# 16th Annual User Conference



# **Conference Guide**

# 2006 South Central Arc User Conference

# **Welcome From The President**

It is an exciting time for SCAUG and its membership. As SCAUG enters its sixteenth year as an organization, we can all be proud of the accomplishments achieved by past and present SCAUG members.

While GIS has been in the conscious of the public and news media, the natural disasters that occurred over the past year have placed our profession in the forefront in terms of public safety and recovery. With this new found awareness the SCAUG family has a unique opportunity to demonstrate the power of GIS to an eager and excited audience.

This year's conference will create unique opportunities to share, collaborate and address the challenges we face everyday in GIS. One of this year's challenges is the adoption of a new charter that will govern SCAUG. The charter has been revised to accommodate recent changes, while still looking towards the future.

On behalf of the SCAUG Board, it is my pleasure to welcome you to Fort Worth to gain insight from those in our GIS community. Join SCAUG to prepare yourselffor the challenges ahead!

# **Special Thanks**

A special thanks to these organizations for helping make this year's conference a success!

**Bexar Appraisal District** 

**Brazos River Authority** 

City of Ardmore

**City of Fort Worth** 

City of Longview

City of McKinney

City of Plano

City of San Antonio

City of Tyler

**Devon Energy Corporation** 

**Geographic Computer Technologies** 

Mississippi Automated Resource Information System

Oklahoma Conservation Commission

Texas Department of State Health Services



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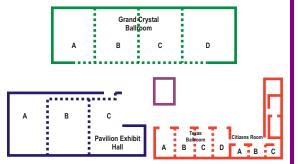
Kevin Koon Devon Energy Corporation

## **ESRI** Representative

Sheila Sullivan ESRI



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Fort Worth, Texas 76102



# Week at a Glance - Training

### TRAINING - Monday, February 6th - Tuesday, February 7th

| 8:00am - 5:00 pm | Introduction to Multi-User Geodatabases | Texas B |  |
|------------------|---|---------|--|
| 8:00am - 5:00 pm | Geoprocessing with Scripts              | Texas C |  |
| 8:00am - 5:00 pm | GIS Analysis for ArcMap Users           | Texas D |  |

#### Introduction to Multi-User Geodatabases (February 6th - 7th)

Multiuser geodatabases use ArcSDE software and a database management system (DBMS) to store large amounts of GIS data that many users need to access. This course provides a comprehensive introduction to ArcSDE and its powerful capabilities for managing the way users interact with GIS data. Participants learn fundamental ArcSDE and DBMS architecture concepts and learn how ArcGIS Desktop clients access and manipulate data stored in a multiuser geodatabase. The course discusses geodatabase behavior in the context of a versioned environment, fundamental versioning workflow procedures, and client-side performance issues. This course does not focus on a specific supported database management system (DBMS). This course to does not focus on a specific supported database management system (DBMS). This tourse is taught using an ArcInfo license of ArcGIS since much of the geodatabase functionality taught in the course requires ArcInfo.

#### Geoprocessing with Scripts (February 6th - 7th)

One of the aspects of the ArcGIS 9 geoprocessing framework is the scripting environment. In this two-day class, students will learn about the Python scripting language and how it can be used to access the geoprocessing functionality in ArcGIS 9. Participants begin the course by understanding Python scripting syntax; progress to writing scripts for geoprocessing operations; and finish by incorporating Python scripts as tools in ArcToolbox. Scripting is easy to learn, so introductory-level programmers are welcome. However, some knowledge of fundamental programming techniques, such as loops and conditional statements, is required.

#### GIS Analysis for ArcMap Users (February 6th - 7th)

This two day class will focus participants on the task of performing spatial analysis with the tools available in ArcMAP and ArcToolbox. Hands-on exercises will highlight the analysis tools and spatial statistics tools, building a better understanding of how and why to use these tools, as well as knowledge of their statistical importance. Attendees should have a prior knowledge of ArcMAP and working with GIS data sets.

### TRAINING - Thursday, February 9th

| 8:00am - 5:00 pm  | Advanced ArcSDE Administration | Citizen A |
|-------------------|--------------------------------|-----------|
| 1:30 pm - 5:00 pm | Model Builder Workshop         | Texas A   |

## Advanced ArcSDE Administration (February 9th)

The Advanced ArcSDE Administration class will cover high-end administration of ArcSDE in a Microsoft SQL Server environment, including multi-instance and multi-database designs. User will come away from the seminar understanding the potential problems and successes experienced in deploying ArcSDE into an enterprise environment. This class is an advanced class and users should have Microsoft SQL Server and ArcSDE administration experience.

#### Model Builder (February 9th)

New to ArcGIS 9.x, the Model Builder is a graphically oriented tool that allows users to string together tools and process from ArcToolbox. It can be used for automating one-time tasks, or building complex applications - and everything in between. This workshop will include hands-on exercises instructing the participants on the basics of model building, setting model parameters, linking models together, and making small applications. Attendees should have a prior knowledge of ArcMAP and ArcToolbox.



