Overstreet
Greenway

Off-Site Activities:

Bike
Run
Walk

Keynote Speaker

Mark L. DeMulder

Acting Chief Scientist for Geography, USGS

Mark L. DeMulder is the Acting Chief Scientist for Geography in the U.S. Geological Survey (USGS). He is based in the USGS headquarters in Reston, Virginia. The USGS serves the Department of the Interior and the nation as an independent science agency that collects, monitors, analyzes, and provides scientific understanding about natural resource conditions, issues, and problems. The USGS is also the nation's civilian mapping agency and provides topographic maps and digital spatial data, geographic research and applications, and land remote sensing information to the United States and its Trust Territories. Prior to this assignment, Mr. DeMulder served as the program coordinator for the Cooperative Topographic Mapping program.

Mr. DeMulder received a master of science degree from George Mason University and a bachelor of arts degree from the University of Connecticut, both in geography. He is also a graduate of the Harvard University Senior Executive Fellows program and the Office of Personnel Management's Federal Executive Institute. Prior to joining the USGS, he served eight years as an active duty Air Force officer and also worked as a civilian for the U.S. Army Intelligence Agency.

Panel Discussion

The 2003 SHRUG GIS Workshop is hosting an interactive luncheon panel with experts representing the public and private sectors, as well as, the non-profit community. This panel of GIS professionals and the workshop participants will engage in an informative dialog on a range of contemporary topics of interest to Florida's GIS community. We invite all those interested to participate in these discussions, offer their insights, and listen to their colleagues during this luncheon panel.

Panel Members:

Christian Carlson, Regional Manager, ESRI

Steve Hodge, GIS Director, FREAC

Henry Norris, Program Administrator, FMRI

Brian Pierce, GIS Project Administrator, DOACS

Bob Rackleff, Leon County Commissioner, District 5

November 19	Room A-1	Room A-2
<i>Concurrent Sessions</i>	Data Access	State and Federal Government Applications
10:30	<i>Developing a Web-Based National Geographic Public Library Database</i> Koontz, Christie	<i>The Challenges of Building an Enterprise-Quality Web Mapping Solution for State Government</i> Davis, Dixie M./Judd, Chris
11:00	<i>Data Access and Delivery Using ArcIMS</i> Walker, Rich	<i>Integrating GIS Data for the Apalachicola River into a Decision Support Tool</i> Jue, Dean K.
<i>Concurrent Sessions</i>	GIS Data Accuracy	State and Federal Government Applications
1:30	<i>FieldPoint: An Application for Locational Quality Assurance</i> Arbogast, Rene	Panel Discussion: <i>The Environmental Screening Tool: Implementing an Enterprise-Wide GIS Application Using ArcIMS</i> Roaza/Thomas/Konikoff/McGilvray
2:00	<i>Assessment and Visualization of Spatial Accuracy: An ArcView Extension</i> Johnson, Jay	
2:30	<i>Land-ID: Tracking the Land Development Process</i> Weisman, Scott	
<i>Concurrent Sessions</i>	Thematic Mapping, Spatial Analysis, and Modeling	Local Government GIS
3:30	<i>Forecasting Seasonal Precipitation Variability for the Peace River Drainage Basin at Arcadia, Florida</i> Coley, David	<i>Physical Address Database Development</i> Mayer, Dan
4:00	<i>Modeling Regional Accessibility in a GIS Environment</i> Singh, A. K.	<i>Address Standardization</i> Mounts, Heather
4:30	<i>Integrating Regional Coral and Benthic Habitat Data via IMS</i> Udoudj, Tina H.	<i>Using GIS to Enhance Tallahassee's Public Safety Dispatch System: A Case Study</i> Pence, Patrick

Room A-3	Room C	Room D
LIDAR Data Accuracy	GIS for Business (Vendor Track)	Cadastral Mapping and GIS
<i>Identifying and Quantifying Flightline Misclosure in LIDAR Data</i> Mauldin, Greg	Complete Session: <i>Geographic Business Intelligence Solutions (Information Builders and ESRI)</i> Akins, Vanessa	<i>Parcel Notification Web-Based Application for Sarasota County</i> Di Pollina, Ed
<i>Error Budget Analysis in LIDAR Mapping</i> Conner, Jeremy		<i>Building a National Parcel Database</i> Stage, David/ Hodge, Stephen
State and Federal Government Applications	Multi-Participant GIS	Remote Sensing and GIS
<i>3D Imagery User Interface for Driveway Access Permitting</i> Hearne, Lonnie	Panel Discussion: <i>Building a Florida GIS Consortium</i> Hartsfield, Lee	<i>Making the most of your Digital Data</i> Culp, Becky
<i>The FMSAS, Coastal Area Contingency Plans, ArcIMS, and ArcPad</i> O'Keefe, Kathleen		<i>Object-Oriented Approach for Image Analysis – Changing the Paradigm of a Pixel-Based Approach</i> Lewis, David
<i>Trail Network Opportunity Map Update Utility</i> Schaller, Lila/Pence, Heather		<i>Use of GIS and Mapping to Manage Tribal Lands</i> Burroughs, Brenda
State and Federal Government Applications	Local Government GIS	State and Federal Government Applications
<i>Florida Restoration Information Center</i> Butgereit/McGuire/Hernandez	Panel Discussion: <i>The Future of History</i> Chapman/Meadows/Cake	Panel Discussion: <i>Stereo Imagery for Evaluation of FAA Airport Obstruction Clearance Conformance</i> Hearne, Lonnie
<i>FLUCCS Code Updated</i> Perchalski, Frank		
<i>Reasons to Migrate from a Legacy Work Order System to a CMMS</i> Wilson, Brent		

November 20	Room A-1	Room A-2
<i>Concurrent Sessions</i>	GIS Data Standards, Policies and Procedures, and Documentation	GIS Data Structures and Data Models
8:30	Panel Discussion: <i>GIS Certification Through URISA</i> Hartsfield, Lee	<i>ArcGIS 8.3 Migration Strategies</i> Walker, Rich
9:00		
9:30		
<i>Concurrent Sessions</i>	GIS Data Structures and Data Models	Data Access
10:30	<i>ArcView 3.x Extension Re-Engineering Using ArcObjects</i> Henderson, Philip	<i>Jacksonville Airport Authority</i> Hicks, Deno
11:00	<i>Defining Our Waters: The New NHD and Watershed Modeling</i> Dietrich, Mark/Gopalan, Hema	<i>GIS, the Internet and Workflow Automation - Combining Technologies to Increase Productivity</i> Clancy, Stephen
<i>Concurrent Sessions</i>	Surveying and GIS	Data Access
1:30	Complete Session: <i>I-10 LAMP Project</i> Nobles, Allen	<i>Touch Technology and Mapping</i> Sovik, Brian R./Drury, Sean
2:00		<i>Web GIS: An Evolving Technology</i> Zwiefelhofer, Aaron
2:30		<i>Publishing GIS Data to the Field in PDF</i> Skillen, Andy
<i>Concurrent Sessions</i>	Local Government GIS	Enterprise GIS
3:30	<i>Impact Analysis and Visualization in Steamboat Springs, Colorado</i> Donley, Chuck	<i>Enterprise Agricultural GIS</i> Hudson, Rob
4:00	<i>Development of an Integrated Asset Management System for the Marion County Engineering Department</i> Nelson, Mark	<i>Building an Enterprise GIS using .NET Technology</i> Pierce, Brian/Van Wart, Sarah

Room A-3	Room C	Room D
User Group	Surveying and GIS	GIS Implementation
<i>Leica Geosystems User Group: ERDAS Imagine 8.7 and StereoAnalyst for ArcGIS</i> Zeller, Amy	Complete Session: <i>Survey Datums, Survey Plats, Grid to Ground, Sections and Quarter Corners</i> Nobles, Allen/Taylor, Ronnie	<i>The Starting Point</i> Depew, Henry C.
		<i>Expanding Our Future</i> Ford, Penny
		<i>Linking and Managing Documents to GIS</i> Spinrad/Murdoch
Photogrammetry (Vendor Track)	Digital Terrain Modeling	GIS Data Standards, Policies and Procedures, and Documentation
<i>Advancements in Airborne Digital Imagery: ADS40 and ZI Imaging DMC Orthophotography Production</i> Conner, Jeremy	<i>Sweetwater Branch, Gainesville, Florida: Watershed Assessment and Modeling Using GIS and ArcHydroTools</i> Foley, Alan	<i>GASB 34 Implementation Using GIS</i> Wilson, Brent
<i>Producing Accurate TrueOrtho Images and Digital Surface Models Using the Leica ADS40 Sensor and ISTA</i> Hoban, Robin J.	<i>Changes in LIDAR</i> Cook, Gary	<i>Tips and Tricks for Implementing Metadata in ArcCatalog and ArcSDE</i> Morgan, Tara
User Group	Local Government GIS	State and Federal Government Applications
<i>ESRI User Group: Editing with ArcGIS</i> Lundeen, Michele	Complete Session: <i>Increasing Database Currency While Reducing Costs</i> Cooper, Mary "Kitty"	Complete Session: <i>Describing the Spatial Characteristics of Recreational Boating in Florida: Innovative Approaches</i> Sargent, William
Thematic Mapping, Spatial Analysis, and Modeling	State and Federal Government Applications	Digital Terrain Modeling
<i>Habitat Mapping and Spatial Modeling to Assess Species Distributions in Relation to Changes in Freshwater Inflow in Rookery Bay, Florida</i> Rubec, Peter J.	Complete Session: <i>GIS for State and Local Health Organizations</i> Belcher, Benton	<i>Contour Mapping and 3D Visualization for St. Johns River Water Management District</i> Di Pollina, Ed
<i>Spatial Relationships Between Estuarine Habitat Structure and the Distribution of Juvenile Fishery Species in Florida</i> Whaley, Shannon		<i>Stereo Imagery for Digital Elevation Modeling and Geospatial Data Extraction</i> Sambenedetto, Dan

November 21		Room A-1	Room A-2
<i>Concurrent Sessions</i>		Photogrammetry	GIS Utility Applications/ GIS for Emergency Mgmt.
	8:30	<i>Incremental Update Procedure for Large-Scale Landbases Using Stereo Imagery Captured by a 4000 x 4000 Pixel CCD and Concurrent LIDAR DSM Data</i> Mauldin, Greg/Raber, Brian	<i>Using GIS for More Effective Outage Management and Field Engineering</i> Holmes, Joe
	9:00	<i>Comparison of Digital Mapping Cameras</i> Conner, Jeremy	<i>The Florida Emergency Management Domestic Security Website</i> Watry, Gary
	9:30	<i>Integrating LIDAR Digital Surface Model (DSM) Data in a Softcopy Environment to Produce 3D Photogrammetric Landbases</i> Mauldin, Greg	
November 21		Room A-3	Room D
<i>Concurrent Sessions</i>		FDEP User Group	State and Federal Government Applications
	8:30	<i>Florida Department of Environmental Protection User Group Meeting</i> Clay, Linc	Complete Session: <i>Leveraging Location-Based Services For Everyday Government and Emergency Management</i> Colombo, Clarke
	9:00		
	9:30		

Pre- and Post-Workshop Off-Site Activities

November 18 & 21, 2003

Munson Hills Off-Road Trail Ride

What: Ride the Munson Hills Off-Road Bicycle Trail

When: 4:00 to 6:00 p.m., Tuesday, November 18

Where: Meet in the parking lot of the Tallahassee-St. Marks Historic Railroad Trail State Park. The trail is about 4.75 miles south of the State Capitol Building on South Monroe Street.

Amenities: The St. Marks Railroad State Trail trailhead has restroom facilities and a water fountain. There is a Shell gas station with a food store and sandwich shop adjacent to the parking lot at the corner of South Monroe Street and Capital Circle (US 319).

