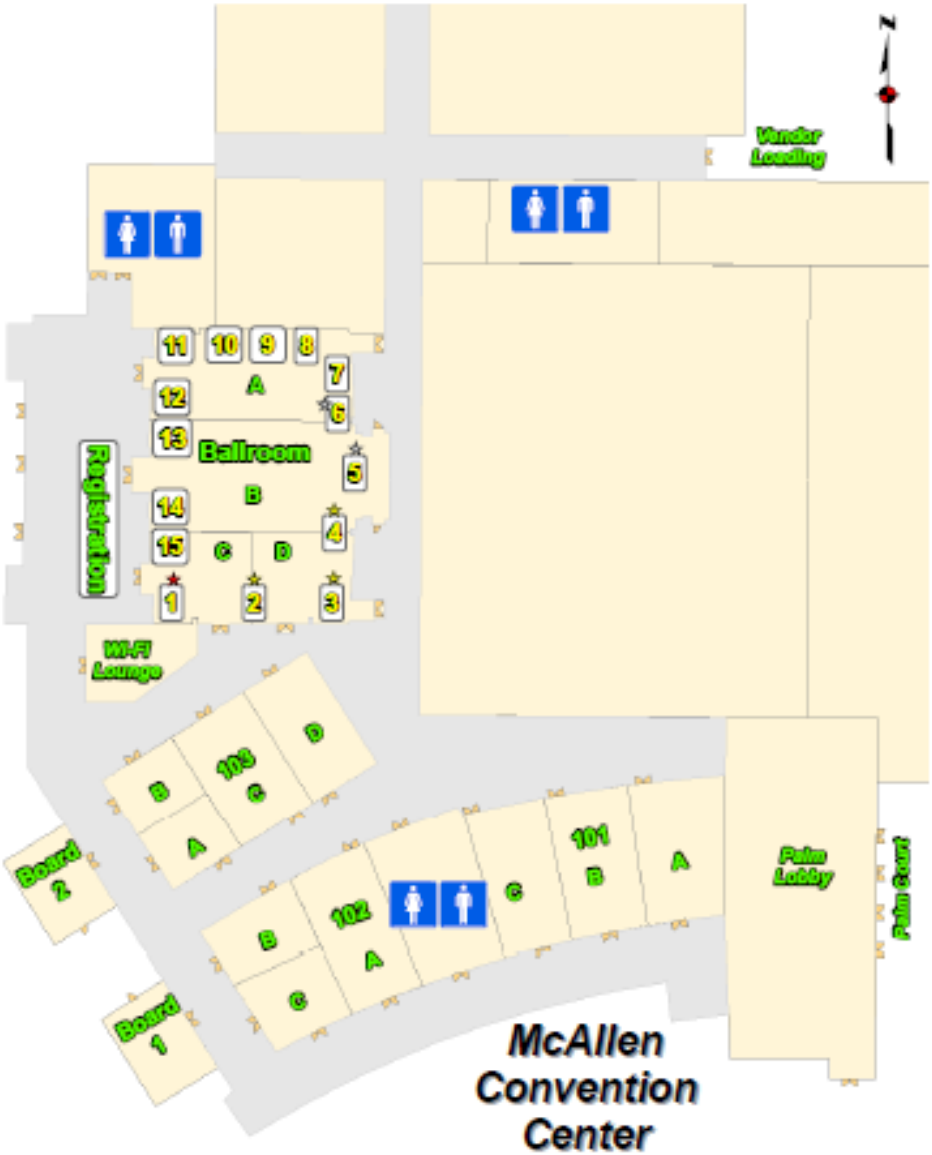
The City of Palms Welcomes

# 22nd Annual
# South Central Arc User Group Conference

**McAllen, Texas**
**March 26th – 30th, 2012**

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*Please take a moment to thank the vendors for their interest & contributions to SCAUG over the years.*

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# LETTER FROM PRESIDENT

Welcome to the 22nd Annual South Central Arc User Group Conference. We would like to welcome you to the City of Palms better known as McAllen, Texas. The Rio Grande Valley has always been known for its growth and productivity. The GIS profession in this region is obviously following in the same solid footsteps. This area is seeing unprecedented growth in spite of the economic climate that has impacted so many. GIS is proving to be the perfect tool to manage this rapid growth. Whether this is your 1st conference or your 22nd we hope that you find our event to be a wonderful resource both professionally and personally to help you perform your job easier, faster, and more efficiently.

Take the next few days to visit with old friends and make new ones. My challenge for you during this conference is to discover solutions to your real world problems, find that professional zeal that made you choose this as your livelihood, and build a solid network for you to take home. Those are the most valuable resources you can take from this conference. Use this time wisely to establish those contacts that you find no where else. Each of us want to leave a conference with a stack of names to use as personal resources but don't forget to return the favor to others. Remember how nice it feels to find the solution to a problem you are having at work? It feels even better to be that resource to someone else. Every person at this conference brings a unique perspective to the profession that we all can learn from. That professional depth and diversity is what makes SCAUG such a valuable tool to each of its members.

Take a moment at some point during this conference to thank the vendors, the McAllen Convention & Visitors Bureau, the local Rio Grande Valley Arc User Group, the Lower Rio Grande Valley Development Council 9-1-1 Department, and the Regional SCAUG Officers for dedicating many tireless hours and personal resources to make this conference a success. Without that personal commitment, this conference and SCAUG as a whole would not exist.

Have a safe trip home and look for more SCAUG events in your area. If you have a suggestion concerning training or other ideas contact a Regional SCAUG Officer in your area. That is how this whole thing got started 22 years ago, with a need and desire to bring the GIS community together as a unified group. For details on that interesting story check our website in the upcoming year.

**Sincerely,**
Charles Brady III, GISP
**Regional SCAUG President**

## NEW SCAUG LOGOS

This year SCAUG is unveiling new logos to emphasize a cohesive design for the overall organization as well as the diverse strength of the individual chapters. This new look hopefully will be one that you come to associate with the professional resource you use on a daily basis.

