

#### Across

- 1. An approximation of the earth's surface
- 3. Where Business Finds Direction
- 7. The Study of the Earth's Surface, Atmosphere, and People.

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- 11. Platinium level sponsor
- 15. Arc\_\_Language

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- 16. Serving Our Changing World, Improving Life for Generations
- 17. Geodatabase Limited to 10 Connections

#### Down

- 2. ESRI President Jack
- 4. Employer of Keynote Speaker Ed Katibah
- 5. Oklahoma State Rep
- 6. 2010 Conference Coordinator
- 8. State in SCAUG Region
- 9. Jim Steil is the Rep for this state
- 10. SCAUG President
- 12. Data model best suited for continuous surfaces
- 13. Enterprise Mapping, Connected Government
- 14. Location of SCAUG UC Mixer

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# Board of officers

Joe Chapa, City of Braunfels President

Cindy Tuttle, San Antonio Water System Vice President

> Lydia Sauceda, CPS Energy Conference Coordinator

Betsi Chatham, City of Fort Worth Conference Coordinator Elect

Shellie Willoughby, Oklahoma Conservation Commission Secretary

> Garri Grossi, City of Plano Treasurer

Justin Cure, City of Longview Past President

Michael Parma, City of Braunfels Outreach Coordinator

> Jim Steil, MARIS Mississippi Representative

Anne Mackey, Tarrant County North Texas Representative

Charles E. Brady III, City of Ardmore Oklahoma Representative

> Deven Rohrer, PBS&J South Texas Representative

Stacia Canaday, ESRI San Antonio ESRI Rep

## Letter from the president

#### Dear South Central Arc User Group Participants and Attendees,

Wow! Can you believe that the South Central Arc User Group (SCAUG) is celebrating its 20th anniversary as a Geographic Information System (GIS) group. It seems like yesterday that our co-founder gathered to meet and discuss how to share GIS information. SCAUG has grown over the years to an organization of over 1,000 users.

As always, the conference will feature ESRI taught workshops, peer-to-peer presentations, vendor exhibits, poster displays, and ESRI technical sessions. An evening social will be held on Thursday evening to celebrate our anniversary. Please take time to visit and thank our sponsors and vendors for helping sustain the SCAUG conference.

Our Opening guest speaker on Wednesday morning is Edwin Katibah (Spatial Ed), a geospatial visionary who will set the stage for the conference by discussing some of the emerging technologies that may affect the way we apply GIS in the future.

In closing, board members welcome your comments, thoughts, ideas and suggestions for improving SCAUG. We encourage you to become active in our regional user groups. SCAUG emphasizes a community approach and spirit of collaboration.

Thank you for joining us on our 20th anniversary and enjoy the conference!!!

Sincerely,

Ioe Chapa

Joe R. Chapa, GISP President

## GENERAL AGENDA

#### **MONDAY, MARCH 29, 2010**

8:30am to 5:00pm

8:30am to 5:00pm 8:30am to 5:00pm

Building Web Maps Using the ArcGIS API for JavaScript Introduction to Geoprocessing Scripts Using Python Putting Geoprocessing to Work

Dry Comal Creek

**Brushv Creek** Cap Rock

#### TUESDAY, MARCH 30, 2010

8:30am to 5:00pm

8:30am to 5:00pm

8:30am to 5:00pm 5:00pm to 8:00pm

Building Web Maps Using the ArcGIS API for JavaScript Introduction to Geoprocessing Scripts Using Python Introduction to ESRI's ArcPad Software NTB Associates, Inc. Meet & Greet

Dry Comal Creek

Brushy Creek Cap Rock Sheraton Pool

#### WEDNESDAY, MARCH 31, 2010

7:30am to 10:30am 10:45am to 12:00pm 12:00pm to 8:00pm 12:00pm to 1:30pm 12:00pm to 1:30pm 1:30pm to 2:30pm 2:45pm to 3:45pm 4:00pm to 5:00pm 5:00pm to 8:00pm

Opening Breakfast & Keynote Address ESRI Plenary Session Vendor Hall & Map Gallery Lunch On Your Own New Officer Lunch Meeting Session Track Session Track II Session Track III Vendor Reception & Map Gallery Awards

#### THURSDAY, APRIL 1, 2010

9:15am to 10:15am 10:30am to 11:30am 11:45am to 1:00pm 1:00pm to 2:00pm 2:15pm to 3:15pm 3:30pm to 4:30pm 6:00pm to 9:00pm

Session Track I Session Track II Lunch on Your Own Session Track III 6 Session Track IV Session Track \ Thursday Night Social

FRIDAY, APRIL 2, 2010 9:00am to 11:00am

10:00am to 12:00pm 10:00am to 1:00pm

Downtown Fort Worth Walking Tour Geeks for ArcGIS Server Meeting East Texas GIS & GPS User Group Meeting

Taste of Texas Ballroom Taste of Texas Ballroom Taste of Texas Ballroom

TBA 2nd Floor 2nd Floor 2nd Floor Taste of Texas Ballroom

2nd Floor 2nd Floor

2nd Floor 2nd Floor 2nd Floor Water Gardens

Meet in Lobby Cap Rock

Meet in Lobby

# events summary

#### **TUESDAY, MARCH 30**

#### NTB Associates, Inc. Meet & Greet – 5:00pm to 8:00pm

Come catch up with old and meet the new at the Sheraton Pool. NTB Associates, Inc. will be sponsoring this event with food along with beer and wine. A nice way to start the conference week!