Ride Description:

Join local off-road riders for a late afternoon ride in the Apalachicola National Forest. Meet at the trailhead (paved parking lot) of the Tallahassee-St. Marks Historic Railroad Trail State Park at 4:00 p.m. We'll ride on the paved St. Marks trail for a bit more than a mile where we'll pick up the Munson Hills trail. Munson Hills provides a 4-mile loop and a 7-mile loop. The trail is moderately technical with some obstacles and a lot of sand. The relief is gentle. The 7-mile loop takes about an hour at a moderate pace.

Phipps/Overstreet/Redbug Trail Ride/Run/Walk

What: Ride (walk or run) the single- and double-track trails of the Phipps and Overstreet tracts.

When: 2:00 to 5:00 p.m., Friday, November 21

Where: Meet in the parking lot of the Forest Meadows City Park on North Meridian Road about 6.5 miles north of the Capitol. Traveling north on Monroe Street, turn right on John Knox Road. (John Knox Road runs along the south side of the Tallahassee Mall and ends at Meridian Road.) Turn left on Meridian Road and continue traveling north to Forest Meadows.

Amenities: The Park has restrooms (with shower facilities) and water fountains.

Ride Description:

There are several riding, running, and walking options. There is the very technical single-track of the 3-mile Redbug Loop (bring your health insurance card); the moderately technical single-track of the 3-mile north, east, and west loops; the slippery double-track of the 5-mile Overstreet double loops; and the 6+-mile double track of the Phipps Park. We'll meet in the parking lot by the picnic tables. From that location, all the options are accessible.

Our thanks to Linc Clay with the Florida Department of Environmental Protection for planning and leading these activities!

Workshop Training Classes

November 17 – 18, 2003

Two-Day Classes

Introduction to ArcGIS 8.3

Introduces the students to ArcGIS 8.3 and provides the foundation for becoming a successful ArcView, ArcEditor, or ArcInfo user. Participants learn how to use ArcMap, ArcCatalog, and ArcToolbox and to explore how these applications work together to provide a complete GIS software solution. The course covers fundamental GIS concepts as well as how to create, edit, and work with georeferenced spatial data. Attendees learn how to manipulate tabular data, query a GIS database, and present data clearly and efficiently using maps and charts.

Instructor: Jeff Williams
Titan Systems Corporation
Jeff.Williams@titan.com

Our thanks to Linc Clay with the Florida Department of Environmental Protection for providing the training facility!

Introduction to ArcIMS

Introduces students to ArcIMS an integrated approach for creating and maintaining geography based Web sites. ArcIMS offers powerful GIS capabilities in an easy to use framework, changing the way users can access and interact with Internet mapping applications. This course also empowers attendees with a conceptual overview of how GIS mapping works on the Internet.

Instructor: ESRI
www.esri.com

Our thanks to Lee Hartsfield with the Tallahassee/Leon County GIS for providing the training facility at the Leon County Courthouse!

Using Autodesk Products in an Enterprise GIS

In this course, learn how CAD files are essential to a GIS enterprise. In addition, you will learn how to project CAD drawings and share data painlessly using eTransmit or by publishing a web page.

Instructor: Sheri King
CADD Centers of Florida

Our thanks to Pete McGilvray with the Florida Department of Transportation for providing the training facility at the FDOT!

Workshop Training Classes

November 17 – 18, 2003

Two-Day Classes

Migrating from ArcView 3.x to ArcGIS Desktop 8.3

Introduces ArcView 3.x users to the features and architecture of ArcView 8. Students learn how to use the new Windows-based applications ArcMap, ArcCatalog, and ArcToolbox and explore how these applications work together. Students gain a basic understanding of ArcView 8 and the experience they need to enroll in many other ESRI courses including Introduction to ArcGIS II (for ArcView 8, ArcEditor 8, and ArcInfo 8). Participants learn how ArcView 3.x terminology and features relate to the new terminology and features of ArcView 8.

Instructor: David Kelly
Forest Resource Consulting, Inc.
kellyd@frcgis.com

Our thanks to Zoreh Moshir of Technology and Professional Programs for providing the training facility at Tallahassee Community College!

What's New in ArcGIS Desktop 8.3

This new course provides an overview of the new functionality available in ArcGIS 8.3 including Geodatabase topology, advanced editing, linear referencing, ArcScan™, ArcPadR integration, and disconnected editing. With Geodatabase topology, participants will learn how to build spatial rules into GIS data to produce improved models of the real world. They will also learn how to build and manage data that occurs along linear features. Class participants will be shown how to use ArcScan to create vector data from raster data, such as a scanned map, more accurately and efficiently than traditional methods. They will also be taught how to integrate ArcPad with ArcGIS and use disconnected editing to edit data in the field and then incorporate those changes into their main data holdings.

Instructor: Wil Green
ESRI
www.esri.com

Our thanks to Calvin DeSouza with the Florida Department of Health for providing the training facility at the FDOH!

ArcSDE Roundtable

Advanced discussions of ArcSDE and its use with RDBMSs. Roundtable moderated by GIS Solutions, Inc.

ArcObjects Roundtable

Advanced discussions of the use of ArcObjects and its relationship with non-ESRI products. Roundtable moderated by GIS Solutions, Inc.

Dr. Shop

Get your GIS questions answered through hands-on assistance from ESRI staff, Autodesk/AutoCad representatives, and other advanced GIS users at the Dr. Shop. Located in the Exhibit Hall, the Dr. Shop will be open for the duration of the workshop and will have many desktop and laptop computers on hand for you to try out software, get tips from the experts, and learn about cutting-edge technologies.

The following software/topics will be available for use and/or instruction and discussion:

- ◆ ESRI ArcGIS 8
- ◆ ESRI ArcIMS
- ◆ ESRI ArcSDE
- ◆ ESRI ArcView 3.2 and/or 3.3
- ◆ AutoCAD 2004
- ◆ AutoDesk
- ◆ Oracle/MS Access/VB



Project Showcase / Demonstration

The Project Showcase / Demonstration forum will highlight GIS projects that are best viewed in a dynamic format. The project showcase forum allows for one-on-one interaction with presenters as they share customized application and highly developed GIS projects in a 45-60 minute time slot. The Project Showcase/Demonstration will be located in the Exhibit Hall.

Examples of Project Showcases include:

- ◆ Stand-alone applications that serve the needs of a particular GIS professional.
- ◆ Internet applications that improve access to GIS information products.
- ◆ Projects that highlight the incredible value of GIS as a spatial analysis tool.

List of Project Showcase Demonstrations

Public Facility Planning

Presenter: Chad Thurner, GIS Analyst
 Organization: Wilson Miller Inc.
 Date/Time: November 19 @ 10:00 A. M.

Geographic Business Intelligence Solutions

Presenter: Vanessa Akins, Marketing/Account Support Representative
 Organization: Information Builders, Inc.
 Date/Time: November 19 @ 1:30 P.M.

Space and Facilities management using GIS

Presenter: Rich Walker, VP Business Development
 Organization: ROK Technology
 Date/Time: November 19 @ 2:30 P. M.

Implementing Web GIS, Case Studies in Successful Implementation

Presenter: Aaron Zwiefelhofer, Sale Representative
 Organization: Varion Systems, a Division of GeoAnalytics Inc.
 Date/Time: November 19 @ 3:30 P. M.

GIS-Centric Rural Lands

Presenter: Chad Thurner, GIS Analyst
 Organization: Wilson Miller Inc.
 Date/Time: November 20 @ 9:00 A. M.

MapDotNet

Presenter: Mark Alexander, President
 Organization: ISC Consulting
 Date/Time: November 20 @ 10:00 A. M.

Florida's Domestic Security Website

Presenter: Gary Watry, GIS Coordinator
 Organization: Florida Department of Community Affairs, Division of Emergency Management
 Date/Time: November 20 @ 11:00 A. M. and November 21 @ 10:00 A. M.

Lee County Parks and Recreation Department

Presenter: Chad Thurner, GIS Analyst
 Organization: Wilson Miller Inc.
 Date/Time: November 20 @ 1:30 P. M.

Maintenance Matrix/Data Catalog

Presenter: John Marquez, GIS Specialist II
 Organization: Tallahassee/Leon County GIS
 Date/Time: November 20 @ 2:30 P. M.

Infectious Disease Reporting and GIS for Health Decisions

Presenter: Cyndy Loomis, Client Partner
 Organization: Information Systems of Florida
 Date/Time: November 20 @ 3:30 P. M. and November 21 @ 9:00 A. M.

Poster Session

Poster Award Categories

A panel of peers will judge the posters, with the exception of the additional category “Best of Show,” which will be voted on by the Workshop attendees. An individual may submit one poster or map, and should specify one of the three categories below. In addition, an individual may submit a second entry as part of a team. Awards will be given for the following categories.

Category and Description

1) Spatial Analysis or Visualization

Use of analytical techniques to reveal spatial or thematic data relationships, analyze patterns, or otherwise enhance our understanding of spatially-related phenomena. This category also may include high impact posters that rise above the ordinary through the creative use of 3-D views, innovative color shading, imagery, unusual viewpoints, or other “special effects.”



2) Cartographic Design and Layout

Traditional mapping products demonstrating the art of map-making as a communication media by the effective or creative use of layout elements.

3) Project Presentation

Best example of a specific project that used GIS to accomplish its goals or of a process that ties GIS into business processes. Poster displays showing workflows and project development over time are encouraged. This category may also include examples of GIS used as a tool for outreach to share the results of projects with the general public, managers, policy-makers, and other non-specialists.

Posters are eligible for awards in all categories. The Poster Committee reserves the right to create additional awards as merited by the poster submissions.

Workshop Abstracts

November 19, 2003

Note: Abstracts are arranged alphabetically by track for each day.

Track: Cadastral Mapping and GIS

10:30 - 11:30, Room D

Parcel Notification Web-Based Application for Sarasota County

This application automates generation of mailing lists. It is accessible from a standard browser, with a simple, user-friendly interface designed for the planning professional with little or no GIS experience. It includes functionality to support:

1. The standard rezoning notification process – it allows selecting properties within a given buffer area of a parcel within a rezoning request, and generates labels to send notifications to property owners and residents. It also includes the ability to carry out this process for multiple parcels.
2. Customized mailing list generation – it provides tools to flexibly define which parcels and corresponding owners and/or residents will be included in the mailing list.

This project shows how the true potential of GIS is reached when building custom applications to meet the users' specific needs and to seamlessly integrate GIS functionality with their business processes.

Presenter: Ed Di Pollina
TekConsultants
Tel: (800) 848-7218/Email: ed@tekconsultants.net

Presentation Time: 10:30 - 11:00

Building a National Parcel Database

The Federal Geographic Data Committee's Subcommittee on Cadastral Data has developed a draft cadastral core data standard for the purpose of building a national parcel database. Four pilot projects were initiated by the Bureau of Land Management (BLM) to assess the business requirements and evaluate the feasibility of implementing regional (multi-county) parcel coverage. This session will review BLM's implementation strategy, the results of a national survey on the status of parcel data conversion, and the technical issues involved with building a multi-county/multi-state parcel data coverage.

Presenter: David Stage/Stephen Hodge
FREAC
Tel: (850) 668-2404/Email: dstage10@comcast.net

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 19, 2003

Track: Data Access

10:30 – 11:30, Room A-1

Developing a Web-Based National Geographic Public Library Database

In this two-year demonstration project, Florida State University's GeoLib Program within the Florida Resources and Environmental Analysis Center (FREAC), partnering with FSU's Information Use Management and Policy Institute, is developing a nationwide public library database system linked to a digital basemap that includes data sets from the U.S. Census and the National Center for Educational Statistics. The database, now in its second year of development, offers consolidated information on public libraries nationwide and is easily accessible over the Internet.