# OFFICERS

**President: Charles E. Brady III, GISP**
City of Ardmore

**Vice President: Shellie Willoughby, GISP**
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**Treasurer: James Allen**
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Montgomery County Emergency Communication District

**Mississippi Representative: Lauralee Gann**
Mendrop-Wages, LLC

**ESRI Representative: Karen Lizcano**
ESRI - San Antonio

# GENERAL AGENDA

| | Monday, March 26th | |
|---|---|---|
| **TIME** | **EVENT** | **PLACE** |
| 7:00am to 8:00am | Breakfast | Marriott Courtyard |
| 8:00am to 8:30am | Shuttle To | Convention Center |
| 8:00am to 9:00am | Registration | Convention Center |
| 9:00am to 5:00pm | Introduction to ArcGIS Server | Boardroom 1 |
| 9:00am to 5:00pm | ArcGIS Desktop III: GIS Workflows & Analysis | 103C |
| 9:00am to 5:00pm | Managing Imagery Using ArcGIS | 103D |
| 9:00am to 5:00pm | GPS Data Acquisition & Processing | 103AB |
| 12:00pm to 1:00pm | Lunch On Your Own | |
| 5:00pm to 6:00pm | Shuttle To | Marriott Courtyard |
| | | |
| | **Tuesday, March 27th** | |
| **TIME** | **EVENT** | **PLACE** |
| 7:00am to 8:00am | Breakfast | Marriott Courtyard |
| 8:00am to 8:30am | Shuttle To | Convention Center |
| 8:00am to 9:00am | Registration | Convention Center |
| 9:00am to 5:00pm | Introduction to ArcGIS Server | Boardroom 1 |
| 9:00am to 5:00pm | ArcGIS Desktop III: GIS Workflows & Analysis | 103C |
| 9:00am to 5:00pm | Managing Imagery Using ArcGIS | 103D |
| 9:00am to 5:00pm | Python for Geoprocessing in ArcGIS | 103AB |
| 12:00pm to 1:00pm | Lunch On Your Own | |
| 5:00pm to 6:00pm | Shuttle To | Marriott Courtyard |
| 6:00pm to 8:00pm | Registration Meet & Greet | Marriott Courtyard |
| | | |
| | **Wednesday, March 28th** | |
| **TIME** | **EVENT** | **PLACE** |
| 7:00am to 8:00am | Breakfast | Marriott Courtyard |
| 7:30am to 8:30am | Shuttle To | Convention Center |
| 8:00am to 5:00pm | Registration | Convention Center |
| 8:00am to 5:00pm | Internet Café/Computer Lab | 103AB |
| 9:00am to 10:15am | SCAUG Business | Ballroom |
| 10:15am to 10:30am | Morning Break | Convention Center |
| 10:30am to 11:30am | ESRI Plenary | Ballroom |
| 11:30am to 1:30pm | BBQ Lunch Gathering | Oval Park Fountain |
| 1:30pm to 5:00pm | ESRI Technical Sessions | Convention Center |
| 4:00pm to 6:00pm | Vendor Set-Up | Ballroom |
| 5:00pm to 5:30pm | Shuttle To | Marriott Courtyard |
| 5:30pm ~ | On Your Own | 17th Street/McAllen |

# GENERAL AGENDA

| | Thursday, March 29th | |
|---|---|---|
| **TIME** | **EVENT** | **PLACE** |
| 7:00am to 8:00am | Breakfast | Marriott Courtyard |
| 7:30am to 8:30am | Shuttle To | Convention Center |
| 8:00am to 12:00pm | Registration | Convention Center |
| 8:00am to 4:oopm | Vendor Hall | Ballroom |
| 8:00am to 3:00pm | Map Gallery | Ballroom |
| 8:00am to 5:00pm | Internet Café/Computer Lab | 103AB |
| 8:00am to 9:15am | Vendor Visit | Ballroom |
| 9:15am to 10:15am | Session Track I | Convention Center |
| 10:30pm to 11:30pm | Session Track II | Convention Center |
| 11:30pm to 1:30pm | Vendor Networking Lunch | Ballroom |
| 1:30pm to 2:30pm | Session Track III | Convention Center |
| 2:30pm to 4:00pm | Vendor Visit/Break | Ballroom |
| 3:30pm to 4:00pm | Vendor Ticket Prizes & Map Gallery Awards | Ballroom |
| 4:00pm to 4:30pm | Shuttle to | Marriott Courtyard |
| 5:00pm to 6:00pm | Border Social | Marriott Courtyard |
| 6:00pm ~ | On Your Own | 17th Street/McAllen |
| | | |
| | **Friday, March 30th** | |
| **TIME** | **EVENT** | **PLACE** |
| 7:00am to 8:00am | Breakfast | Marriott Courtyard |
| 7:30am to 8:30am | Shuttle To | Convention Center |
| 9:00am to 12:00pm | Rio Grande Valley Arc User Group Meeting | Boardroom 1 |
| 9:00am to 12:00pm | Internet Café/Computer Lab | 103AB |
| 9:00am to 12:00pm | Map Gallery | 103c |
| 9:00am to 10:00am | Alamo Area GIS User Group Meeting | 103D |
| 12:00pm to 12:30pm | Shuttle To | Marriott Courtyard |

## SAVE THE DATE

**ESRI International User Conference**
July 23rd – 27th, 2012
San Diego, California

**15th Annual**
**Oklahoma South Central Arc User Group Conference**
September 24th, 2012
Oklahoma City, Oklahoma

**23rd Annual**
**South Central Arc User Group Conference**
April 7th – 12th, 2013
Addison, Texas

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## A HUGE THANK YOU TO:

**Lower Rio Grande Valley Development Council**
**9-1-1 Department**
Sergio Castro & Staff

**McAllen Convention & Visitors Bureau**
Trisha D. Watts

**For their incredibly hard work, dedication, and support throughout the planning and marketing of the conference**

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**Special thanks to the following agencies for allowing their employees to volunteer to serve on the SCAUG Board:**

Carter County, Oklahoma
Chesapeake Midstream
City of Ardmore
City of Fort Worth
CPS Energy
ESRI
Oklahoma Conservation Commission
Mendrop-Wages, LLC
Montgomery County Emergency Communication District
Principal Meridian Consulting
Southwestern Energy Corp
Tarrant County

## EVENTS SUMMARY

**Breakfast at the Marriott Courtyard**
Monday, March 26th - Friday, March 30th 7:00am – 8:00am

During your stay at the Marriott Courtyard take advantage of the complimentary hot breakfast and fresh brewed coffee every morning. Get a full breakfast and then take the shuttle over to the McAllen Convention Center.