# Week at a Glance

| DAY ONE - Wednesday 8th |                               |                 |  |
|-------------------------|-------------------------------|-----------------|--|
| 8:30 am - 10:30 am      | Opening Breakfast & Keynote   | Crystal D       |  |
| 10:30 am - 12:00 pm     | Vendor Bingo                  | Promenade       |  |
| 12:00 pm - 8:00 pm      | Vendor Exhibits               | Promenade       |  |
| 12:00 pm - 1:00 pm      | Lunch on your own             |                 |  |
| 1:30 pm - 2:30 pm       | User Presentations Session I  | Texas B, C, & D |  |
| 2:30 pm - 3:30 pm       | User Presentations Session II | Texas B, C, & D |  |
| 3:30 pm - 4:30 pm       | User Presentations Session II | Texas B, C, & D |  |
| 5:00 pm - 8:00 pm       | Vendor Reception              | Promenade       |  |
| 5:00 pm - 8:00 pm       | Map Gallery                   | Promenade       |  |
| 5:00 pm - 8:00 pm       | Fastest Map In The West       | Promenade       |  |
| 5:00 pm - 8:00 pm       | Application Competition       | Promenade       |  |

| I | DAY TWO - Thursday 9th |                                 |                     |
|---|------------------------|---------------------------------|---------------------|
|   | 8:30 am - 5:00 pm      | Panel Discussions               | Texas B             |
|   | 8:30 am - 9:30 am      | User Presentations Session I    | Texas C & D         |
|   | 9:30 am - 10:00 am     | Break                           |                     |
|   | 10:00 am - 11:00 am    | User Presentations Session II   | Texas C & D         |
|   | 11:00 am - 12:00 pm    | User Presentations Session III  | Texas C & D         |
|   | 12:00 pm - 1:30 pm     | Lunch on your own               |                     |
|   | 1:30 pm - 5:00 pm      | City of Fort Worth Walking Tour | Meet in Hotel Lobby |
|   | 1:30 pm - 5:00 pm      | Geocaching Challenge            | Meet in Hotel Lobby |
|   | 6:00 pm - 10:00 pm     | Cowtown Casino Social           | Crystal C & D       |
|   | 10:00 pm - ???         | Cowtown Poker Pub Crawl         | Downtown Fort Worth |
|   |                        |                                 |                     |

| <b>DAY THREE - Friday 10t</b> | h                           |                    |
|-------------------------------|-----------------------------|--------------------|
| 8:30 am 10:00 am              | ESRI Technical Session I    | Texas A, B, C, & D |
| 10:00 am - 11:30 am           | ESRI Technical Session II   | Texas A, B, C, & D |
| 11:30 am - 1:30 pm            | Lunch and Conference Awards | Crystal B          |



Texas • Oklahoma • Louisiana • Mississippi



# **Conference Information**

### Opening Breakfast & Keynote

Join us Wednesday, February 8th in Crystal D Ballroom for breakfast with Darrel McDonald, Assistance Director of Education and Training for the Columbia Regional Geospatial Service Center! The K-12 Student Competition Winners will be announced as well as the newly elected 2006-2007 SCAUG Officers and we will also be introduced to our vendor participants and their companies during the Vendor Spotlight at the Opening Breakfast.

#### VendorHall&Reception

Vendors will be exhibiting all of their newest technology and services from 10:30am to 8:00pm on Wednesday, February 8th in the Promenade. Stop by to check out the latest and greatest products in the industry, and a vendor quite possibly may give you a "FREE DRINK" token to redeem at the Vendor Reception. Enjoy the fun, food and drinks at the Vendor Reception from 5:00pm to 8:00pm on Wednesday, February 8th also in the Promenade. Don't forget your bingo game card in your conference packet, because you just may be the lucky winner at our traditional game of Vendor Bingo!!!

## Map Gallery & Applications Contest

Please plan to attend the Map Gallery and Application Contest on Wednesday, February 8th in the Promenade from 5:00pm to 8:00pm. Cast your vote with the ballot in your conference packet. Your votes will determine the winners of some very nice prizes.

#### Fastest Map in the West

Can you out-draw the competition? Participate in our **Fastest Map in the West Competition!** Participants are given 10 minutes to make the best map possible to help keep the City in order!

\$1 Entry Fee... Winner takes all!

#### **Walking Tour**

On Thursday February 9, 2006 take the opportunity to see how the City of Fort Worth's GIS and Emergency Operations Centerinteractina simulated emergency and how the IT Solutions GIS Division coordinates and facilitates the Fort Worth's geographic data in both an ArcGIS environment and in providing web-based services.