#### WEDNESDAY, MARCH 31

#### Opening Breakfast, Keynote & Plenary – 7:30am to 12:00pm

Join everyone for breakfast in the Taste of Texas Ballroom. A handful of SCAUG business items will include a message from the Regional ESRI Manager Gary Scoffield, Founders and Thumbs Up Awards, SCAUG scholarships, the change of SCAUG Officers, and conference agenda items. Our Keynote Speaker, Ed Katibah will be sharing ideas and visions from the Microsoft SQL Server Strategy, Infrastructure and Architecture Team. The Opening Session will end with a technical session of What's Coming in ArcGIS 10.

#### Vendor Hall & Map Gallery – 12:00pm to 8:00pm

Between sessions spend your time visiting the Vendor Hall to see innovative technologies and solutions. Be sure to hit up vendors for their signatures on Vendor Bingo as well as drink tokens to be used during the Vendor Reception. 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. Be sure to cast your vote to receive the official conference pint glass! Turn in your ballot at the registration desk.

#### Vendor Reception & Map Gallery Awards – 5:00pm to 8:00pm

Start your evening by enjoying some hors d'oeuvres and drinks over vendor conversation. Map Gallery winners will be announced along with vendor raffles

#### THURSDAY, APRIL 1

#### **ESRI Technical Sessions & User Presentations**

ESRI Technical Sessions will include:

- Public Works Special Interest Group (SIG) Meeting
- Commercial Special Interest Group (SIG): Solve Problems and Improve Operations
  - Emergency Management and Situational Awareness
  - The Strategic GIS Implementation Plan Providing a Roadmap for an Organizations' GIS
    - Working with Imagery: Now and the Road Ahead

- Publishing your GIS Content Online
- ArcGIS 10 Overview
- What Tools in ArcGIS Desktop Can Help You Do Your Job?

User Presentations will encompass a variety of session tracks including Applications & Programming, Emergency Management, Environmental, Historic Data Use, Project Management and Solutions.

#### Thursday Night Social – 6:00pm to 9:00pm

Decompress from a week of conferencing amongst the oasis of the Fort Worth Water Gardens. Directly across from the hotel engage in conversation, food and drink in a beautifully serene urban park. If weather doesn't cooperate the social will be moved to the Taste of Texas Ballroom. No Rain Dancing please!

#### FRIDAY, APRIL 2

#### Downtown Walking Tour - 9:00am to 11:00am

Meet in the lobby at 9:00am with your walking shoes and pray for good weather. A visit and history lesson will be given for a total of 43 sites throughout the charming streets of Downtown Cowtown.

#### Geeks for ArcGIS Server (GAS) Meeting – 10:00am to 12:00pm

Integrating ArcGIS GIS Server with Enterprise Systems using Web Services

Brian Besier, IT Nexus – Brian will be going over several projects that IT Nexus has done where ArcGIS Server had to be integrated with other Enterprise systems. This will include the integration of AGS with non-spatial databases, workorder management systems and document management systems.

Cool ArcGIS Server Sites

John Hunt, ESRI – John will be showing several customer ArcGIS Server web sites with interesting development to give the users ideas for their own sites.

#### East Texas GIS & GPS User Group (ETUG) - 10:00am to 1:00pm

Please meet in the lobby of the hotel (bring your walking shoes, this event will be away from the hotel). All conference attendees from the East Texas Region are welcome to attend. Lunch will be provided.





Ed Katibah is a Principal Program Manager on the Microsoft SQL Server Strategy, Infrastructure and Architecture team. Ed began his professional career over 34 years ago while working in a University of California, Berkeley research group at the Space Sciences Laboratory. Ed has extensive experience in the spatial industry with jobs ranging from research, software development, consulting, application programming and large scale spatial database production systems. Since 1996, Ed has

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worked exclusively on spatially-enabled database systems for Informix, IBM and now Microsoft.