**17th Street District**
Monday, March 26th - Thursday, March 29th Nights Out

Ready for a night on the town, or just want to grab some dinner? McAllen's 17th Street District has something for every taste with a variety of pubs, clubs, lounges, and restaurants. For a list of establishments visit www.exploremcallen.com and go to the Night Life/17th Street link. Free shuttles will be running nightly from the Marriott Courtyard.

**Meet & Greet at Marriot Courtyard**
Tuesday, March 27th 6:00pm - 8:00pm

Start your conference week off by attending the NTB & Associates sponsored Meet & Greet at the Marriot Courtyard. Catch up with old and meet the new over drinks and finger foods.

**Opening Business & ESRI Plenary in Ballroom**
Wednesday, March 28th 9:00am - 11:30am

The official kickoff of the conference includes annual SCAUG business items: conference materials and agenda, Founders and Thumbs Up Awards, announcement of 2012-2013 SCAUG Officers and 2013 conference details. Following these business items ESRI staff will host the plenary with a presentation highlighting new and upcoming technologies from ESRI.

**Internet Café/Computer Lab Room in 103AB**
Wednesday, March 28th - Friday, March 30th 8:00am – 5:00pm

Need to check your email or dial into work, and don't have a computer? Swing by the Internet Café/Computer Lab to answer emails or check in with the boss. Several computers with hard-line internet will be available in a comfortable workspace.

**BBQ Lunch Gathering in Oval Park**
Wednesday, March 28th 11:30am - 1:30pm

Join us for lunch outside at Oval Park in front of the McAllen Convention Center. . After lunch, come hear what ESRI has been working on by attending Technical Sessions.

***Longhorn BBQ Buffet***
*Mixed Texas Greens with Tear Drop Tomatoes & Cucumbers*
*Jicama and Carrot Cole Slaw with Apple Cider Vinaigrette*
*Grilled Chicken with Chipotle Barbeque Sauce*
*Sliced Barbequed Brisket with Fried Jalapeno Onions*
*Buttered Corn on the Cob*
*Whipped Golden Yukon Mashed Potatoes*
*Hearth Baked Dinner Rolls & Creamy Whipped Butter*
*Hot Peach Cobbler*
*Iced Tea & Lemonade*

**Vendor Hall in Ballroom**
Thursday, March 29th 8:00am - 4:00pm

The conference schedule has special Vendor Visit Times throughout the day to accommodate more one-on-one time to see the innovative technologies and solutions our vendors have to offer. Inside your conference name badge you should find two tickets that can placed in any of the Vendor Ticket Prize Drawings. Be sure to hit up vendors for extra tickets to submit, which gives you a better chance of being a drawn winner. Winners can only win one prize! Remember to place your name and phone number on ticket to claim your prize. Prizes and submittal boxes will be showcased at Registration.

**Map Gallery in Ballroom**
Thursday, March 29th 8:00am - 3:00pm

Your colleagues have taken research and analysis and put it on the map! The Map Gallery provides a visual sense of the power of geospatial technology. Between sessions walk through the Map Gallery to see many of our colleagues' projects. Don't forget to cast your ballot for the Map Gallery no later than 3:00pm.

**Vendor Networking Lunch in Ballroom**
Thursday, March 29th 11:30am - 1:30pm

Meet in the Vendor Hall for lunch, networking and casual conversation.

***Italian Buffet***
*Tossed Garden Salad*
*Chicken Parmesan*
*Beef Lasagna*
*Angel Hair Pasta & Vegetable Medley*
*Garlic Bread Sticks & French Crostini Bread*
*Iced Tea & Brewed Coffee*

**Vendor Ticket Prizes & Map Gallery Awards in Ballroom**
Thursday, March 29th 3:30pm - 4:00pm

Be sure to stay and congratulate the winners of the Vendor Ticket Prizes and Map Gallery. You might be one of the lucky winners yourself!

**Border Social at Marriott Courtyard**
Thursday, March 29th 5:00pm - 6:00pm

Unwind after a day of conferencing by partaking in the 49-year-old tradition of Border Buttermilk. The drink is a "south-of-the-border" mixture, not actually buttermilk at all, but a frozen pink lemonade and tequila drink, which has become a city trademark. McAllen Greeters will be pouring these complimentary concoctions for one hour, and then you can go enjoy the town.

**Rio Grande Valley Arc User Group Meeting in Boardroom 1**
Friday, March 30th 9:00am – 12:00pm

The Rio Grande Valley Arc User Group (RGVAUG) is committed to advancing the Geographic Information System (GIS) profession through varied activities such as exchanging knowledge, promoting academic studies of GIS, as well as providing training and services to it's members and the general public. Our membership spans from Webb County down through Cameron County.

**Alamo GIS User Group in 103D**
Friday, March 30th 9:00am – 12:00pm

If you think you might be interested in participating in the San Antonio area, come see the year in review for the Alamo GIS User Group. We will discuss San Antonio GIS Day and Quarterly Meetings from 2011, as well as take input for our future meetings.