Also take the exciting opportunity to be guided on a tour of historic downtown Fort Worth. See some of the diverse architecture and hear some of the wild history of "The City Where the West Begins" and the diverse architecture and hear some of the wild history of "The City Where the West Begins" and the diverse architecture and hear some of the wild history of "The City Where the West Begins" and the diverse architecture and hear some of the wild history of "The City Where the West Begins" and the diverse architecture and hear some of the wild history of "The City Where the West Begins" are the diverse architecture and hear some of the wild history of "The City Where the West Begins" are the diverse architecture and hear some of the wild history of "The City Where the West Begins" are the diverse architecture and hear some of the wild history of "The City Where the West Begins" are the diverse architecture and hear some of the wild history of "The City Where the West Begins" are the diverse architecture and hear some of the wild history of "The City Where the West Begins" are the diverse architecture and hear some of the wild history of the diverse architecture are the diverse architecture and hear some of the diverse architecture are the diverse are the diverse architecture are the diverse are the d

#### **Geocaching Event**

Participate in the first SCAUG Geocaching event, **Thursday February 9, 2006**. What better way to explore historic downtown Fort Worth then to go on a scavenger hunt? **GeoCaching** is a 21st century version of the scavenger hunt with **GPS users** navigating through downtown while discovering historic, famous, or just interesting sites. Once you've collected all the items, you will be registered in a drawing for **prizes!** 

#### Cowtown Casino Social

Join us **Thursday evening**, **February 9th**, **6:00pm-10:00pm** in the Crystal C & D Ballroom for the Cowtown Casino Social, in the heart of Fort Worth's historic "Entertainment" district - Hell's Half-Acre. You can fill up on some BBQ at the chuck wagon, converse with fellow cowhands, or wash down the trail dust at the saloon. Try your luck at blackjack, Texas Hold'em, craps or roulette. No money will change hands but plenty of prizes will be available if the cards are right!

#### **Lunchand Conference Awards**

Our business meeting will be held during the Awards Lunch on Friday, February 10th at 11:30am to 1:30pm in the Crystal B Ballroom. After lunch we will have some important topics to discuss, including a few words from our Regional ESRI Representative, Sheila Sullivan, winners from the Map Gallery & Applications Contest!



# Keynote Speaker

# Dr. Darrel L. McDonald

Dr. Darrel McDonald is the Assistant Director of Education and Training for the Columbia Regional Geospatial Service Center at Stephen F. Austin State University



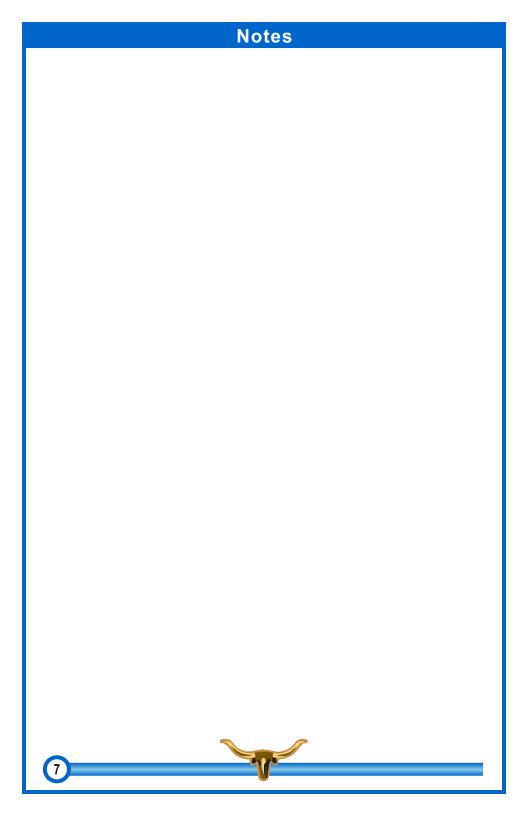
r. McDonald received his Ph.D. in Geography from Texas A&M University. His principal functions with the Columbia Center involve developing internship opportunities for students in geospatial sciences and training modules for local first responders. He also is a Professor in the Arthur Temple College of Forestry and Agriculture. Prior to joining the Columbia Center management team, he served as coordinator of Geography and HUES GIS Laboratory. In that capacity, the HUES GIS Labbegan a cooperative GIS infrastructure project with the City of Nacogdoches. Although he is mainly involved with geospatial education, he has long standing interests in cultural biography topics and in historical landscape visualization and interpretation focused on Galveston plantscapes and South Texas sacred landscapes. He has been involved with the remote sensing community serving as the Mid-South Region's president 203-2004. In addition, he has served as a member of the Association of American Geographers GIS standards committee. Further, McDonald is actively involved in outreach to public schools relying on his Professor World character to encourage young minds to embrace learning and geospatial sciences. Among his latest publications include working with the Museum of East Texas, Lufkin, Texas on a children's exhibit entitled. "Where Are We and How Do We Know?"