Presenter: Dr. Christie Koontz, Director
GeoLib, FREAC/FSU
Tel: (850) 644-2007/Email: ckoontz@admin.fsu.edu

Presentation Time: 10:30 - 11:00

Data Access and Delivery Using ArcIMS

The intranet can be used as a tool for access and delivery of GIS data. This reduces the need for a GIS manager to be involved with everyday users wanting data. Additionally, data users may have developed time-consuming work-a-rounds to meet their needs, which may take up 30% of a user's time as well as 90% of the GIS manager's time. This presentation will focus on using ArcIMS and the intranet to solve most of these issues and provide real-time access and rich functionality to all level of users. Additionally, by taking the GIS professional out of the solution, the "one source" or "one person" data access is eliminated and users are allowed to retrieve their own data in a number of formats.

Presenter: Dr. Rich Walker, Vice President of Business Development
ROK Technologies, Inc.
Tel: (843) 577.3192/Email: rcwalker@roktech.net

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 19, 2003

Track: GIS Data Accuracy

1:30 - 3:00, Room A-1

FieldPoint: An Application for Locational Quality Assurance

Recently, at FDEP, strong emphasis has been placed on providing locational quality assurance in order to enhance the value and usefulness of the department's GIS. A Visual Basic application called FieldPoint has been developed to conduct locational QA during collection, as well as after the fact. This system ensures adherence to a set of business rules that define a locational quality assurance process, while making the process as effortless as possible for the collector. Every database implementing the FDEP Locational Data Standard is accessible by the application. Data automatically collected by point-and-click satisfies this standard, as well as the Division of Water Resource Management's GPS collection standards. This discussion will go into the basic architecture and design of the application, which combines the technologies of Visual Basic 6, ESRI's MapObjects 2.1, Oracle Database Access (DAO), and Trimble Pathfinder's SDK. Methods for enabling applications to listen to GPS units using the NMEA 0183 output will be discussed, and the programming code will be made available to interested developers. The locational QA rules will be described and offered as a model for accuracy assurance of spatial data.

Presenter: Rene Arbogast, Systems Project Administrator
Florida Department of Environmental Protection
Tel: (850) 245-8522/Email: rene.arbogast@dep.state.fl.us

Presentation Time: 1:30 - 2:00

Assessment and Visualization of Spatial Accuracy: An ArcView Extension

Provide GIS users with accessible tools to assess the spatial accuracy of their data themes and to visualize this accuracy by implementing the FGDC's National Standard for Spatial Data Accuracy (NSSDA) methodology. The functionality was implemented in ArcView 3.2 through Avenue scripting. The accuracy assessment is accomplished by comparing the dataset in question against a reference data set consisting of well-known positions. The differences between the data points and the known reference points are used to calculate the root mean squared error and the NSSDA statistic. For horizontal accuracy or error representation, a standard buffer operation is performed using the appropriate statistic to build a buffer polygon around each data theme feature. The visualization techniques exhibit appropriate behavior over a wide range of scales to convey information about the accuracy of the features/themes relative to the displayed scale.

Presenter: Jay Johnson, GIS Project Manager
City of Tallahassee
Tel: (850) 891-8099/Email: johnsonj@talgov.com

Presentation Time: 2:00 - 2:30

Workshop Abstracts

November 19, 2003

Track: GIS Data Accuracy

1:30 - 3:00, Room A-1

Land-ID: Tracking the Land Development Process

The Land-ID Project is an umbrella project that focuses on disseminating information that has been historically created and kept at the Growth Management offices. This project utilizes scanned subdivision plats that can be accessed via an ArcIMS site by staff that previously did not have access to this important information. The scanned plats are also georeferenced on top of the parcel layer, providing better utilities planning and other activities that can benefit from the overlay.

Presenter: Scott Weisman, GIS Specialist III
Tallahassee-Leon County GIS
Tel: (850) 413-0149/Email: weismans@mail.co.leon.fl.us

Presentation Time: 2:30 - 3:00

(Vendor) Track: GIS for Business

10:30 – 11:30, Room C

Geographic Business Intelligence Solutions (Information Builders and ESRI)

Information Builders and ESRI have teamed to deliver a geographic business intelligence solution (GBIS) that extends the real-time enterprise business intelligence and reporting capabilities of WebFOCUS to the powerful ArcIMS geographic information systems (GIS) environment. The combined solution allows users throughout the extended enterprise to rapidly and intuitively analyze real-time information with a spatial component by presenting business intelligence information in the context of physical location. GBIS improves decision-making and responsiveness while extending the reach of GIS to address a wider range of business applications and integrate natively with more than 85 data sources.

Business intelligence (BI) tools can manipulate data in many ways. It can be grouped, sorted down and across a page, displayed in both a tabular report and a matrix. Any row, column, or cell can be linked to another report and the underlying data passed to that process. This is how BI and GIS tools interoperate. Parameters are passed from report to the GIS environment, which selects comparable data from their attribute and spatial databases, renders a map, and plots the coordinates. This makes all of the special functions of the BI environment available to the GIS user.

Any report that allows you to pass parameters and drill down to another report will also allow you to drill down to a map. When driving the map from a report, the map receives benefits of BI functionality like those mentioned in the above paragraph. Similarly, when a report is launched from within a GIS menu, it often does so at the end of extensive spatial analysis. In this way, the BI user benefits from the extensive analytical capabilities of the GIS tool. Each solution complements the other. Each enhances the other by enabling the analyst to drill deeper into data to predict behavior and uncover the truth.

(Continued on page 19.)

Workshop Abstracts

November 19, 2003

(Vendor) Track: GIS for Business

10:30 – 11:30, Room C

(Continued from page 18.)

Presenter: Vanessa Akins, Marketing/Account Support Representative
Information Builders, Inc. – iWay Software, an Information Builders Company
Tel: (770) 677-9954/Email: vanessa_akins@ibi.com

Presentation Time: 10:30 - 11:30

Track: LIDAR Data Accuracy

10:30 - 11:30, Room A-3

Identifying and Quantifying Flightline Misclosure in LIDAR Data

This paper describes a process of comparing and quantifying the variation in elevation between overlapped flightlines for a given location. This process creates digital surface model (DSM) surfaces for each flightline and applies an RMS correction to each DTM surface based on survey control data. Each DSM surface is compared with the other to identify the location and degree of misclosure. The misclosure is subsequently evaluated to determine the significance relative to the nominal map scale and precision level expected for the LIDAR DSM data.

Presenter: Greg Mauldin, GIS Project Manager
Tallahassee-Leon County GIS
Tel: (850) 488-8020/Email: gregm@mail.co.leon.fl.us

Presentation Time: 10:30 - 11:00

Error Budget Analysis in LIDAR Mapping

Light Detection And Ranging (LIDAR) technology is becoming the preferred method for medium-to-large floodplain mapping projects throughout the world. The mapping industry is working to standardize LIDAR practices to ensure consistency, accuracy, and repeatability for these jobs. A key component of any LIDAR project is to quantify the accuracy (and conversely the errors) resulting from the variables that affect the product quality. This presentation will provide an analysis of the “error budget” of LIDAR mapping and DEM production process to identify critical paths for overall quality improvement, and demonstrate several approaches to accuracy assessment, with an analysis of the relative strengths and weaknesses of each approach for evaluating specific LIDAR products.

Presenter: Jeremy Conner, Marketing Director
3001, Inc.
Tel: (352) 379-3001/Email: jconner@gnv.3001data.com

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 19, 2003

Track: Local Government GIS

3:30 - 5:00, Room A-2

Physical Address Database Development

Dan Mayer, Director of Information Technology for the city of Clearwater, and Dave Larremore, GIS Analyst, will discuss issues dealing with the development of a citywide physical address database. Topics will include differentiation of various types of addresses, data maintenance issues, validation of data sources, and business practices involved with the use of physical addresses. This presentation will also explore Clearwater's solution for handling the many-to-many relationship between county-assigned parcel ID numbers and physical location addresses maintained by city staff. The unique way in which GIS facilitates this tabular relationship will be highlighted.

Presenter: Dan Mayer, Director of Information Technology
City of Clearwater
Tel: (727) 562-4660/Email: dmayer@clearwater-fl.com

Presentation Time: 3:30 - 4:00

Address Standardization

Various city departments maintain independent databases that contain references to physical addresses and/or parcel identification numbers. These address-based data elements often contain considerable errors, making it difficult to share data across departments. This paper discusses the development of a "master" table for over 53,000 physical addresses and over 42,000 parcels for the city of Clearwater. Since the city of Clearwater shares data with Pinellas County on a regular basis, the "master" address database was built on U.S. Postal Service and Pinellas County standards. The city now uses in-house resources to join the Pinellas County database to the "master" database. Examples will cover the solutions of assigning addresses, moving misplaced address points, and developing standardization attribute formats for county and USPS conventions.

Presenter: Heather Mounts, Senior Database Developer
GIS Solutions, Inc.
Tel: (727) 896-5913/Email: hmounts@gis-solutions.com

Presentation Time: 4:00 - 4:30

Workshop Abstracts

November 19, 2003

Track: Local Government GIS

3:30 - 5:00, Room A-2

Using GIS to Enhance Tallahassee's Public Safety Dispatch System: A Case Study

In March, 2003, the Tallahassee Police Department's Public Safety 911 Communication section completed the first part of its integration to PrinTrak's Premier CAD (computer-aided dispatch) system. This new CAD utilizes GIS functionality to dispatch resources for police, fire and EMS response. It uses GIS data for the maintenance of street segments and common place data, and also within an enhanced GUI-based tactical mapping system. This presentation will provide an overview of the functionality of these new tools, the steps taken during the 2-plus-year GIS integration process, and the benefit this new system provides to the citizens of both Tallahassee and Leon County.

Presenter: Patrick Pence, GIS Coordinator – Public Safety
City of Tallahassee
Tel: (850) 891-4941/Email: pencep@talgov.com

Presentation Time: 4:30 - 5:00

Track: Local Government GIS

3:30 - 5:00, Room C

The Future of History

Methods of collecting, analyzing, and disseminating historical and pre-historical data have been revolutionized by GIS technology. Four panelists will discuss a progression of achievements, developed through a cooperative between state and local governments. Beginning with automated information from the state, local government built a GIS project, which identified all the surveyed historic sites in Leon County. Subsequently, the GIS project was elevated to an ArcIMS interactive website. Local government is now in the process of linking to the State's EDMS files containing National Register documentation. And finally, in order to maintain the historical data, an ArcPad application is being created to facilitate the collection of field data in a format that can directly update GIS source files, and ultimately, the ArcIMS website.

Presenter: Lora Chapman/J. J. Meadows/Ned Cake
Tallahassee-Leon County Planning Department/Tallahassee-Leon County GIS/
Leon County Department of Growth and Environmental Management
Tel: (850) 891-8624/Email: ChapmanL@talgov.com

Presentation Time: 3:30 – 5:00

Workshop Abstracts

November 19, 2003

Track: Multi-Participant GIS

1:30 - 3:00, Room C

Building a Florida GIS Consortium

I would like to see if there is any interest in this topic. This discussion is general in nature. Suggested topics include multi-jurisdictional co-operation, public/private partnerships, potential funding sources, funding sources for small counties, new imaging technologies for basemapping (e.g., Leica Geosystems ADS40, Z/I Imaging DMC, etc.), common coordinate systems, data standards, etc.