# VENDOR SPONSORSHIPS

## PLATINUM

## GOLD

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## ESRI LIGHTENING TALKS

**Thursday, March 29th**

**ESRI Booth in Vendor Hall**

We'll be delivering the following short presentations; join us and learn how Esri can help you and your organization accomplish your goals.

| | |
|---|---|
| 8:30am | ArcGIS Online |
| 9:00am | Community Analyst |
| 9:30am | Quick Tips & Tricks |
| 10:00am | Land Records |
| 10:30am | ArcGIS Mobile |
| 11:00am | Tablets & Smart Phones |
| 11:30am | ArcLogisitcs |
| 12:00pm | Community Maps |
| 1:00pm | Lidar in ArcGIS |
| 1:30pm | ArcGIS Online |
| 2:00pm | Community Analyst |
| 2:30pm | ArcGIS Server in the Cloud |
| 3:00pm | Land Records |
| 3:30pm | Tablets & Smart Phones |

## ESRI TECHNICAL SESSION SCHEDULE

Wednesday, March 28th

### Session Track I – 1:30pm to 2:30pm

**ArcGIS Online**
Karen Lizcano, ESRI — Boardroom 1

**ArcGIS for Government**
Gary Scoffield, ESRI — 103 C

**Desktop Tips & Tricks**
Pam Kersh, ESRI — 103D

### Session Track II – 2:45pm to 3:45pm

**ArcGIS Online**
Karen Lizcano, ESRI — Boardroom 1

**Update on Community Maps**
Gary Scoffield & Brig Bowles, ESRI — 103C

**Public Works Solutions**
Pam Kersh, ESRI — 103D

### Session Track III – 4:00pm to 5:00pm

**Creating a Simple Web Application**
Karen Lizcano, ESRI — Boardroom 1

**What's New in 10.1**
Brig Bowles, ESRI — 103C

**Local Governmental Data Model**
Pam Kersh, ESRI — 103D

## USER PRESENTATION SCHEDULE

Thursday, March 29th

### Session Track I – 9:15am to 10:15am

**Integrated Stormwater Management Model for the City of Sugarland, Texas**
Abigail L Bush, GISP, CFM — Boardroom 1

**Stormwater GIS: Multi-Phased Integration from Scratch**
Andrew Clem — Boardroom 1

**So You Think You Know How Topology Works?**
Kurt Menking & Agustine Solis — 103 C

**How Not to Migrate from Topology to Fabric**
Kurt Menking & Agustine Solis — 103 C

**Geospatial Market Trends**
Ashok Wadwani — 103D

**U.S. Geological Survey Historical Topographic Map Collection: Preserving the Past**
Darryl S. Williams — 103D

### Session Track II – 10:30am to 11:30am

**The National Map: Data Delivery Services**
Claire DeVaughan — Boardroom 1

**Making Data Useful**
Donna Coggeshall — 103C

**Development of the Willacy County Mapbook a Manual Approach**
Orlando Nino — 103C

**Mastering Expressions in ArcGIS**
Jenny Harrison — 103D

### Session Track III – 1:30pm to 2:30pm

**How to Display Data, Data, and More Data**
Santa Rivas — Boardroom 1

**Aligning Geospatial Industry Workforce Needs with Academic Programs**
Dr. Phillip Davis — Boardroom 1

**Using GIS and GPS to Map Caves**
Kurt Menking — 103C

**Development of an Agency-wide GPS Technology Management Plan**
Jeff Barnett — 103C

**So You Think You Can't Afford a GIS?**
L. David Flores, Jr., CPM — 103D

## ESRI TECHNICAL SESSION ABSTRACTS

Wednesday, March 28th

### Session Track I – 1:30pm to 2:30pm

**ArcGIS Online**
Karen Lizcano, ESRI — Boardroom 1

Learn how to use ArcGIS online to better manage and leverage your Organizational Information. During this session we will look at managing Users and Groups. We will also add content to ArcGIS Online including services, shapefiles, spreadsheets and layer packages. We will then look at different ways to disseminate that information via web maps, social media and online collaboration.

**ArcGIS for Government**
Gary Scoffield, ESRI — 103 C

ArcGIS for Government has many aspects. During this session we will look at how government agencies use ArcGIS to better serve their internal users and constituents. Some of the solutions we will take a look at include the ArcGIS online, maps and apps, and the local government information model and field mobility.

**Desktop Tips & Tricks**
Pam Kersh, ESRI — 103D

Several options are available for interacting with the ArcGIS Desktop application. These options include ways to manage the interface, enhance the mapping and editing experience, work with geoprocessing environments, and customize the user interface. This session will provide useful tips and tricks and time-saving techniques for working with the ArcMap application, and provide familiarity with some lesser known tools for enhancing the user experience.

### Session Track II – 2:45pm to 3:45pm

**ArcGIS Online**
Karen Lizcano, ESRI — Boardroom 1

Learn how to use ArcGIS online to better manage and leverage your Organizational Information. During this session we will look at managing Users and Groups. We will also add content to ArcGIS Online including services, shapefiles, spreadsheets and layer packages. We will then look at different ways to disseminate that information via web maps, social media and online collaboration.

**Update on Community Maps**
Gary Scoffield & Brig Bowles, ESRI — 103C

Esri's Community Maps program is in its third year and a lot will change in 2012. The Community Maps are a suite of global maps in image-cache form hosted in the cloud by Esri. The Maps work at scales from global down to 1:1000 neighborhood detail. They can be used in desktop, web and mobile environments. They're called "Community" maps because they contain an increasing amount of authoritative data contributed by participating agencies, frequently the GIS arm of cities, states or national mapping agencies.

**Public Works Solutions**
Pam Kersh, ESRI 103D

Public Works agencies are responsible for the planning, maintenance, and operations of public streets and related assets, parks, government facilities, and vehicle fleets. ArcGIS can be configured to manage your public assets and help you: inventory and maintain your assets, provide information to field staff, interact with your citizenry, and evaluate your organizational performance and health of your infrastructure. This session will cover some of the templates, maps, and apps that help Public Works agencies accomplish their goals, and efficiently share data and analysis across their organizations.