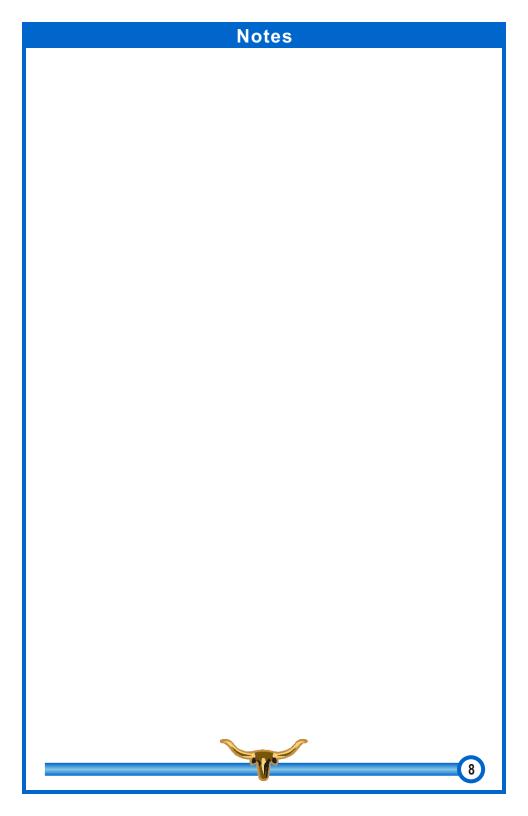
# **Address Topic**

THE COLUMBIA REGIONAL GEOSPATIAL SERVICE CENTER SYSTEM:
A model for rural geospatial support for the nation

The Columbia Regional Geospatial Service Center System (Texas) represents a unique approach to regional geospatial support for emergency response and planning, economic development and resource management. The system had its origins with the Forest Resources Institute (FRI), funded initially through a startup grant from the T.L.L. Temple Foundation in 1997. The idea was to "level the playing field" for traditionally under served rural communities, primarily for economic development and resource management. FRI's geospatial support system evolved to include regional emergency planning and response. From the outset, we took a bottom-up approach to serving our constituency, especially in time of emergency. This concept was tested during the Shuttle Columbia disaster and Hurricane Rita. Staff members were able to begin their mapping in only 22 minutes. Congress funded establishment and support of the prototype system in 2005 and 2006. The system now includes the University of Texas at El Paso and the Texas Natural Resources Information System, and Texas Tech University . Structure and functionality of the system will be presented.







# **User Presentation Guide**

# Wednesday, February 8th

# Texas B, C, & D

| Session I<br>1:30pm - 2:30pm   | Session II<br>2:30pm - 3:30pm  | Session III<br>3:30pm - 4:30pm  |
|--|--|---|
| <b>Tred Riggs</b> Developing Geo-Spatial Internet Map Applications                             | William Holland<br>Enterprise GeoSpatial Data Intregration             | Dan Allee, Andrew Kissel, Jody<br>Lampin, and Jan Funderburgh<br>Multi Agency GIS: Pulling All Entities<br>Together |
| Nirav Shah Still thinking about Migrating to ArcSDE? Do's and Don'ts about Migrating to ArcSDE | <b>Teri Landrum</b> Automating Zoning and Land Use Management With GIS |   |

# Thursday, February 9th

# Texas C & D

| Session I<br>8:30am - 9:30am   | Session II<br>10:00am - 11:00am   | Session III<br>11:00am - 12:00pm  |
|--|---|---|
| Ty Summerville Texas Historic Overlay: 300 Years of Spatially Enabled Historic Maps    | <b>Talbot Brooks</b><br>Hurricane Katrina   | Michael J. Kazda Design, Administration, and Analysis of a Municipal Needs Assessment |
| Erdenechimeg Eldev-Ochir<br>Migration and Economic Changes in<br>Mississippi 1995-2000 | Jenni Hoang<br>Zoo Horticulture Management<br>Application Using Web Services and<br>ArcGIS Server | James Mallory Oklahoma County Assessor's Public Access/GIS Website                    |

# Texas D

| Session IV                            | Session V   | Session VI   |
|---------------------------------------|---|--|
| 1:30pm - 2:30pm                       | 3:00pm - 4:00pm   | 4:00pm - 5:00pm  |
| Beni Patel<br>GIS Comes to the Rescue | <b>Laura Carr</b><br>Creating a Doorway to Data: Web Portal<br>Technology and GIS | Fernando De Vivo<br>Streamlining Environmental<br>Assessments with GIS |

# Texas B

# **PANEL DISCUSSIONS**

| Session I        | Session II         | Session III     | Session IV      |
|------------------|--------------------|-----------------|-----------------|
| 8:30am - 10:00am | 10:00am - 12:00pm  | 1:30pm - 3:00pm | 3:00pm - 5:00pm |
| ArcIMS           | Emergency Response | Managing GIS    | GISP            |