Presenter: Lee Hartsfield, GIS Coordinator
Tallahassee-Leon County GIS
Tel: (850) 488-2818/Email: leeh@mail.co.leon.fl.us

Presentation Time: 1:30 – 3:30

Track: Remote Sensing and GIS

1:30 - 3:00, Room D

Making the Most of Your Digital Data

Recent years have seen mapping industry primary data acquisition media transformed from film to digital cameras such as ADS40. These digital cameras acquire data in the visual, as well as NIR region of the Electro Magnetic (EM), spectrum. The Satellite remote sensing industry has developed various applications using multi-spectral imagery at coarser resolution; and the high resolution data at sub-meter resolution, acquired for mapping, opens a gamut of applications ranging from pervious/impervious surface mapping to wetlands delineation to forest type classification to invasive species analysis, etc. These previously time-consuming applications, using photogrammetric approaches, can be highly automated using state-of-the-art image processing/analysis technology. As the primary cost associated with these applications is data, any value added applications/information layers can be derived at a fraction of the cost and the same data can be reused for variety of other applications.

Presenter: Becky Culp, Sales Manager
RESOURCE21
Tel: (720) 274-4000/Email: bculp@resource21.com

Presentation Time: 1:30 - 2:00

Workshop Abstracts

November 19, 2003

Track: Remote Sensing and GIS

1:30 - 3:00, Room D

Object-Oriented Approach for Image Analysis – Changing the Paradigm of a Pixel-Based Approach

Using ADS40 imagery, the use of the object-oriented technology is demonstrated for various applications in natural resource management including landuse/landcover mapping, impervious surface mapping, and other applications. The proposed technique uses an object space, where pixels with similar spectral and spatial properties are grouped together for classification. The objects are created using a segmentation process in the COTS software eCognition. Objects can be created at multiple resolutions/scales to extract features of interest at various scales. Similar to training-set extraction in supervised classification, a class hierarchy file is built to formulate description of various features. The class hierarchy files allow the end user to capture the spectral variability of features in different spectral bands using a fuzzy logic distribution function. Further, other spatial, spectral, and temporal characteristics can be integrated into the class hierarchy function along with the spectral definitions. Classification is performed on an object-by-object basis at various resolutions using a fuzzy logic approach. Objects of similar semantic meaning are grouped together to create meaningful classes for specific classifications.

Presenter: David Lewis, Vice President
RESOURCE21
Tel: (703) 444-0971/Email: dlewis@resource21.com

Presentation Time: 2:00 - 2:30

Track: Remote Sensing and GIS

1:30 - 3:00, Room D

Use of GIS and Mapping to Manage Tribal Lands

This presentation is intended to show how the Mississippi band of Choctaw Indians are using GIS/remote sensing to manage, maintain, and acquire tribal lands. GIS is being used to evaluate and plan the growth for the eight Choctaw tribal communities. The tribe uses GIS/remote sensing on a daily basis to plan and develop tribal communities, assess tribal lands, and plan land acquisitions. This information will go into the Tribe-wide Land Information System that is being developed to give the tribal government access to data that will help them make informed decisions about their land and assets. In addition, GIS/remote sensing was used to collect and map the Choctaw's 2002 demographic survey. Leica GPS units with Panasonic Toughbook PDAs containing ESRI's ArcPad with vector and aerial data were used to collect and map the tribe's 2002 demographic survey/census.

Presenter: Brenda Burroughs, Vice President of Sales and Marketing
Applied Geo Technologies, Inc.
Tel: (407) 273-4114/Email: bburroughs@choctawgeo.com

Presentation Time: 2:30 - 3:00

Workshop Abstracts

November 19, 2003

Track: State and Federal Government Applications

10:30 - 11:30, Room A-2

The Challenges of Building an Enterprise-Quality Web Mapping Solution for State Government

This session discusses the lessons learned in designing, building, and implementing a highly available, fault-tolerant, and distributed ArcIMS system. Topics addressed include: using a reverse proxy server for enhanced security, server load balancing, configuring multiple spatial servers, ArcIMS fail-over, and the development of remote access procedures for an in-house development community. The challenge was to build a commercial-grade, centrally managed, web mapping system that would replace an existing handful of independent Internet and intranet map servers.

Presenters: Dixie M Davis, GIS Contractor/Chris Judd, Systems Project Analyst
The GIS Shop, INC./Florida Department of Environmental Protection
Tel: (850) 933-5359/Email: dixie@gisshop.com

Presentation Time: 10:30 - 11:00

Integrating GIS Data for the Apalachicola River Into a Decision Support Tool

Florida State University (FSU) has received a grant from the National Oceanic and Atmospheric Association (NOAA) to develop a GIS-based data clearinghouse and decision support tool for the Apalachicola River basin that will be accessible over the Web. This Apalachicola River Basin Ecological Characterization (ARBEC) project will involve planners from the local governmental level to the federal level. There will be public meetings to solicit input from private citizens and likely users of the ARBEC decision support tools as well. This presentation will discuss the progress on this two-year project and describe the implementation strategies for the GIS-like web interface to this project.

Presenter: Dean K. Jue, Director
Florida State University
Tel: (850) 644-2007

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 19, 2003

Track: State and Federal Government Applications

1:30 - 3:00, Room A-2

The Environmental Screening Tool: Implementing an Enterprise-Wide GIS Application Using ArcIMS

The Florida Department of Transportation has developed a new, more efficient process for conducting environmental reviews of transportation projects. A key component of the process is Florida's Environmental Screening Tool, an interactive database and mapping application available on the Internet. The application, which became operational in March 2003, uses ArcIMS, ArcSDE, Oracle, ArcObjects, JSP, XML, and HTML. This technical panel discusses the implementation of the tool with an emphasis on the technical challenges and how these were overcome. The panel will provide background information about the requirements and how these were identified, techniques for online data entry and GIS analysis, customizing and optimizing the ArcIMS map viewers, and the challenges that the FDOT has met in implementing a statewide information system to support the new process.

Presenters: Ruth Roaza, Senior GIS Project Manager, URS Corporation
Alexis Thomas/Michael Konikoff/Peter McGilvray
University of Florida/URS Corporation/Florida Department of Transportation
Tel: (850) 574-3197/Email: ruth_roaza@urscorp.com

Presentation Time: 1:30 - 3:00

Track: State and Federal Government Applications

1:30 - 3:00, Room A-3

3D Imagery User Interface for Driveway Access Permitting

The Federal Highway Administration has funded a research project to develop a tool that integrates 3D Imagery together with FDOT and regional GIS data via the Internet to provide an automated application and analysis tool for driveway access permitting. A key capability of the application is the ability to overlay accurately geo-registered stereo imagery with vector CAD and GIS data. This provides both the applicant and the permit engineer with new tools to analyze and evaluate the permit application. Accomplishments have included the ability to overlay stereo vector data onto stereo imagery and the ability to serve stereo imagery datasets over the Web. An ArcIMS application is being developed to link at least one county GIS data system with the FDOT RCI database dataset. Prototype analysis tools are being installed in participating engineering firms to assist in developing a meaningful application.

Presenter: Lonnie Hearne, Director of Programs
SimWright, Inc.
Tel: (615) 497-0569/Email: lonnie@simwright.com

Presentation Time: 1:30 - 2:00

Workshop Abstracts

November 19, 2003

Track: State and Federal Government Applications

1:30 - 3:00, Room A-3

The FMSAS, Coastal Area Contingency Plans, ArcIMS, and ArcPad

In cooperation with numerous valued partners, the Florida Marine Research Institute (FMRI) continues to compile an extensive library of GIS data, documentation, and applications for contingency planning, interagency coordination, effective response, and natural resources damage assessments. GIS is a central component of these efforts. FMRI accomplishes broad distribution of information through creation of digital area contingency plans (ACP) served through both CD and IMS applications. Integration of the ACP data with the Florida Marine Spill Analysis System dramatically improved access to spill response information. New mobile wireless tools for accurate and timely field data collection continue to evolve. Future efforts focus on wireless dissemination of critical spill response information and creation of a GIS-enabled incident tool that allows response agencies to rapidly and consistently report on the numerous smaller spills that occur throughout the state.

Presenter: Kathleen O'Keife, GIS Coordinator
Florida Fish and Wildlife Conservation Commission
Tel: (727) 896-8626/Email: kathleen.okeife@fwc.state.fl.us

Presentation Time: 2:00 - 2:30

Trail Network Opportunity Map Update Utility

The Trail Network Opportunity Maps represent the vision for a statewide system of trails in Florida. These maps depict opportunity areas for an interconnected system of recreational trails. The Florida Department of Environmental Protection's Office of Greenways and Trails, in coordination with the University of Florida, will be updating these maps using an interactive web-based application. The Statewide Greenways Recreational Trail Opportunity Map Update Utility integrates geographic information systems (GIS), relational database management systems and Internet mapping technology to provide online tools to digitize new recreation trails in Florida. This presentation will discuss the background and utilization of the Trail Network Opportunity Maps, as well as the creation of the Update Utility and its effectiveness in completing the opportunity map update process.

Presenters: Lila Schaller/Heather Pence
University of Florida GeoPlan Center/FDEP, Office of Greenways and Trails
Tel: (850) 245-2052/Email: heather.pence@dep.state.fl.us

Presentation Time: 2:30 - 3:00

Workshop Abstracts

November 19, 2003

Track: State and Federal Government Applications

3:30 - 5:00, Room A-3

Florida Restoration Information Center

The goal of the Florida Wetland Restoration Information Center (FWRIC) is to develop the framework for a statewide ecological restoration program for wetlands and their associated uplands using ecosystem management and ecological principles. FWRIC has been developed to aid local governments and community organizations with their restoration efforts by providing online tools and research materials needed for the implementation and management of restoration projects.

FWRIC products currently available online include the interactive Florida Ecological Restoration Inventory, a searchable restoration funding database, a restoration library of research links, and a searchable bibliography. A handbook for restoration techniques and a review of restoration policy in the state of Florida are still being developed.

The FWRIC consolidates many aspects of restoration into a single resource, as well as enables project access and update capabilities for public and private entities. Contributors can provide feedback online to continually update current restoration projects and needs. FWRIC increases the functionality of tracking restoration in the state by maintaining and tracking spatial data in relational databases. Restoration practitioners can visit the mapping site and see their project components on an aerial photograph as well as visualize other restoration projects in that landscape.

Visit the Florida Wetland Restoration Information Center, (www.dep.state.fl.us/water/wetlands/fwric) and browse the tools it has to offer. Please consider contributing to the searchable Florida Ecological Restoration Inventory.

Presenters: Richard Butgereit/Marti McGuire/Erica Hernandez
Florida Department of Environmental Protection
Tel: (850) 245-8533/Email: erica.hernandez@dep.state.fl.us

Presentation Time: 3:30 - 4:00

Workshop Abstracts

November 19, 2003

Track: State and Federal Government Applications

3:30 - 5:00, Room A-3

FLUCCS Code Updated

Based on experiences in performing “fast track” land-use updates in Lake County, the FLUCCS code has been reevaluated to reflect its use with today’s growth management information needs, other available county data, and current technology. Some innovation in how landscape databases are created and maintained can increase the currency of key urban growth information while simultaneously reducing data maintenance costs. The FLUCCS code has been in use for about 30 years and it reflects the state of the technology in the 1960s and 1970s. A lot has changed during that period. The major change has been the rapid advancements in computing technology, making practical the use of digital orthophotographs as high resolution map bases. Another development is the availability of parcel outlines in digital form. The updated FLUCCS code reflects the new technology and data sources to help expedite growth management decisions.