## Session Track III – 4:00pm to 5:00pm

**Creating a Simple Web Application**
Karen Lizcano, ESRI Boardroom 1

Have you created your first web mapping application yet? During this session we will talk about a few best practices for adding data layers in your map, creating mapping services and map caching. We will then publish a service and create and consume a web mapping application.

**What's New in 10.1**
Brig Bowles, ESRI 103C

The primary theme for ArcGIS 10.1 is sharing and collaboration. Users will find that this release makes it simpler to put mapping and geospatial analytics into the hands of more people without requiring that they be GIS experts. We will explore some of these mapping and analytic capabilities. We will also talk about Server improvements, imagery enhancements and ArcGIS Runtime.

**Local Government Data Model**
Pam Kersh, ESRI 103D

Learn more about how you can use the local government data model to build your own local government geodatabase. We will talk about some of the migration challenges and templates that are available to use with the data model.

# USER PRESENTATION ABSTRACTS

Thursday, March 29th

## Session Track I – 9:15am to 10:15am

### Integrated Stormwater Management Model for the City of Sugarland, Texas

Abigail L Bush, GISP, CFM — Boardroom 1

The City of Sugarland's Integrated Stormwater Management Model (ISWMM) is a comprehensive geo-database of the City's entire drainage infrastructure and evaluation of its current operation. The geo-database was developed in ArcGIS, consisting of all applicable information for the City's drainage facilities and internal watersheds. In addition, the database will include a system wide analysis of all channels, detention ponds, and storm sewer systems on a consistent datum and set of standards. The results of these analyses will be georeferenced in the database in the form of flood mapping and organized links to the applicable hydrologic and hydraulic models.

The initial phase consisted of data collection, geo-referencing the data into GIS on a common vertical and horizontal datum, and development of the City's geodatabase. The second phase consists of performing detailed analysis for the hydrology and hydraulics of the channels and their watersheds, including analysis of storm sewer systems in areas of interest and known flooding problems. This analysis will provide the City with a system wide analysis indicating how key components operate under various flooding event scenarios.

This presentation will discuss the project goals, challenges, and potential uses for this geodatabase.

### Stormwater GIS: Multi-Phased Integration from Scratch

Andrew Clem — Boardroom 1

As public and private entities continually come under financial scrutiny, the need for asset management programs and effective capital improvement planning procedures are ever-increasing. Particularly in terms of stormwater, having an inventory of the infrastructure in place is a vital component to making assessment and planning decisions. Due to strict allocations and varying project scales, it is understood that projects might have to take on a phased approach. Whether building a stormwater GIS from scratch, or updating an existing network, a multi-phased integration approach can be used to create a robust stormwater GIS system.

The City of Dallas is modernizing Love Field Airport (DAL) though the Love Field Modernization Program. As a component of this program, a stormwater master plan is being created, part of which includes building and updating the stormwater GIS network at DAL. Built into this effort is building the GIS from scratch in some areas and also includes digitizing as-builts, above ground survey, and CCTV inspections. All of these efforts get integrated into the City-wide GIS. By taking a phased approach to integration, Data-Driven Pages, SDE, and geodatabases were used to provide a steady stream of updates.

Whether a project is simple or complex, this presentation will show of how a multi-phased approach can be taken to integrate stormwater infrastructure into an existing GIS system or by starting from scratch. An overview of lessons learned and an outlook on potential complications will also be discussed.

Keywords: GIS, integration, stormwater, survey, CCTV, asset management

**So You Think You Know How Topology Works?**
Kurt Menking & Agustine Solis 103 C

Many of those who maintain parcel data sets have been using the ESRI parcel topology tools since the early 1990's. But I'll bet there are some things you'd be surprised to know. We will demonstrate and discuss some of the tricks for success and even disclose some of the lesser known flaws or problems with editing in topology datasets.

**How Not to Migrate from Topology to Fabric**
Kurt Menking & Agustine Solis 103 C

BCAD recently migrated from parcel topology to the new parcel fabric database. We will give lots of hints, ideas, and recommendations for those considering the migration. We made plenty of mistakes, which we'll outline, and discuss how we should have done things differently. We'll also spend some time describing what the fabric is, how it works, and a user perspective of benefits, and drawbacks.

**Geospatial Market Trends**
Ashok Wadwani 103D

Since past few years, there has been various mergers and acquisitions in the GEOSPATIAL market place. This trend is continuing and will continue. Another major trend in our industry is cost cutting /cost sharing policies. Both of these trends directly impact the new product innovations and customer service. Unless the user community puts the pressure, we will all be hit with higher prices, lower service levels, less competition and less product innovations. The presentation will cover the trends in detail and provide suggestions for changing these trends.

**U.S. Geological Survey Historical Topographic Map Collection: Preserving the Past**
Darryl S. Williams 103D

For more than 125 years, the U.S. Geological Survey (USGS) topographic maps have accurately portrayed the complex geography of our Nation. The Historical Topographic Map Collection scanning will provide a comprehensive digital repository of USGS topographic maps, available to the public at no costs. As physical and cultural features change over time, maps are updated, revised and new editions printed. A series of maps covering the same geographic area published over a period of time can show how an area looked before development and provide a detailed view of changes over time.

The goal of the Historical Topographic Map Collection is to scan all scales and all editions of the more than 200,000 topographic maps published by the USGS since the inception of the topographic mapping program in 1884.These maps are either no longer available for distribution in print or are being replaced by the new generation of US Topo maps. The National Geospatial Program (NGP) is accurately cataloging and creating metadata to accompany the high-resolution, georeferenced digital files representing the legacy lithographic maps. Historical Topographic maps are available free on the web through the USGS Store and The National Map Viewer.