# **ESRI Session Guide**

# Friday, February 10th

Texas A Texas B Texas C Texas D

| Friday, February 10                 | Friday, February 10                | Friday, February 10   | Friday, February 10     |
|-------------------------------------|------------------------------------|-----------------------|-------------------------|
| 8:30am - 11:30am                    | 8:30am - 11:30am                   | 8:30am - 11:30am      | 8:30am - 11:30am        |
| What's New in<br>ArcGIS 9.2 Desktop | Introducing ArcGIS<br>Image Server | Taking GIS to the Web | Tips & Tricks in ArcGIS |

#### Adam Pittman - ESRI Technical Team

What's New in ArcGIS 9.2 Desktop: ArcGIS 9.2 is a very exciting release! Topics covered will include new enhancements to the core product such as cartographic editing, table usability, animation, CAD data, and graphs & charts. Geodatabase enhancements will also be highlighted such as database replication, terrain, and historical archiving. ArcGIS 9.2 is the next major release of the ArcGIS product line and will be in beta at the time of the SCAUG conference.

## Joseph "Brig" Bowles - ESRI Technical Team

Introducing ArcGIS Image Server: Image server is a new server product to be offered by ESRI. The product provides a rich capability to serve imagery while applying image processing steps to the raw data on-the-fly. In addition, the product allows file based imagery to be directly served without having to load or process the data first. Preprocessed data (eq. Ortho-imagery) can also be quickly served.

## Reggie Romo - ESRI Technical Team

Tips & Tricks in ArcGIS: How much do you know about ArcGIS? Better stated, how much do you think you know? During this session we will share some of our favorite tips and tricks for ArcGIS Desktop. Think you know a trick that no one else does? Bring it along and share!

#### Dal Hunter - ESRI Technical Team

**Taking GIS to the Web:** The way in which GIS professionals interact with each other and their daily tasks has evolved amazingly fast. ESRI has some very exciting products and applications that can and will benefit you. Listed below are some of the products and applications that will be shown and discussed.

ArcGIS Explorer is a geospatial information viewer that offers a free, fast, fun, and easy-to-use way to view geographic information—in both 2D and 3D—while performing queries and analysis on the underlying data. ArcGIS Explorer integrates the rich world of GIS datasets and server-based geoprocessing applications. It does this by accessing the full GIS capabilities of ArcGIS Server including geoprocessing and 3D services. ArcGIS Explorer can also use data layers and services from ArcIMS and ArcWeb Services. It supports Open Geospatial Consortium WMS and Google KML data, making it open and interoperable.

The ArcWeb Viewer is a flash based ArcWeb Services client that not only looks fantastic but allows you geocode and route your own data.

*ArcIMS* 9.2 is a very exciting release. A number of enhancements have been made such as pinable and dockable GUI, "game-like" panning and zooming, new and fresh looking templates for quickly and easily creating sites, and the ability to customize your project in .NET or JAVA.

ArcGIS Server gives you the ability to access the building blocks of ArcGIS through a web browser. In a nut shell you have the ability to do very complex GIS analysis through a web browser. This is very exciting technology and we will spend time explaining this.



# Wednesday, February 8th

Session I 1:30pm - 2:30pm

# **Developing Geo-Spatial Internet Map Applications**

Tred Riggs, Stephen F. Austin University Nacodoches, TX

Wednesday 1:30 PM Texas C

**Bio:** I coordinate geo-spatial efforts between the city and county of Nacogdoches and Stephen F. Austin State University, manage and develop Oracle GIS Databases for local entities, manage ArcSDE and ArcIMS, assist student and graduate assistants in GIS projects and help them develop their GIS and GPS skills utilizing ESRI,ERDAS Imagine and Trimble software.

**Abstract:** This paper documents the process of developing a geo-spatial Internet map application using the US Army Corps of Engineers (USACE) CampView application as an example. The specific objective of this paper is to discuss and evaluate selected IMS software, determine what an Internet CampView application should look like, document how to customize an ArcIMS application and to generate and document a USACE IMS application called CampView. Also information on where to find help on the Internet to develop and IMS.

# Still thinking about Migrating to ArcSDE? Do's and Don'ts about Migrating to ArcSDE

Nirav Shah, El Technologies Parker, CO

Wednesday 1:30 PM Texas D

**Bio:** Nirav Shah is the president and founder of El Technologies, a limited liability company founded in 1992. Nirav has an M.S. in Engineering from the University of Illinois at Urbana Chanpaign. He has authored over 20 publications on GIS and project management.

**Abstract:** This presentation discusses in detail how to go about in migrating to ArcSDE Enterprise Geodatabases environment. Issues related to database design, data migration, application design and application migration are discussed.