Presenter: Frank Perchalski, President
Aerial Terrain Services
Tel: (423) 580-0601/Email: fperchalski@comcast.net

Presentation Time: 4:00 - 4:30

Reasons to Migrate from a Legacy Work Order System to a CMMS (Computerized Maintenance Management System)

This paper illustrates the use of GIS in the public works process. GIS processes include asset inventory from which public works can benefit, if done correctly. The GIS approach presented in this paper illustrates the long-term benefits of an ongoing GIS-based work order maintenance management program. A PowerPoint slideshow, along with an actual demonstration of Work Order Management using GIS, will be given.

Presenter: Brent Wilson, Regional Representative/Account Manager
Azteca Systems
Tel: (817) 652-4775/Email: bwilson@azteca.com

Presentation Time: 4:30 - 5:00

Workshop Abstracts

November 19, 2003

Track: State and Federal Government Applications

3:30 - 5:00, Room D

Stereo Imagery for Evaluation of FAA Airport Obstruction Clearance Conformance

The current method of evaluating FAA airport obstruction clearance conformance is based on the Three-Dimensional Airspace Analysis Program (3DAAP). 3DAAP uses a GIS application to compare 3D models of the airport and its environs to models of the FAA obstruction clearances. While very effective, this process is very expensive and time consuming because it requires planimetric data extraction and 3D modeling as a precursor to the analysis process. A new process has been developed that allows overlay of the obstruction clearance vector data directly onto digital stereo imagery of the airport. Automatic or manual comparisons are then made to determine if the obstruction clearance requirements are being met. The process has been used with two Florida airports and is currently in use in Texas for evaluation of airports in the Dallas/Ft. Worth metropolitan area.

Presenter: Lonnie Hearne, Director of Programs
SimWright Inc.
Tel: (615) 497-0569/Email: lonnie@simwright.com

Presentation Time: 3:30 – 5:00

Track: Thematic Mapping, Spatial Analysis, and Modeling 3:30 - 5:00, Room A-1

Forecasting Seasonal Precipitation Variability for the Peace River Drainage Basin at Arcadia, Florida

The Peace River provides supplemental municipal water for southwest Florida counties. As such, determining the probability of very low precipitation totals during the dry season is of critical importance. The contemporary association between warmer/cooler sea surface temperatures (SSTs) in the eastern Pacific and wetter/dryer winter season precipitation in the southeastern United States is well documented.

ArcGIS geostatistical analyst interpolation methods are used to infill historic precipitation records and to estimate seasonal precipitation totals. Derived totals are sorted into two subpopulations conditioned upon above/below median SSTs from the previous summer. The mean and variance of each subpopulation are calculated and separate probability distributions fitted. Probability estimates and return periods for various precipitation levels are calculated.

Preliminary results indicate that the probabilities of experiencing various winter precipitation levels are strongly conditioned upon summer SSTs. This readily available information provides forecasts of precipitation characteristics for the winter season.

Presenter: David Coley, Master of Science
University of Florida, Department of Geography
Tel: ((352) 392-0494/Email: dcoley@geog.ufl.edu

Presentation Time: 3:30 - 4:00

Workshop Abstracts

November 19, 2003

Track: Thematic Mapping, Spatial Analysis, and Modeling 3:30 - 5:00, Room A-1

Modeling Regional Accessibility in a GIS Environment

Accessibility is an important issue in transportation and regional planning policies. Most of the available indicators of accessibility have an inherent deficiency, as they are biased by the geographic location of places. In a regional context, the peripheral places invariably show low accessibility when these indicators are used for analysis. These places, therefore, falsely demand more investment even though there may already be sufficient provision of transport infrastructure. In this research paper, a new indicator of accessibility is proposed, which is not biased by geographical location of places. The proposed indicator uses relative ease of access, the ratio of network and Euclidean impedance, based on a network efficiency concept. A lower value of accessibility indicates more accessibility. The accessibility analysis of a region consisting of more than 1000 rural and urban settlements is performed using this indicator and the process is automated in a GIS environment using TransCAD software.

Presenter: A. K. Singh, Reader
M. N. National Institute of Technology
Tel: +91-532-2445103/Email: aks_gis@rediffmail.com

Presentation Time: 4:00 - 4:30

Integrating Regional Coral and Benthic Habitat Data via IMS

Coral reefs are important habitats for many species of fish. The Magnuson-Stevens Act designated that the South Atlantic Fishery Management Council (SAFMC) identify, conserve, and enhance essential fish habitat (EFH). At the request of SAFMC, the Florida Marine Research Institute is producing an Internet map server (IMS) to provide GIS data, imagery, and documents related to EFH across the South Atlantic Region (the Carolinas, Georgia, and Florida). The coral and benthic habitats IMS will assist decision makers and scientists that manage and protect EFH. This project will incorporate GIS data from a variety of federal, state, and private sources. Example datasets include fish species distributions, environmental sensitivity indexes, hardbottom distribution, coral extents, marine protected areas, and artificial reefs. The IMS will also serve video and still imagery of coral reefs to provide researchers a unique opportunity to monitor coral health, abundance, and habitat dynamics in the South Atlantic Region.

Presenter: Tina H. Udouj, Assistant Research Scientist
Florida Fish and Wildlife Conservation Commission
Tel: (727) 896-8626, Ext. 30/Email: tina.udouj@fwc.state.fl.us

Presentation Time: 4:30 - 5:00

Workshop Abstracts

November 20, 2003

Note: Abstracts are arranged alphabetically by track for each day.

Track: Data Access

10:30 – 11:30, Room A-2

Jacksonville Airport Authority

GIS has many advantages to offer airport authorities, from supplementing security systems to enhancing work order management systems, to adding mapping and 3D analysis tools to current business practices. In this implementation, the main goals consisted of the conversion of airport layout plans (ALP), the development of a standard CAD delivery process for data delivered by consultants, and the creation of individual modules for each of the four airport terminals. Each module was developed using ArcIMS 4.0 and backed by ColdFusion. Modules were created for security, infrastructure, and terminal layouts. These modules can be modified without affecting other components and offer the flexibility required to integrate with other software and business practices.

Presenter: Deno Hicks, Business Development Manager
England-Thims & Miller
Tel: (904) 642-8990/Email: HicksD@etminc.com

Presentation Time: 10:30 - 11:00

GIS, the Internet, and Workflow Automation – Combining Technologies to Increase Productivity

For many organizations, it has become increasingly important to utilize new technologies in order to streamline everyday processes. This session will focus on the development of a fully integrated land acquisition management system, which harnesses the power of the Internet to deliver real-time acquisition status, GIS maps, and data management capabilities. Offer letters, contracts, and exhibits are created on the fly using Crystal Reports, while maps are generated and output using ArcIMS and ArcMap Server. Lastly, acquisition status, ownership information, and everything in between can be updated/modified using predefined forms pages. All of this is deployed to a standard web browser employing Microsoft .NET, ASP.NET and Secure Sockets Layer (SSL) security. For those who are constantly on the go, the site can be deployed on a number of mobile devices, including PDA's and Internet-ready phones.

Presenter: Stephen Clancy
Nick Miller, Inc.
Tel: (850) 222-0599/Email: sclancy@nickmillerinc.com

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 20, 2003

Track: Data Access

1:30 – 3:00, Room A-2

Touch Technology and Mapping

Touch screen technology has quickly become a part of our everyday lives from checking into a flight at a kiosk, to using a hand-held device such as ArcPad. Since GIS and mapping are now taking advantage of touch screen technology, this presentation will explain how this technology works. This presentation will also explain some of the differences that exist within the world of touch technologies, and where we are headed into the future.

Presenter: Brian R. Sovik, Regional Manager /Sean Drury
Geographic Technologies Group, Inc./Pen Techno
Tel: (561) 572-4900/Email: brians@geotg.com

Presentation Time: 1:30 - 2:00

Web GIS: An Evolving Technology

As budgets shrink and internal and external demands expand at a rapid rate, local government agencies need to be proactive in getting their data out to constituents in a timely, secure, and cost-effective fashion. Many government agencies have spent a considerable amount of time and money on data collection. Some organizations have ventured into the area of web GIS to provide constituents with an easy way to access important information through a browser. This presentation will explore the issues related to developing and implementing a web-based GIS application on your intranet or Internet. Discussions will include the evolution of web-based GIS technology and where it is going, data design issues for efficient use across the Web, a review of the functionality that can be expected from today's web GIS applications, and how to address privacy and security issues. Case studies from city and county implementations will be used to showcase how to make your data accessible to all your constituents.

Presenter: Aaron Zwiefelhofer, Sales Representative
Varion Systems, a Division of GeoAnalytics, Inc.
Tel: (847) 824-6423/Email: aaronz@varionsystems.com

Presentation Time: 2:00 - 2:30

Workshop Abstracts

November 20, 2003

Track: Data Access

1:30 – 3:00, Room A-2

Publishing GIS Data to the Field in PDF

Publishing GIS Data to PDF for Rapid and Widespread Access to Engineering Data. This presentation will provide actual case studies of how large utility organizations with thousands or millions of engineering drawings and maps can convert data to intelligent, georeferenced PDFs. Engineering data that was difficult and time consuming to find can now be accessed in seconds. We will cover the advantages of using a non-proprietary file format for easily distributing engineering data to anybody, anywhere at a moment's notice.

About Layton Graphics, Inc. Founded in 1976, LGI specializes in publishing mapping, GIS database and engineering data from CAD, GIS, manual drawings, and other engineering and document management applications to easy-to-use, intelligent PDF files. PDF files can be distributed to anybody, anywhere for use by maintenance, installation, repair, construction, facility locating, and engineering. PDF files can be distributed and viewed for FREE using Adobe® Reader.

Presenter: Andy Skillen, Account Manager
Layton Graphics, Inc.
Tel: (770) 973-4312/Email: askillen@layton-graphics.com

Presentation Time: 2:30 - 3:00

Track: Digital Terrain Modeling

10:30 –11:30, Room C

Sweetwater Branch, Gainesville, Florida: Watershed Assessment and Modeling Using GIS and ArcHydroTools

The Sweetwater Branch is a stream draining a large portion of the urban area within Gainesville, Florida and ultimately discharging to Alachua Sink within Payne's Prairie State Park. The city of Gainesville hired Jones, Edmunds and Associates, Inc. to perform an assessment of the Sweetwater Branch watershed. This presentation will describe use of LIDAR data to develop a DEM; using ArcHydroTools (developed by Dr. David Maidment, University of Texas) within ArcGIS to process the DEM; incorporation of field survey and stormwater infrastructure data within ArcGIS; and use of HEC-GeoRAS for development of a HEC-RAS model of the stream.

Presenter: Alan Foley, P.E., Project Manager
Jones, Edmunds and Associates, Inc.
Tel: (352) 377-5821

Presentation Time: 10:30 - 11:00

Workshop Abstracts

November 20, 2003

Track: Digital Terrain Modeling

10:30 –11:30, Room C

Changes in LIDAR

With new laser equipment, faster computers, and better software a lot of changes have occurred since our first attempts to get reliable data collection using LIDAR. I will explain the standards and procedures we have developed to acquire engineering quality accuracy. Examples of recently collected LIDAR in Northeast Florida and QA/QC methodology we use to prove its accuracy will be discussed, along with the problems we encountered along the way to achieving our goal.

Presenter: Gary Cook, Researcher – GIS
Florida State University
Tel: (850) 487-4469, Ext. 101/Email: gcook@mailers.fsu.edu

Presentation Time: 11:00 - 11:30

Track: Digital Terrain Modeling

3:30 - 4:30, Room D

Contour Mapping and 3D Visualization for St. Johns River Water Management District

The project involved digitizing 1-foot contours and spot elevations from mylars and paper maps with grayscale aerial photo background. It was carried out applying standard tools and phases for this type of projects involving scanning, image registration, image enhancement, digitizing, and quality control.