## Session Track II – 10:30am to 11:30am

**The National Map: Data Delivery Services**
Claire DeVaughan Boardroom 1

The National Map comprises a variety of products and services that provide the Nation with access to base geospatial information to describe the landscape of the United States. The National Map supports data download, digital and print versions of topographic maps, geospatial data services, and online viewing. This presentation will provide an overview of how The National Map web services and data download capabilities can be easily accesse

and used to support a variety of project needs. Emphasis will be on use of The National Map viewer, learning how to download and access The National Map data, and understanding the variety of new web map services that are available.

**Making Data Useful**
Donna Coggeshall 103C

Data analysis is a critical function of successful organizations. Data must be collected, assessed, stored, and managed. To provide value, it must be converted to useful information through combinations with other data and analytical processes to create meaning and worth.

Most data can be geographically referenced. The locational component of the data can, just by itself, add value. Virtually all data collected by governmental entities has a geographic reference. As a result, geographic information system (GIS) technology is important for analyzing and displaying data to add to its worth for businesses and governmental entities.

The North Central Texas Council of Governments' Research and Information Services Department has experience transforming data into useful information and using GIS technology to make that data available in informative and convenient formats. The latest offering is the Research and Information Services Network (RISN), a framework designed to meet a wide range of data needs.

Through RISN, data users have a variety of data access options including the dynamic RISN Viewer, which maximizes data exploration through interactive tools and reporting. Built on our established, award-winning, web mapping program, iCommunities, the RISN viewer provides data to customers in a format that is easily understood, accessible, informational, operationally useful and adds value through savings and cost avoidance, thereby making data useful.

**Development of the Willacy County Mapbook a Manual Approach**
Orlando Nino 103C

The Lower Rio Grande Valley Development Council, 9-1-1 Department, is the official addressing authority for Hidalgo and Willacy Counties. Both counties have approximately 800,000 residents. A major duty of the 9-1-1 Department is to provide legal 9-1-1 addresses to all structures including towers, lift satiations and other utilities. As the 9-1-1-agency for both counties it is vital to provide first responders tools to minimize respond times where help is needed. Willacy County is sparsely populated with many rural homes and a mapbook is invaluable for this type of scenario. With the addition of data driven pages in ArcDesktop 10 the creation of mapbookshas been simplified. This presentation will focus on the development of the Willacy County mapbook by a non-scripting method fromthe planning process all the way to the dissemination of the mapbook the end users.

**Mastering Expressions in ArcGIS**
Jenny Harrison 103D

There are different types of expressions used throughout ArcMap, including display expressions, query expressions, and calculator expressions. The display expression is used to differentiate between one feature and the next (formerly known as the Primary Display Field). Query expressions are used whenever a filter is applied based on the attributes of the features. Calculator expressions are used in the Field Calculator to modify tables. Each of these types of expressions can be used in a simple way with single fields or operations, or in a complex way using functions and variables. Learn where these expressions can be used, how to write basic expressions, and how to build complex expressions that harness the true power of these tools. This workshop will help you master expressions, no matter which version of ArcGIS you are using.

## Session Track III – 1:30pm to 2:30pm

**How to Display Data, Data, and More Data**
Santa Rivas Boardroom 1

Creating exhibits and displaying several layers of data can be very challenging and even those with experience can be overwhelmed with the amount of data to be displayed in one single exhibit. The key goal is to convert and transform the data into useful information in the form of an exhibit, which the end user can use to conduct a valid analysis and to make better decisions.

A good exhibit is detrimental to the daily function of the Wastewater Master Planning team (WWMP) since it is referenced on a daily basis by the group. Millions of dollars in proposed wastewater capital improvement projects (CIPs) are geographically depicted in the Wastewater Infrastructure Plan (WWIP) exhibit, as well as other related data. The WWIP exhibit makes coordination efforts between departments and other agencies a lot easier.

The beauty of using GIS is that once the mxd has been created and the data has been properly stored in a designated Geodatabase, it can be easily revised (edited), making it easier to manage while making revisions and updates as changes occur. That is why Geographic information system (GIS) software is useful in accomplishing this challenging task.

**Aligning Geospatial Industry Workforce Needs with Academic Programs**
Dr. Phillip Davis Boardroom 1

The Department of Labor's Geospatial Technology Competency Model (GTCM) is the de-facto standard for the industry. The GTCM outlines the requisite knowledge, skills, and abilities (KSA) required by workers in the industry, from technician level to manager and scientist. The GTCM covers all three sectors of our industry, and is critically important to hiring managers, supervisors, human resource managers, and line supervisors since they must select, hire, and manage geospatial workers. This presentation will provide how the GeoTech Center assisted in developing the GTCM, our work to improve upon its depth of detail and our GTCM Model Course Curriculum that can be used by industry and educators to develop training and education programs that align their graduates with the latest industry needs. Participants will receive free access to our GTCM model course server where they can download the curriculum for their own use or adaptation. We will examine our GTCM self-assessment tool and quiz that may become the basis for the new GISP skills exam proposed for 2015. See how you can join our GeoTech Center mentoring program and earn valuable education points towards your own GISP certification or community service requirement.

**Using GIS and GPS to Map Caves**
Kurt Menking 103C

Kurt will first describe techniques used in cave surveying and mapping. Then he will discuss how GIS and GPS can play useful roles in the process. There will be photos of surveying techniques, and map demos as well as some use of 3D views to show caves relationships with the 3D surface terrain.

**Development of an Agency-wide GPS Technology Management Plan**
Jeff Barnett 103C

Over the past two decades, GPS technology has been increasingly used by many organizations without any uniform standards or management plan. It is commonly unknown within a company who is using GPS, what kinds of units are being used, and for what purposes. Therefore, the current state of GPS adoption needs to be assessed and

compared with current best practices as defined by internal users, other large agencies, and the overall GPS industry.