# Wednesday, February 8th

Session II 2:30pm - 3:30pm

# Enterprise GeoSpatial Data Integration: Using SAS and ESRI Technology to Consolidate Business Systems in Support of Domestic Security and Performance Management, A Case Study

William Holland, GeoAnalytics Chicago, IL Wednesday 2:30 PM Texas C

**Bio:** GeoAnalytics CEO William S. Holland is regarded nationally as an industry expert on information and technology policy, systems architectures, and the business and administrative aspects of information system implementation. He was a founder and Past-President of the National States Geographic Information Council (NSGIC) and was recently a member of the National Research Council Committee on Licensing Geographic Data and Services. A frequent author, Mr. Holland is currently a member of the Editorial Advisory Board of *GeoWorld* magazine. Prior to co-founding GeoAnalytics, Mr. Holland was the first Executive Director of the State of Wisconsin Land Information Board. Prior to that Mr. Holland was an attorney in private practice. Mr. Holland holds BS and MS degrees with academic honors in Agricultural Economics and was a Hunter Graduate Fellow at the University of Illinois. He was conferred, cum laude, a Juris Doctor from the Northern Illinois University College of Law.

Abstract: Food and agriculture have been identified as critical infrastructure for the security of our nation; and they're potential targets for terrorism. The Florida Department of Agriculture and Consumer Services (FDACS) is responsible for readiness in the event of both man-made and natural security threats that could involve agricultural-related human pathogens, animal or plant diseases and/or pests, adulteration, tampering or poisoning of foods, and the unauthorized use of agrichemical and agricultural products. In order to support this mission, the Department needed the capability to rapidly gain access to and apply information that exists throughout the Department. Through SAS and ESRI technologies, the department is implementing an enterprise level Geospatial Data Integration (GDI) system. The GDI system has helped create a consolidated data model that reconciles differing.

# **Automating Zoning and Land Use Case Management With GIS**

Teri Landrum, City of Grapevine Grapevine, TX Wednesday 2:30 PM Texas D

**Bio:** Teri has 13 years experience in GIS. She can do everything from editing and map production to programming, administering and managing a GIS. Teri rocks!

**Abstract:** The City of Grapevine, TX, is a small but growing city located on the northern end of the Dallas/Fort Worth Metroplex. In 1999, John Jennery, the City IT Manager, with the backing of Assistant City Manager Bruno Rumbelow, successfully applied for an ESRI Local Government



Start-Up Grant. This case study will review how Grapevine was able to leverage the grant and create the foundation for what has blossomed into a comprehensive Enterprise GIS. Taking a closer look at one of the city's departments we will examine how the Planning Department utilized ArcObjects to automate the entire Zoning and Land Use Case Management process. The City of Grapevine is an outstanding example of how a GIS can flourish in a small city when it has dedicated, capable personnel and the backing of city administrators and department directors.

# Wednesday, February 8th

Session III 3:30pm - 4:30pm

# Multi Agency GIS: Pulling All Entities Together

Dan Allee, City of Tyler; Andrew Kissel, Jody Lampin; Smith County Appraisal District; Jan Funderburgh, Smith County 9-1-1 Tyler, TX

Wednesday 3:30 PM Texas D

**Bio:** Dan Allee is the GIS Coordinator for the City of Tyler, Texas. Dan has been involved in GIS since 1987 and working with ESRI since 1990.

Jan Funderburgh has been employed by Smith County 9-1-1 District since 1986. Her present position is GIS/MIS Operations Manager.

Andrew Kissel is a GIS Analyst for the Smith County Appraisal District. Andrew was first introduced to GIS in early 2001.

Jody Lampin is a GIS Analyst for Smith County Appraisal District, and has been in the GIS field since 1995.

**Abstract:** So you work for a governmental entity and you probably need to either access or share a lot of your information with the other GIS entities in your county. You probably work well with the other entities, sharing information back and forth on CD's or via emails. Why not take this to the next level and create a single GIS while maintaining the uniqueness of each entity? Come and hear how the City of Tyler, Smith County 911 Communications District, Smith County Appraisal, and Smith County was able to combine all their GIS efforts into a single county-wide super GIS. We will be discussing strategy, pros, pitfalls, and how to make it all come together to create a better information database for all entities while reducing or eliminating cost and redundancy.



# Thursday, February 9th

Session I 8:30am - 9:30am

# Texas Historic Overlay: 300 Years of Spatially Enabled Historic Maps

Ty Summerville, PBS&J Austin, TX Thursday 8:30 AM Texas C

Abstract: The Texas Historic Overlay project is managed by the Environmental Affairs Division of the Texas Department of Transportation (TxDOT) and executed by PBS&J, a private science and engineering firm. The project involves the research, acquisition, digitization and spatial registration of historic maps for the eastern half of Texas. 3,000 maps were used to complete the data set ranging in date from 1690 to 1990. The completed map images and vectorized extents are used in GIS software to investigate and predict the location of protected and potentially protected historic features that could impact highway development projects. Use of the data saves money and improves responsiveness by compiling data that would otherwise be researched and prepared per project or missed entirely. Key automation tools developed for the project include PAAG, a tool that calculates horizontal positional accuracy of registered maps and the Metadata Miner, an application that automates the generation of metadata.