What made this project challenging was the fact that the grayscale background made it difficult to use standard automated tools for line tracing, so it required significant manual intervention. This was addressed through optimizing the image enhancement process and applying specialized vectorizing tools.

A second aspect was the generation of a DTM and overlaying of orthophotos, which were used for generation of photorealistic 3D images of the study area.

Presenter: Ed Di Pollina
TekConsultants
Tel: (800) 848-7218, Ext. 244/Email: ed@tekconsultants.net

Presentation Time: 3:30 - 4:00

Workshop Abstracts

November 20, 2003

Track: Digital Terrain Modeling

3:30 - 4:30, Room D

Stereo Imagery for Digital Elevation Modeling and Geospatial Data Extraction

In 2000, Okaloosa County began to explore ways to decrease the cost of geospatial data collection, especially as it related to stormwater data. The result was an innovative partnership with FDOT District 3 Planning to collect high-resolution stereo imagery to use for extracting elevation data and cultural features compatible for use with Okaloosa County's enterprise GIS. FDOT collected aerial photography that provided pixel resolution and 3D accuracies down to approximately three inches. FDOT's engineering contractor developed a feature extraction tool that allows semi-automatic extraction of digital elevation data and 2D/3D cultural feature extraction in ESRI shapefile formats. This tool is based on algorithms developed to create DEMs for the military's Tomahawk Missile program. The tool is currently in use in Florida in Okaloosa County, Escambia County, and Flagler County. It is also used in Tennessee in Williamson and Davidson Counties.

Presenter: Dan Sambenedetto, Manager – GIS Department
Okaloosa County, Florida
Tel: (850) 651-7574/Email: dsambenedetto@co.okaloosa.fl.us

Presentation Time: 4:00 - 4:30



Workshop Abstracts

November 20, 2003

Track: Enterprise GIS

3:30 - 4:30, Room A-2

Enterprise Agricultural GIS

GIS Solutions built an enterprise GIS for a large agricultural operation that is primarily maintained in a corporate office with certain controls and responsibilities delegated to the field office level. Developing an enterprise GIS system of any significant scope typically begins with analyzing perceived problem(s) and building desired solutions that can be implemented through the use of GIS software and related databases. As a result, an enterprise GIS system is simply a collection of software and information that has been consolidated to solve a defined set of spatial problems.

This enterprise agricultural GIS includes a Spatial Database Engine (ArcSDE) enabled Microsoft SQL Server relational database. Several Internet Map Server (ArcIMS) applications serving these GIS data and targeted tools to the field offices from the corporate office have been implemented. In addition, user-friendly desktop functionality will be developed using ArcObjects for both the corporate GIS office and the field offices during future phases of the agricultural GIS development. Lastly, we anticipate expanding the mobile GIS applications already deployed in selected grove vehicles.

The recently implemented GIS capabilities are assisting this agricultural operation in attaining their business goals and solving the challenges that were summarized as part of our four-day User Needs Assessment.

Presenter: Rob Hudson, Senior Project Manager
GIS Solutions, Inc.
Tel: (727) 896-5913/Email: rhudson@gis-solutions.com

Presentation Time: 3:30 - 4:00

Building an Enterprise GIS Using .NET Technology

The Florida Department of Agriculture and Consumer Services has been building the infrastructure for an enterprise GIS and the tools for users to access the spatial data from their desktop. Typical basemap data layers, imagery, and metadata were compiled for the enterprise. As with all major IT projects, data is always a limiting factor. The department's data was not captured or stored in a fashion readily available for inclusion into the enterprise GIS. Map services, data generating tools, attribute data entry forms, and metadata catalogs were developed using .NET technology as the primary building blocks to assist the department to spatially enable existing datasets, build new datasets, and review metadata via web browsers. The department is now well underway to build GIS tools, interfaces, and spatial data using the latest technology.

Presenters: Brian Pierce, GIS Project Manager/Sarah Van Wart, GIS Programmer
Florida Department of Agriculture and Consumer Services
Tel: (850) 245-1061/Email: pierceb@doacs.state.fl.us

Presentation Time: 4:00 - 4:30

Workshop Abstracts

November 20, 2003

Track: User Group

1:30 - 3:00, Room A-3

Editing with ArcGIS

This session is for beginning and intermediate users of ArcGIS desktop products who want to learn more about editing data. We'll cover tips & tricks for ArcView, ArcEditor and ArcInfo users. Learn how to utilize the latest functionality.

Topics will include:

- ◆ Sketch tools.
- ◆ Edit tools.
- ◆ Snapping options.
- ◆ Copy/paste vs. load objects.
- ◆ Geodatabase basics (options for ArcView users!).
- ◆ ArcPad check out/in with user forms.
- ◆ Integrating CAD data.
- ◆ Advanced editing (traverse, planarize, etc.).
- ◆ Annotation and dimension features.
- ◆ Topology (map based and geodatabase).
- ◆ Geometric networks.
- ◆ Enterprise (versioning, disconnected editing).
- ◆ Useful developer samples.
- ◆ ArcScan extension.

Presenter: Michele Lundeen, Technical Specialist
ESRI – Charlotte
Tel: (561) 832-1058, Ext. 11/Email: mlundeen@esri.com

Presentation Time: 1:30 - 3:00

Track: Data Standards, Policies and Procedures, and Documentation

8:30 - 10:00, Room A-1

GIS Certification Through URISA

Professional certification is an important topic for GIS professionals. This panel discussion will cover the certification program under the national URISA organization. Attendees are encouraged to raise any issue of interest regarding URISA certification. Discussion items will be forwarded to URISA for review and possible inclusion in the certification program.

Presenter: Lee Hartsfield, GIS Coordinator
Tallahassee-Leon County GIS
Tel: (850) 488-2818/Email: leeh@mail.co.leon.fl.us

Presentation Time: 8:30 - 10:00

Workshop Abstracts

November 20, 2003

Track: GIS Data Standards, Policies and Procedures, and Documentation
10:30 - 11:30, Room D

GASB 34 Implementation Using GIS

GASB 34 requires state and local governments to establish a mechanism that reports infrastructure value, depreciation, and management practices. This paper illustrates the use of GIS in this accounting process. GIS processes include asset inventory and valuation models, depreciation, and implementation of an asset management system in lieu of depreciation. The GIS approach presented in this paper illustrates the long-term benefits of an ongoing GIS-based inventory, valuation, and maintenance program that satisfies GASB 34 requirements. A PowerPoint, along with an actual demonstration of asset management using GIS, will be given.

Presenter: Brent Wilson, Regional Representative/Account Manager
Azteca Systems
Tel: (817) 652-4775/Email: bwilson@azteca.com

Presentation Time: 10:30 - 11:00

Tips and Tricks for Implementing Metadata in ArcCatalog and ArcSDE

Recently, FMRI dedicated time and resources to migrating historic UNIX/text file metadata records for the entire Marine Resources Geographic Information System (MRGIS) database to FGDC-compliant corporate metadata records, which are stored in the MRGIS Oracle geodatabase and accessed by ArcSDE through ArcGIS. Another software tool used by FMRI to create spatial and non-spatial metadata is the Spatial Metadata Management System (SMMS), which has a user-friendly interface to capture, develop, manage, and publish metadata. FMRI uses both ArcCatalog and SMMS to create MRGIS metadata. This presentation will provide tips on lessons learned specific to using the metadata tools in ArcCatalog (e.g., synchronizing, importing, and exporting) in order to preserve the integrity of metadata associated with shapefiles, coverages, personal geodatabases, or geodatabases stored in an RDBMS.

Presenter: Tara Morgan, GIS Database Administrator
Florida Fish and Wildlife Conservation Commission
Tel: (727) 896-8626/Email: tara.morgan@fwc.state.fl.us

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 20, 2003

Track: GIS Data Structures and Data Models

10:30 – 11:30, Room A-1

ArcView 3.x Extension Re-Engineering Using ArcObjects

Many organizations have invested a considerable amount of time and effort into customizing ArcView 3.x for the specific needs of the organization's users. Avenue programmers created a wealth of scripts and extensions that must now be re-engineered for use in the ArcGIS environment. These re-engineering activities require a solid understanding of spatial analysis and ESRI functionality, structured thinking to reverse engineer Avenue code, and the ability to navigate the ArcObjects libraries and object model diagrams. This paper will examine several efforts that have been undertaken to rebuild ArcView 3.x extensions in ArcGIS and provide recommendations for future programming endeavors.

Presenter: Philip Henderson, Senior Applications Developer
GIS Solutions, Inc.
Tel: (727) 896-5913/Email: phenderson@gis-solutions.com

Presentation Time: 10:30 - 11:00

Defining Our Waters: The New National Hydrography Dataset and Watershed Modeling

The National Hydrography Dataset (NHD) is undergoing a change. The NHD that provides a national framework for organizing and mapping water resource data is developing a powerful new geodatabase model that integrates the crucial spatial layers of water bodies, watersheds, stream flow networks, and water monitoring stations. The NHDinGEO, based on the ArcHydro model provides support for mapping (geographic features), referencing (Reach Code addresses), and modeling/analysis (watersheds and stream networks).

FDEP wishes to use the NHDinGEO to organize and structure its water quality data, provide support for basin assessment and TMDL modeling, and display and report the results to the public and other agencies in a much better fashion than has been possible up until now using this new model.

Presenter: Mark Dietrich/Hema Gopalan
Florida Department of Environmental Protection
Tel: (850) 245-8550/Email: mark.dietrich@dep.state.fl.us

Presentation Time: 11:00 - 11:30

Workshop Abstracts

November 20, 2003

Track: GIS Data Structures and Data Model

8:30 – 10:00, Room A-2

ArcGIS 8.3 Migration Strategies

Most land-based GISs are in a transition phase, moving from ESRI's ArcInfo 7.x or 8.0 Workstation and Librarian products to ArcGIS 8.3. This migration requires careful consideration because of the fundamental change in the data model and the various users and projects that are reliant on the business processes necessary to maintain the system. In other words, to take full advantage of the powerful features of ArcGIS, you need to properly design a geodatabase model and framework for your data and correctly implement it for your business processes and needs. Based on our experience, ROK recommends that an ArcGIS migration plan be developed to use as a guide to outline these steps as well as other necessary considerations. Once the plan is compiled, reviewed, and accepted, a clear and precise path to follow for a comprehensive migration and implementation to the ArcGIS environment will be established. Whether your plan is developed in-house or with the help of an outside consultant, it should include some key components. This talk will discuss why and how to develop the migration plan, including the key components, and outline the benefits of migrating to ArcGIS 8.3. Real world examples from other organizations and lessons learned will be given.

Presenter: Dr. Rich Walker, Vice President of Business Development
ROK Technologies, Inc.
Tel: (843) 577.3192/Email: rcwalker@roktech.net

Presentation Time: 8:30 - 9:00



Workshop Abstracts

November 20, 2003

Track: GIS Implementation

8:30 – 10:00, Room D

The Starting Point

While “Expanding Our Boundaries” is an excellent idea for personal and professional growth, there is a need to have a starting point. Whether a person is working with point, line, or polygon files, the files have to be acquired or built. In many cases, the file must be built and the question is one of data sources, projection, scale, and other such considerations. Based on my 30-some years of experience, this is a proposed presentation on how to build database files, possible sources, and other considerations.

General areas to be covered include:

- Finding a source(s).
- Importing the file (format considerations).
- Creating an ArcView readable database.
- Geocoding (if necessary).

Presenter: C. Henry Depew, Survey and Mapping Technician
DCA/DEM/GIS Unit
Tel: (850) 413-9906/Email: henry.depew@dca.state.fl.us

Presentation Time: 8:30 - 9:00

Expanding Our Future

To ensure a solid future for GIS, we must begin to train and educate our “future.” We need to find creative and innovative ways to reach the next generation of users. One way to achieve this vital goal is through our high school students. These young minds do not even realize what GIS is or that it is an available career option. This presentation will discuss ways in which Gulf County GIS is trying to open the door to GIS for the students of Gulf County.