In 2011, a study was conducted to create a management plan to guide the Louisiana Department of Transportation and Development (LADOTD)'s use of GPS technology into the future based on those best practices. Survey methodologies and results from this study are applicable to GIS/GPS professionals in the petroleum industry because the challenges of GPS adoption like equipment standards, field use, operator training, device management, data management, documentation, and technology support are being faced here as well. This presentation will discuss that study focusing on the issues faced, methodologies, and recommendations of the resulting GPS technology management plan.

**So You Think You Can't Afford a GIS?**
L. David Flores, Jr., CPM 103D

Don't think you can afford a GIS? Let me show you that you can. The City of Pharr, TX has done a remarkable job in deploying their GIS throughout their organization with a lean budget all without huge consulting costs. During these challenging times the need to do more with the same or less capital outlay, organizations still have to maintain, track and plan ahead. Let me show you where we were, are now and where we are going using our GIS into the future with a GIS of One. We will look at how Pharr is using their GIS to service Economic Development, Utilities, Public Works, Engineering, Planning, E-911/Addressing and legal issues.

During the presentation will look into the collaboration efforts of our GIS Community, the Rio Grande Valley Arc Users Group (RGVAUG) and how our GIS Community helps in cost savings. We will also look at upcoming ESRI services and how they will play a role in our future.

# VENDOR BIOGRAPHIES

## PLATINUM

**Western Data Systems** is an Authorized Trimble Dealer and our only business is supplying spatial measurement and GPS related products. We do this in several ways.

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2. We offer fully integrated GPS based Hydrographic systems anywhere in the United States, complete with training and support.
3. We offer spatial measurement items including Lasers, Laser Scanners, GPS cameras, Bar Code scanners, Ground Penetrating Radar, Pipe Locators, Tablet PCs and much more. Also multiple software options to fit your application needs.
4. We have one of the largest Trimble GPS rental pools in the world. This equipment is available to a worldwide customer base. If your rental needs are for as little as one day or as long as one year, Western Data Systems can meet your needs. There are no other GPS rental companies that can combine the amount of equipment we have available with the technical support we can and do provide our customers.
5. Full Service centers for all the Trimble products we rent and sell.
6. Western Data Systems manages the largest private VRS network in the world. The network is available to both the survey & mapping communities. www.txrtk.com Check out our website for the office nearest you. www.westerndatasystems.com

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**Geocortex** software by **Latitude Geographics**, transforms how people design, build and maintain Esri ArcGIS Server applications. By taking advantage of off-the-shelf components and a supportable infrastructure you will be able to do more – faster, cheaper and better than otherwise possible. In fact, that is what hundreds of organizations around the world have done in choosing Geocortex when seeking powerful, intuitive web-based mapping solutions. In 2010, Latitude Geographics was named one of Esri's first Platinum Business Partners as well as 2010 Partner of the Year.

**Surdex** has been recognized as a premier geospatial data provider since 1954, supplying accurate information on time and within budget. Our success is attributed to our focus on client satisfaction through timely delivery of quality products and continuous innovation from our investment in staff and equipment resources. Surdex provides orthophotography; planimetric and topographic maps; LiDAR; and geographic information solutions to various counties and municipalities in North America. A distinguisher for Surdex is our focus on all phases of geospatial data services products, from acquisition—with our fleet of nine aircraft—through final production of all deliverables and data. We have a highly-trained and experienced staff that provides complete geographic solutions customized to each client's needs.

Inner Corridor Technologies, Inc. – **TeachMeGIS** – is the leader in Geographic Information Systems (GIS) training for the petroleum industry. Staffed with GIS professionals who have extensive industry experience and are ESRI Certified Training Partners, we offer high quality training locally and across the nation, at a reasonable price. Our professional GIS consulting staff are available for short- or long-term projects. Please call us if you need help meeting your company's GIS goals.

## SILVER

**Atkins** (www.atkinsglobal.com) is one of the world's leading engineering and design consultancies, employing some 17,700 people across the UK, North America, Middle East, Asia Pacific, and Europe. It has the breadth and depth of expertise to plan, design, and enable some of the world's most technically challenging and time critical infrastructure projects. Atkins has also remained at the forefront of implementing innovative geographic information system (GIS) solutions for environmental, natural resources, public utilities, land planning, and infrastructure management for nearly 20 years. Our staff comprises both GIS analysts and software developers across the company and internationally. It is the largest engineering consultancy in the UK (New Civil Engineer Consultants File 2011); and it is the 29th largest design firm in the U.S. and the 13th largest international design firm (Engineering News-Record 2011).

Since 1969, **ESRI®** has been giving customers around the world the power to think and plan geographically. The market leader in GIS, ESRI software is used in more than 300,000 organizations worldwide including each of the 200 largest cities in the United States, most national governments, more than two-thirds of Fortune 500 companies, and more than 7,000 colleges and universities, applications, running on more than one million desktops and thousands of Web and enterprise servers, provide the backbone for the world's mapping and spatial analysis. ESRI is the only vendor that provides complete technical solutions for desktop, mobile, server, and Internet platforms. Visit us at www.esri.com.

## STANDARD

**Aerial Services, Inc. (ASI)** is an integrated team of professionals providing premier Aerial Acquisition, Digital Ortho, Vector Mapping, Terrain & LiDAR services to government, utilities, engineers, and other geospatial customers. Based in the Iowa heartland for over 40 years, Aerial Services' Midwestern work ethic, cutting-edge technology, and experienced staff combine to harness the power of geographic information and provide solutions you need.

**Applied Field Data Systems Inc.,** based in Houston is a systems integrator offering GPS/GIS mapping systems. Our products include GPS receivers, Laser Range Finders, Rugged PDA'S , Tablet PC, GPS enabled camera, Field Data Collection Software, GIS software etc. We also offer GIS services such as digitizing, application development, data management, custom GIS programs and training.

CDM Smith provides lasting and integrated solutions in water, environment, transportation, energy and facilities to public and private clients worldwide. As a full-service consulting, engineering, construction and operations firm, we deliver exceptional client service, quality results and enduring value across the entire project life-cycle. Listen. Think. Deliver.