# Migration and Economic Changes in Mississippi 1995-2000

Erdenechimeg Eldev-Ochir, Mississippi State University Doctoral Student Starkville, MS
Thursday 8:30 AM Texas D

**Bio:** Erdenechimeg is a Mississippi State University Student Currently pursuing her doctoral degree in Applied Economics. Her interest are in Regional and Demographic Economics. She enjoys using ArcGIS towards her economics study.

**Abstract:** The purpose of this project is to investigate the relationship between migration and economic changes for the state of Mississippi and for non-metropolitan areas in Mississippi from 1995 to 2000. In order to investigate the relationship, a 4 simultaneous equations model and GIS raster modeling will be employed in which the dependant variables are in-migration, outmigration, wage and salary employment growth, and wage and salary disbursement growth.

The models are concerned with the determinants of migration and consequences of migration. The explanatory variables for models of demographic changes are composed of economic growth, socioeconomic, demographic, and cost characteristics. The explanatory variables for models of economic changes are composed of migratory factors, socioeconomic, demographic, and cost characteristics.

The 4 simultaneous equations model was estimated using the 3 Stage Least Square techniques. The results for the equations and GIS raster model suggest that migration is affected by economic change and effects economic changes.



# Thursday, February 9th

Session II 10:00am - 11:00am

# Hurricane Katrina

Talbot Brooks, Delta State University Cleveland, MS Thursday 10:00 AM Texas C

**Bio:** Talbot Brooks is the director of the Center for Interdisciplinary Geospatial Information Technology at Delta State University located in Cleveland, MS.

**Abstract:** The Hurricane Katrina event in Mississippi was the first large-scale natural disasters in the region for which Geospatial Information Technologies (GIT) played a significant role. The Mississippi GIT response was unique because it a) was not an original part of any hazard mitigation plan; b) was implemented using nearly 100% volunteer resources and services; and c) it was present at nearly all operational levels. These accomplishments were only possible through integration of GIT activities within the operational matrices for MEMA, FEMA, and MCDEMA. Activities, management strategies, and key lessons learned will be presented and discussed.

# Zoo Horticulture Management Application using Web Services and ArcGIS Server

Jenni Hoang, City of Oklahoma City Oklahoma City, OK Thursday 10:00 AM Texas D

Bio: Jenni Hoang is a GIS analyst for the City of Oklahoma City.

**Abstract:** Previously the Oklahoma City Zoo maintained information about their horticulture assets in a dated DOS based DBASE 3 database. This database did not meet their needs plant management needs and provided no GIS reference to the location of the plant on the Zoo property.

The City's GIS team developed an ArcGIS Server based horticulture management application for the Oklahoma City Zoo. This application allows the Zoo to maintain horticulture asset data in the City's enterprise GIS system through a web base client interface. The user interface was developed using ASP.Net and requires no client installation. With the new application and spatial information the Zoo is able to more effectively manage their horticulture assets.



# Thursday, February 9th

Session III 11:00am - 12:00pm

# Design, Administration, and Analysis of a Municipal Needs Assessment: Innovative Use of GIS to Assure rReliability

Michael J. Kazda, City of Ft Worth Health Department Fort Worth, TX Thursday 11:00 AM Texas C

**Bio:** Michael Kazda has worked as an epidemiologist since 1998. He currently works with the Fort Worth Public Health Department as an epidemiologist and GIS analyst.

Abstract: To ensure acquisition of a highly reliable and randomly distributed sample of a diverse urban population and allow for small geographic area analysis of disease prevalence data, the City of Fort Worth Public Health Department utilized a geographic information system (GIS) in orchestrating recent community needs assessment efforts. Sampling frames were defined using demographic and housing data layers in a GIS. Sample size determinations were calculated to assure representative samples for different geographic strata of the resident population. Collection of location data at the time of the 3,361 face-to-face assessment interviews allowed for the association of reliable geographic data with measures of health conditions and behaviors. Incorporating a spatial component in analyses of mortality and needs assessment data allows efficient integration of geographically concordant demographic and socio-economic data available from the most recent census. Accomplishing this through the GIS platform increases the relevance of data to specific populations by allowing stratification by geographic areas at the neighborhood level as well as other strata defined by socio-cultural conventions. Additionally, it enables the production of compelling visual representations of data easily understood by policy makers and citizens. Further, an important strength of this approach is the flexibility afforded by the capability to stratify these data to adjust for changing geographic boundaries. Spatial analysis of morbidity and mortality combined with the rich data available regarding the underlying population permits the targeting of culturally and linguistically relevant interventions to populations most affected and results in the efficient delivery of essential services.

# Oklahoma County Assessor's Public Access / GIS Website

James Mallory and Michael Morrison, Oklahoma County Assessor Oklahoma City, OK Thursday 11:00 PM Texas D

**Bio:** James Mallory, GIS Director and Mike Morrison, Webmaster / Assistant Comptroller are employed with the Oklahoma County Assessor's Office. James is a member of IAAO (International Association of Assessing Officers) over 20 years and URISA (Urban and Regional Information Systems Association). Their Office received a 2005 ESRI Special Achievement in GIS Award.