Presenter: Penny Ford, GIS Director
Gulf County
Tel: (850) 229-6145/Email: pennygis@gtcom.net

Presentation Time: 9:00 - 9:30

Workshop Abstracts

November 20, 2003

Track: GIS Implementation

8:30 – 10:00, Room D

Linking and Managing Documents to GIS

Over the past decade, GIS has evolved into a highly innovative, competent, and productive technology, integrating the ability to present, query, and model geographic features with database attributes. On the other hand, GIS has not been able to deal effectively with the large number of documents and images, stored in numerous and often incompatible formats, which are usually associated with features within the GIS. Parallel to this, document management software has evolved into a similarly productive technology focusing on storing, retrieving, and presenting large volumes of documents – making them available to large enterprise IT installations.

It is only recently that these two technologies are meeting in a common ground. Document management companies are now creating “software bridges” linking powerful GIS packages to proven, enterprise-grade document management systems. This paper demonstrates how one such system operates, integrating state-of-the-art ArcGIS 8.3 with Legato’s ApplicationXtender document management system. We will demonstrate how this works by linking typical GIS features, such as parcels, with an assortment of linked documents, such as building permits and/or zoning approvals (stored as Word, .pdf, or scanned images), spreadsheet files, and emails.

The presentation will also endeavor to define the operational benefits typically derived by users of such a system, as well as financial costs involved in a typical application.

Presenter: Bernard Spinrad, President/Jeffrey Murdock, Director of Sales – Latin America & Caribbean
IDAS/Legato
Tel: (305) 665-8303

Presentation Time: 9:30 - 10:00

Track: User Group

8:30 - 10:00, Room A-3

Leica Geosystems User Group: ERDAS Imagine 8.7 and StereoAnalyst for ArcGIS

Presenter: Amy Zeller, Territory Sales Manager – Geographic Imaging Products
Leica Geosystems GIS & Mapping, LLC
Tel: (404) 248-9000, Ext. 2255
Email: amy.zeller@gis.leica-geosystems.com

Presentation Time: 8:30 - 10:00

Workshop Abstracts

November 20, 2003

Track: Local Government GIS

3:30 - 4:30, Room A-1

Impact Analysis and Visualization in Steamboat Springs, Colorado

Explore development alternatives for the Fish Creek Falls area, east of Steamboat Springs, Colorado. The visualization will depict natural resource locations, a village concept, and the approved development. The impact analysis will evaluate road construction costs, development suitability, and elementary school demand. The analyses will use ArcView 8.3 extensions to provide real-time visualizations and dynamic attribute calculations.

Presenter: Chuck Donley
CommunityViz
Tel: (303) 442-8800/Email: cdonley@communityviz.com

Presentation Time: 3:30 - 4:00

Development of an Integrated Asset Management System for the Marion County Engineering Department

Governmental Accounting Standards Board Statement No. 34 establishes financial reporting standards for state and local governments, including states, cities, towns, villages, and special-purpose governments such as school districts and public utilities. Governments should report all capital assets, including infrastructure assets, in the government-wide statement of net assets and generally should report depreciation expense in the statement of activities. Space Imaging and Jones Edmunds and Associates, Inc. are working with Marion County, Florida to collect this asset data for incorporation into an integrated asset management system. This solution utilizes field data collection and image-based feature extraction to build the required asset databases.

Presenter: Mark Nelson, Vice President/GIS Manager
Jones Edmunds and Associates, Inc.
Tel: (352) 377-5821/Email: mnelson@jea.net

Presentation Time: 4:00 - 4:30

Workshop Abstracts

November 20, 2003

Track: Local Government GIS

1:30 - 3:00, Room C

Increasing Database Currency While Reducing Costs

Lake County addresses growth-related spatial data challenges by increasing the currency of its land-use database while, simultaneously, reducing costs by limiting built-in redundancies found in many traditional approaches. This requires a selective, multitask approach to database maintenance. Fortunately, there is a good match between data currency improvements and image analysis approaches. Land uses with the most significant data currency requirements, such as manmade features, are those requiring the least complex image analysis. Conversely, slowly changing features, typically reflected by vegetation, require the most complex image analysis. A hybrid approach resulted. High currency, low complexity information extraction is done by trained in-house staff using an updated FLUCCS code. Growth areas will be updated annually using other agency air photos, supplemented by targeted acquisitions. Low currency, high complexity tasks continue to be performed by contacted specialist, but those have relatively long update cycles.

Presenter: Mary "Kitty" Cooper, Lake County GIS Director
Lake County Board of County Commissioners
Tel: (352) 343-9775

Presentation Time: 1:30 – 3:00

Track: Photogrammetry (Vendor Track)

10:30 - 11:30, Room A-3

Advancements in Airborne Digital Imagery: ADS40 and Z/I Imaging DMC Orthophotography Production

Digital cameras have finally surpassed the capabilities of film cameras as demonstrated through 3001's deployment of the LH Systems ADS40 and the Z/I Imaging DMC sensors. The session will discuss application of airborne digital cameras within the GIS world and their use as a photogrammetric quality product. The systems will be compared to each other, as well as with film-based solutions, with an emphasis on real-world solutions for the GIS professional.

Presenter: Jeremy Conner, Marketing Director
3001, Inc.
Tel: (352) 379-3001/Email: jconner@gnv.3001data.com

Presentation Time: 10:30 - 11:00

Workshop Abstracts

November 20, 2003

Track: Photogrammetry (Vendor Track)

10:30 - 11:30, Room A-3

Producing Accurate TrueOrtho Images and Digital Surface Models Using the Leica ADS40 Sensor and ISTA

From utilities to state and local governments, users are turning to orthophotography to provide a fundamental base layer in their GIS. EarthData produces accurate, seamless TrueOrtho™ mosaics and precisely correlated 3D surface models, using Leica's ADS40 digital push-broom sensor in combination with the fully automated ISTAR processing system.

What is a TrueOrtho™? It is an aerial view where each pixel in the image is represented in its true geographical location, and is completely free of building lean or distortion. With the TrueOrtho™ you can accurately digitize planimetric features directly off the image product, without having to use a traditional stereo-compilation process.

The ADS40 sensor acquires stereoscopic imagery as continuous image strips along the flight path. This data is then processed through the ISTAR TrueOrtho™ system to generate a high-resolution digital surface model (DSM). The DSM contains elevation measurements for every feature exposed to the airborne sensor, including buildings, bridges and trees. It is the basis for the orthorectification process to generate the final TrueOrtho™ product.

In 2003, EarthData successfully acquired and produced TrueOrtho™ images with the Leica sensor for a number of county and municipal governments across the U.S., who use these products as a cost-effective means of capturing and updating planimetric data. Some examples of these projects are presented.

Presenter: Robin J. Hoban, Regional Manager
EarthData International
Tel: (850) 877-7881/Email: rhoban@earthdata.com

Presentation Time: 11:00 - 11:30

Track: State and Federal Government Applications

3:30 - 4:30, Room C

GIS for State and Local Health Organizations

We at Florida Department of Health headquarters (Bill Alfred, Chris Duclos, Benton Belcher, and Calvin Desouza) would like to do a breakout session focused towards GIS users at the county health departments. Our plan is to get users, from as many counties as possible, to come to the workshop. The presentation would give the county GIS users an overview of what the Department of Health is doing with GIS, how it applies to the GIS work that they are doing and give the users an opportunity to ask DOH users questions. The presentation would specifically cover the CHARTS application, field data collection, the Internet mapping services, and the counties' access to the ArcGIS platform.

(Continued on page 46.)

Workshop Abstracts

November 20, 2003

Track: State and Federal Government Applications

3:30 - 4:30, Room C

(Continued from page 45.)

Presenter: Benton Belcher, GIS Analyst
Florida Department of Health
Tel: (850) 245.4009/Email: benton_belcher@doh.state.fl.us

Presentation Time: 3:30 - 4:30

Track: State and Federal Government Applications

1:30 - 3:00, Room D

Describing the Spatial Characteristics of Recreational Boating in Florida: Innovative Approaches

Consisting of three presentations by Robert Swett (Florida Sea Grant), Bill Sargent (Florida Fish and Wildlife Conservation Commission), and Charles Sidman (University of Florida). Individual abstracts have been prepared and are available upon request.

Overall Abstract for Complete Session. One-fourth of the nation's recreational boating occurs in Florida, where there is one boat for every 20 residents. Statewide, the number of boaters increases faster than the overall population. The growing demand on Florida's waterways underscores the need for enhanced public access, public safety, and environmental protection. However, information available to managers does not fully describe activities and desires of the boating community.

This session explores development of scientifically defensible methods, integrated processes, and effective tools for addressing boating issues from the perspective of the activity itself. Discussion includes use of the state's Vessel Title and Registration System for identifying spatial distribution of boats; delineation of landward service areas for boat access facilities; and a user-derived, on-the-water origin, destination, and traffic route study. These highly integrated studies provide vital information for a proactive resource management approach that considers the activities and needs of a major user group.

Presenter: William Sargent, Research Scientist
Florida Fish and Wildlife Conservation Commission
Tel: (727) 896-8626/Email: Bill.Sargent@fwc.state.fl.us

Presentation Time: 1:30 – 3:00

Workshop Abstracts

November 20, 2003

Track: Surveying and GIS

1:30 - 3:00, Room A-1

I-10 LAMP Project

This session is to show the setup required and results of the design survey for I-10 in Leon County using a mix of LAMP (low altitude mapping photography) at heights of 360 feet and ground survey. The project was for 13 miles of I-10 and had to be completed in a five-month timeframe.

Presenter: Allen Nobles, PSM
Allen Nobles & Associates, Inc.
Tel: (850) 385-1179/Email: noblesa@anobles.com

Presentation Time: 1:30 - 3:00

Track: Surveying and GIS

8:30 - 10:00, Room C

Survey Datums, Survey Plats, Grid to Ground, Sections, and Quarter Corners

This session will provide an overview of the datums used in surveying today. The areas covered will be horizontal datums (27 and 83), vertical datums (29 and 88), state plane systems, grid to ground, and control networks.

This session will also discuss issues related to the placement of surveys and subdivision plats into a GIS system. Some details on why you can have problems fitting this data into the system will be covered. We will also look at how section corners and quarter corners are used in the survey world.

Presenter: Allen Nobles, PSM/Ronnie Taylor
Allen Nobles & Associates, Inc., National Geodetic Survey
Tel: (850) 385-1179/Email: noblesa@anobles.com

Presentation Time: 8:30 - 10:00

Workshop Abstracts

November 20, 2003

Track: Thematic Mapping, Spatial Analysis, and Modeling 3:30 - 4:30, Room A-3

Habitat Mapping and Spatial Modeling to Assess Species Distributions in Relation to Changes in Freshwater Inflow in Rookery Bay, Florida

We conducted this study to assess the influence of changes in freshwater inflow on estuarine species in Rookery Bay. Originally, freshwater entered the bay via sheet-flow. In the 1960s, the creation of a canal system, which funnels water through a weir situated on Henderson Creek, altered inflows.

We employed side-scan and QTC View sonar systems to map bottom types and bathymetry in Rookery Bay. We verified bottom types by analyses of bottom grab samples. We used abundance indices derived from fisheries monitoring in Charlotte Harbor with habitat maps for Rookery Bay to conduct habitat suitability modeling (HSM) during a dry season (spring) and a wet season (summer). Predicted HSM maps depict suitability zones (low to optimum) across the estuary. This allowed determination of spatial distributions of species' life stages in relation to changes in salinity patterns.