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Founded in 1986, **Cityworks Azteca Systems, Inc.** is the leading provider of GIS-centric Enterprise Management Systems. Created for local government, utilities and agencies, it is designed to leverage an organization's investment in Esri's leading GIS technology. Cityworks is powerful, scalable, and affordable, Empowering GIS for Asset Management, Permitting, Licensing™ and more.

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Established in 1986, **NTB Associates, Inc. (NTBA)** has experienced significant expansion in staff and capabilities. The professional staff includes GIS application specialist, programmers, database administrators, civil and structural engineers, and land surveyors. We provide expertise in the following areas:

- GIS/GPS
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- GPS field collection and inventories
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**RazorTek LLC** is a GIS & Remote Sensing 8(a) certified small business located in Germantown, Tennessee. Established in 2002, the firm has provided services and technology assistance to the GeoSpatial community. RazorTek specializes in GIS training, feature extraction, product finishing, development and automation of complex systems for spatial data display and analysis. Data conversion from CAD into a GIS format and QC/QA services are also offered with our company. Also RazorTek offers the capability of doing image compression, mosaicing, reprojection with the LizardTech GeoExpress software if the processing capabilities are needed. RazorTek is also a provider for LizardTech software, aerial and satellite (Digital Globe and GeoEye) imagery including LiDAR data for the Geospatial community.

United Geo Technologies, LLC

**United Geo Technologies, LLC.** (former Stewart Geo Technologies) is an economically disadvantaged woman-owned small business (SBA Self Certification) providing a wide range of professional services such as photogrammetry, orthophotography, parcel mapping, and geographic information systems. UGT has two Certified Photogrammetrist's on staff, and our personnel have extensive experience in the following areas:

- Aerial Imagery Acquisition (both analog and digital)
- Airborne GPS
- CAD (MicroStation and AutoCAD)
- Digital Aerial Triangulation
- Digital Terrain Models (DTM)
- Digital Orthophotography and Mosaics
- Image Compression (MrSID, JPEG2000, ECW)
- LiDAR DTM and Contour Generation
- Parcel Mapping
- Geographic Information Services (ESRI)
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- Volume Computations
- Aerial Film Scanning
- Contour Generation
- Digital Elevation Models (DEM)

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As the Nation's largest water, earth, and biological science and civilian mapping agency, the **United States Geological Survey (USGS)** collects, monitors, analyzes, and provides scientific understanding about natural resource conditions, issues, and problems. The diversity of our scientific expertise enables us to carry out large-scale, multi-disciplinary investigations and provide impartial scientific information to resource managers, planners, and other customers. The National Geospatial Program (NGP) provides leadership for USGS geospatial coordination, production and service activities. The NGP, through its Geospatial Liaison Network, engages partners at State, regional, and local levels of government to develop standards and produce consistent and accurate data.

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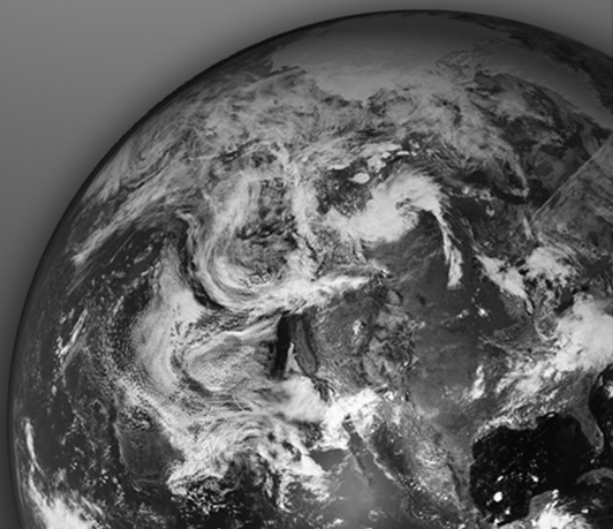

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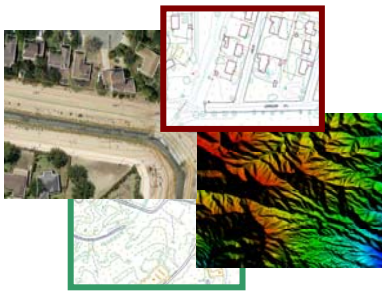
**Senior Vice President**
**rstack@unitedgeotech.com**



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# GISP CHECKLIST

## 22nd Annual SCAUG Conference in McAllen, Texas

| Description | Classification | Credit | Recertification Credit | Credits Earned | |
|---|---|---|---|---|---|
| **2½ Day Regional SCAUG Conference (20 hour)** | | | | | |
| Attendee (0.1 x # of days attended) | EDU | 0.25 | 3.33 | | |
| Presenter (1 point per instance) | CON | 1 | 3 | | |
| Poster Presenter (1 point per instance) | CON | 1 | 3 | | |
| Poster Award Winner | CON | 2 | 6 | | |
| | | | | | |
| **1 Day Training (8 hour) *** | | | | | |
| GPS Data Acquisition and Processing | EDU | 0.2 | 1.33 | | |
| Python for Geoprocessing in ArcGIS 10 | EDU | 0.2 | 1.33 | | |
| 1 Day Training Instructor : _____ | EDU | 3 | 9 | | |
| | | | | | |
| **2 Day Training (16 hour) *** | | | | | |
| Introduction to ArcGIS Server | EDU | 0.4 | 2.67 | | |
| Managing Imagery Using ArcGIS | EDU | 0.4 | 2.67 | | |
| ArcGIS Desktop III: GIS Workflows & Analysis | EDU | 0.4 | 2.67 | | |
| 2 Day Training Instructor : _____ | EDU | 3 | 9 | | |
| | | | | | |
| | | | | | |
| * Training Certificate required for documentation credit | | | | | |

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