**Abstract**: The Oklahoma County Assessor's Office had a goal to integrate our public access system and our CAMA system (Computer Assisted Mass Appraisal), with our GIS data inside our



ArcIMS site. To provide user-friendly applications allowing our users to access and output GIS layers, orthophotos, assessment data, ownership information, building attributes, property descriptions, sales data and more. The use of GIS maps, aerials and assessment data is crucial for the use of local Governments and the community in regards to emergency management, planning, economic development, real estate trends, ownership information and more. By integrating our CAMA data with our GIS data and creating a public access system and ArcIMS site that communicates securely and in real time with "live" data, our users can now access this information anytime anywhere on the internet. Oklahoma County uses ArcSDE / SQL Server to manage our spatial data. GIS technicians use ArcInfo 9.0, the general staff accesses our data through our CAMA system and ArcIMS site. We use Geocortex's IMF application to output our GIS lavers. We also use FME conversion software to covert CAD files to ESRI formats.

Thursday, February 9th

Session IV 1:30pm - 2:30pm

**GIS Comes to the Rescue** 

Beni Patel, Tessellations The Woodlands, TX Thursday 1:30 PM Texas D

**Bio:** Beni Patel has been working with ESRI software since 1988. She has been an ESRI Authorized Training Partner since 1996 and has taught several hundred students in various GIS classes. Beni taught at the University of Houston's Geosciences Departments for 8 years, as well as teaching in many industry courses. She has extensive experience in developing custom courses for clients. She also provides consulting services in GIS and remote sensing, litigation support, and expert witness. She has designed and implemented several GIS systems for local governments and the private industry. Has experience in both application development for ArcGIS desktop and ArcIMS. Her expertise lies in developing models using Spatial Analyst.

**Abstract:** GISCorps provided volunteers to the Mississippi Emergency Management Agency to help with the GIS for Katrina response activities. This is a personal account of how the GIS volunteers helped MEMA and other governmental agencies.

Thursday, February 9th

Session V 3:00pm - 4:00pm

Creating a Doorway to Data: Web Portal Technology and GIS

Laura Carr, CDM Fort Worth, TX Thursday 3:00 PM Texas D

**Bio:** Laura Carr is the GIS Project Manager for CDM's Ft. Worth office. She has been with CDM since September of 2005. She has ten years experience with GIS working in both the private and



public sectors. Her projects have ranged from digitizing, data conversion, application development, and project management.

While Laura loves GIS her additional hobbies include rock climbing, working out at the gym and partying hard with all of her buddies.

**Abstract:** When launching a new GIS system for your client presenting data in a format that guarantees non-technical users will access the system is key. A web portal provides these users a menu driven work environment and a personalized interface that allows easy access to stored reports, graphs, and maps. It also provides a starting point for entry into the GIS system. This concept can resolve issues that non-technical users typically experience such as the complexity to learn and understand GIS data retrieval methods.

CDM is utilizing web portal technology for a revitalization effort in Ft. Worth, Texas. The goal of the portal is to provide stakeholders, generally classified as non-technical users, entrance to the project data management system. Since the portal retrieves data from a centralized database, this improves project collaboration and communication by ensuring that everyone is looking at the same information.

# Thursday, February 9th

Session VI 4:00pm - 5:00pm

# Streamlining Environmental Assessments with GIS

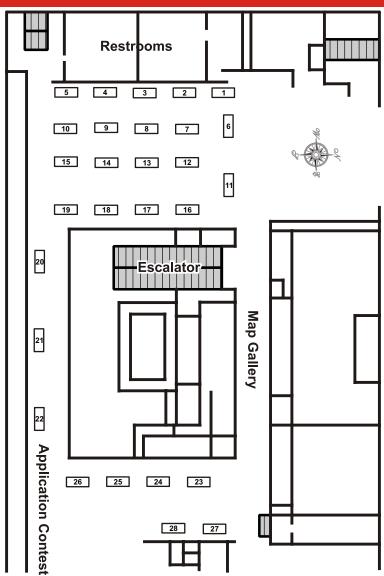
Fernando De Vivo, CDM Fort Worth, TX Thursday 4:00 PM Texas D

**Bio:** Fernando is a GIS Analyst in CDM's Fort Worth Office. He has over 3 years of experience working in a wide range of projects for public and private sector clients.

**Abstract:** Environmental site assessments are conducted to gather valuable information regarding the potential presence of contaminants at a particular location. GIS facilitates this process by providing the tools to automate and structure data collection, resulting in a reduced time spent performing manual input, increased data quality, and improved reporting capabilities.



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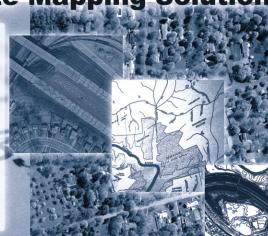
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