Presenter: Peter J. Rubec, Research Scientist
Florida Fish and Wildlife Conservation Commission
Tel: (727) 896-8626/Email: peter.rubec@fwc.state.fl.us

Presentation Time: 3:30 - 4:00

Track: Thematic Mapping, Spatial Analysis, and Modeling 3:30 - 4:30, Room A-3

Spatial Relationships Between Estuarine Habitat Structure and the Distribution of Juvenile Fishery Species in Florida

Estuarine habitats are important nurseries for many fishery species in Florida. Literature suggests that habitat structure (spatial configuration of habitat elements) affects the abundance, growth, and biodiversity of estuarine nekton. We employ GIS, ordination techniques, and modeling to examine relationships between estuarine habitat structure and the spatial distribution of several juvenile fishery species in Charlotte Harbor.

We combined GIS-derived habitat data with site-specific data on fish species abundance and calculated habitat structure metrics describing habitat edges and the distance to landscape features. We applied canonical correspondence analysis to examine relationships between fishery species abundance, habitat structure metrics, and environmental variables. Using results from regression modeling and neural networks, we mapped fish distributions across the estuary. Our findings advance our ability to map essential fish habitats and may help improve management of juvenile fishery species across the estuarine landscape.

Presenter: Shannon Whaley, Associate Research Scientist
Florida Fish and Wildlife Conservation Commission
Tel: (727) 896-8626/Email: Shannon.Whaley@fwc.state.fl.us

Presentation Time: 4:00 - 4:30

Workshop Abstracts

November 21, 2003

Note: Abstracts are arranged alphabetically by track for each day.

Combined Track: GIS Utility Applications/GIS for Emergency Management

8:30 - 10:00, Room A-2

Using GIS for More Effective Outage Management and Field Engineering

In 1999 Clay Electric Cooperative (Keystone Heights, Florida) implemented a comprehensive integrated AM-FM-GIS/Work Order/Truck Map/Trouble Call system and data conversion services using GIS and IVR technologies. The UAI system provided includes: data conversion specifications development, electric distribution facility data conversion services, software, installation and training, development of an implementation strategy, preparation of a pilot study, customization of base applications, and support for applications and system enhancements.

The implemented system improved decision-making by providing better and timelier information, saved money by eliminating redundant activities and automating manual processes, and improved customer satisfaction by reducing the time to restore power after outages.

UAI implemented a sophisticated GIS-AM-FM application integrated with almost all areas of the Utility System; i.e., Operations, Engineering, Planning, Trouble Call and Dispatch, Pole Inspection, Billing, and Customer Services. All of the above department functions revolve around the geographic information system (GIS), where an electronic model of the total utility system is maintained on actual geography.

Clay EC's project involved conversion of existing AutoCAD drawings, associated documents and electronic data, and paper maps and land base into a seamless GIS on an ESRI platform.

Since its implementation, Clay EC has realized substantial cost savings through improved efficiencies and productivity. Herman Dyal, Director of Engineering, said the co-op's 1998 projection of \$600,000 in labor savings has already been surpassed.

Lee County Electric Cooperative (LCEC – North Ft. Myers, Florida) also implemented UAI's system for field engineering and outage management in 1998. During that time, LCEC migrated from a paper-based, manual operation to an ESRI-based GIS with functionality that touches all areas of daily operation. The 160,000-member co-op has automated both its field engineering processes and outage response to better serve customers.

LCEC has also implemented a comprehensive response tracking system using its outage management software and reporting modules. Through its seamless, system-wide GIS, LCEC's operations staff is able to visualize all outages reported onscreen. The OMS also analyzes incoming calls and predicts the source of the fault, displays actual calls as well as affected routes, and archives all data related to specific outages for future reporting needs.

The ability to generate reports detailing outage duration and specific crew response is powering LCEC's continuing goal of gaining greater operational efficiencies and providing the best possible customer service.

(Continued on page 50.)

Workshop Abstracts

November 21, 2003

Combined Track: GIS Utility Applications/GIS for Emergency Management 8:30 - 10:00, Room A-2

(Continued from page 49.)

In September of 2003, the city of Tallahassee approved implementation of UAI's UtilityCenter® OMS. The project is in the initial kickoff phase and is scheduled for completion next year. Joe Johnson, Director of Business Development for UAI, will discuss the success of Clay Electric and LCEC, while providing an overview of the pending Tallahassee project and the benefits to be realized.

Presenter: Joe Holmes, Manager of Communications and Marketing
Utility Automation Integrators
Tel: (877) 722-8220/Email: joe.holmes@uai.com

Presentation Time: 8:30 - 9:00

The Florida Emergency Management Domestic Security Website

The Florida Division of Emergency Management (FDEM) operates two websites within the state in support of public information, emergency management, and domestic security. Both sites use an Autodesk product called MapGuide. It is comparable to ESRI's ArcIMS. Both MapGuide and ArcIMS have their strengths and weaknesses. MapGuide was found to be a better fit for the goals and tasks that FDEM is supporting. The public site has information for citizens about hurricanes, nuclear power plants, tornadoes, thunderstorms, evacuation routes and zones, etc. The secure site supports emergency management and law enforcement, is password protected and has law enforcement sensitive data, proprietary data, or other sensitive data.

Presenter: Gary Watry, GIS Coordinator
Florida Department of Community Affairs
Tel: (850) 413-9907/Email: gary.watry@dca.state.fl.us

Presentation Time: 9:00- 9:30

Workshop Abstracts

November 21, 2003

Track: Photogrammetry

8:30 - 10:00, Room A-1

Incremental Update Procedure for Large-Scale Landbases Using Stereo Imagery Captured by a 4000 x 4000 Pixel CCD and Concurrent LIDAR DSM Data

Updating large-scale landbases has long been a problem for local government GIS agencies and still is today. Typically, local governments have scheduled photogrammetric updates on five-year cycles whereby the entire landbase is recaptured and the previous data replaced. With the advent of softcopy technology, some agencies have employed change detection techniques whereby the legacy landbase data is updated to reflect observed changes.

This presentation describes a methodology whereby apriori data on the location of new development is provided to the photogrammetric contractor and these areas are updated every one or two years. This process has the advantage of keeping landbases more current and budgets flat. This method uses digital color stereo imagery and concurrently acquired LIDAR data. Issues of merging stereo-captured planimetric data, LIDAR-captured topographic data, and the accuracy and aesthetics considerations of orthophotography production in an incremental update scenario are discussed.

Presenter: Greg Mauldin/Brian Raber
Tallahassee-Leon County GIS/Merrick & Company
Tel: (850) 488-8020/(800) 544-1714
Email: gregm@mail.co.leon.fl.us/brian.raber@merrick.com

Presentation Time: 8:30 - 9:00

Comparison of Digital Mapping Cameras

For years, many have been trying to develop digital cameras that meet mapping standards. The LH Systems ADS40 digital aerial sensor and the Z/I Imaging Digital Mapping Camera (DMC) provide the first all-digital systems that meet ASPRS and NMAS mapping standards for orthophotography and 3D stereocompilation. Moreover, the consistency of the image capture avoids many of the problems historically associated with film photography. 3001, Inc. is operating the first production ADS40 and DMC and provides a comparison case study of the two sensors. The ADS40 is a pushbroom-imaging device that captures data in image strips. The Z/I DMC is a frame-based system that captures individual images using eight synchronously operating CCD matrix-based array cameras. Discussion will include accuracy, applications of remote sensing, and photogrammetric mapping.

Presenter: Jeremy Conner, Marketing Director
3001, Inc.
Email: mkt@3001data.com

Presentation Time: 9:00 - 9:30

Workshop Abstracts

November 21, 2003

Track: Photogrammetry

8:30 - 10:00, Room A-1

Integrating LIDAR Digital Surface Model (DSM) Data in a Softcopy Environment to Produce 3D Photogrammetric Landbases

This paper describes a process for capturing 3D planimetric features in a softcopy environment directly into an ESRI geodatabase and integrating the planimetric data with LIDAR DSM data to produce a comprehensive 3D landbase. Some topics discussed include the initial capture of 3D features from stereo photography in a GIS format, converting 2D legacy data to 3D and techniques for integration with LIDAR data.

Presenter: Greg Mauldin, GIS Project Manager
Tallahassee-Leon County GIS
Tel: (850) 488-8020/Email: gregm@mail.co.leon.fl.us

Presentation Time: 9:30 - 10:00

Track: State and Federal Government Applications

8:30 - 10:00, Room D

Leveraging Location-Based Services for Everyday Government and Emergency Management

Geospatial or location-based service solutions are fast becoming an integral part of the IT infrastructure at all levels of government: federal, state, city, and county. The benefits of bringing spatial information into the open systems world are enormous: tax mapping, zoning, crime analysis, demographic studies, routing and dispatching police, land use planning, and today Homeland Security.

Learn about the possibilities and benefits of using the latest spatial solutions to improve government performance. Oracle has the only database solutions with built-in spatial features that allows storing, indexing, and managing of location content and querying of location relationships to enhance service delivery to constituents, jurisdiction analysis, emergency preparedness, and critical infrastructure management.

Presenter: Clarke Colombo, Technologist
Oracle
Tel: (703) 364-2369

Presentation Time: 8:30 - 10:00

Workshop Abstracts

November 21, 2003

Track: User Group

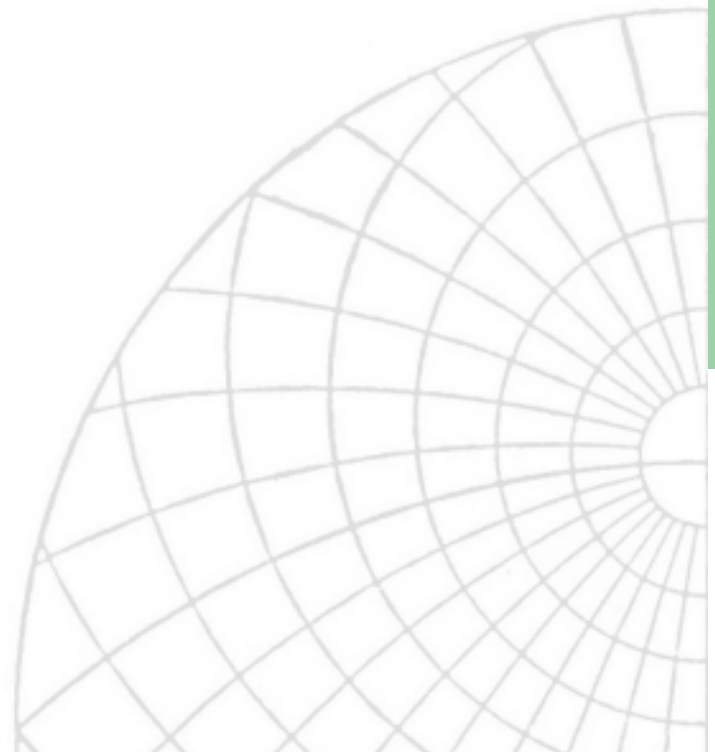
8:30 - 10:00, Room A-3

Florida Department of Environmental Protection User Group Meeting

The FDEP GIS user community is invited to attend this session to discuss GIS-related problems, issues, challenges, and opportunities facing us. Implementing new software versions and the FDEP Integrated Management System will be discussed, and users will be polled for ideas on timing, phasing, priorities and resource allocation. This will also be a good forum to share innovative applications of GIS to address agency issues and mandates.

Presenter: Linc Clay, GIS Data Processing Manager
Florida Department of Environmental Protection
Tel: (850) 245-8295/Email: linc.clay@dep.state.fl.us

Presentation Time: 8:30 - 10:00



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