# save the date

#### SCAUG UC MIXER

July 13, 2010 5:30pm to 7:00pm ESRI User Conference San Diego, California

#### 2010 OK SCAUG CONFERENCE

September 21, 2010 Moore Norman Technology Center South Penn Campus Oklahoma City, Oklahoma

#### 21st ANNUAL SCAUG CONFERENCE

April 3 – 8, 2011 Crowne Plaza Riverwalk San Antonio, Texas



PLATINUM LEVEL











### SILVER LEVEL



# perceptive software





SCAUG created an academic scholarship program to assist in furthering the education of undergraduate and graduate students in geospatial sciences, promote and support an increase of knowledge and proficiency of geospatial science in the SCAUG community, recognize and encourage scholastic and professional accomplishments in the geospatial field, and encourage the exemplary goals of students who are working toward their undergraduate degree in geospatial science. A total of three scholarships are included in the program with two \$1,500 undergraduate scholarships and one \$1,500 scholarship or research grant for graduate students. The program is made possible in partnership with Latitude Geographics and Tri-Global Technologies.

#### 2010 WINNERS

2010 Latitude Geographics / SCAUG Graduate Scholarship winner: Cary Lincoln, Oklahoma State University (full award: \$1,500)

2010 Tri-Global Technologies / SCAUG Undergraduate Scholarship winner: Thomas Davis, Texas A&M – Corpus Christi (full award: \$1,500)

2010 SCAUG Undergraduate Scholarship winner: Jonathan Phillips, University of Central Oklahoma (partial award: \$750)





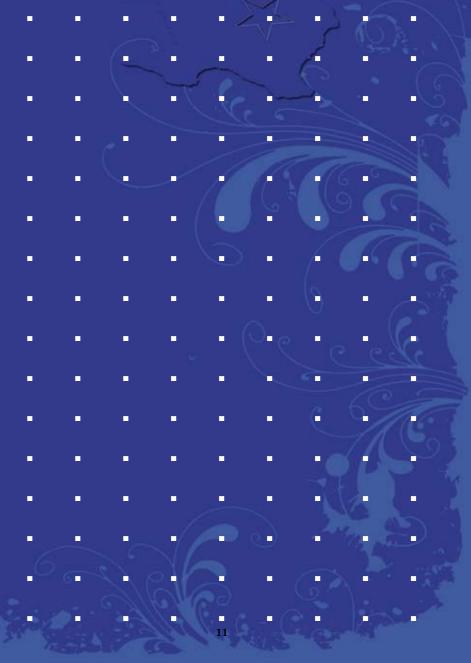
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### DOTS-N-BOXES

Take turns joining two horizonally or vertically adjacent dots by a line. A player that completes the fourth side of a square (a box) colors that box and must play again. When all boxes have been colored, the game ends and the player who has colored more boxes wins.



# USER PRESENTATIONS 2 ESRI TECH SESSIONS

#### WEDNESDAY, MARCH 31

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

What Lies Beneath? A Detailed Look at the World Underground and the Tools Used to Map It Dennis Heath, Tri-Global Technologies, LLC Brandon Baker, Green Equipment Company Cap Rock Texas GIS Data Acquisition Challenges the Time-Space-Government Continuum Felicia Retiz, Texas Natural Resources Information System Cap Rock 3D Mobile Mapping Dave Henderson, Topcon Positioning Systems Driftwood The People Behind the People! Shane Diaz, Columbia Regional Geospatial Service Center Spicewood 4-H Youth GIS Partnerships in Action: Alert, Evacuate, and Shelter Jeff Sallee PhD, Oklahoma State University Spicewood Session Track II – 2:45pm to 3:45pm Mapping of Buried Assets in GIS for Future Access Ashok Wadwani, Applied Field Data Systems, Inc. Cap Rock GIS and GPS for Historical Preservation David W. Allen, City of Euless Cap Rock Next Generation 9-1-1 GIS Anthony Haddad, Contact One, Inc. Driftwood Creating Better Maps: Cartographic Design

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

Intuitive Mobile Solutions for Your Data Sharing Challenges Lon Cornell, TerraGo Technologies

Cap Rock

Johnny Brown, Columbia Regional Geospatial Service Center Spicewood

Sign Inventory Allison Alford, Western Data Systems

Architectural, Historical Data Conversion and Management Process, as a part of an Enterprise Project, "Historical Site Management Tool" Amy K. Bellande Gwin, The Geospatial Group

Driftwood

Cap Rock

Reconstructing and Preserving the Past with GIS Stefan Hildebrand, Dallas / Fort Worth International Airport

Driftwood

Carter County 2009 Disasters – Blurring the Lines for Clarity James Allen, Carter County Charles Brady III, City of Admore

Spicewood

#### **THURSDAY, APRIL 1**

#### Special Session Track – 8:30am to 11:30am

ESRI TECH SESSION: Commercial Special Interest Group: Solve Problems and Improve Operations Linda Peters, Dennis Kaplan and Betsy Leal

Spicewood

Driftwood

#### Special Session Track – 9:15am to 11:30am

ESRI TECH SESSION: Public Works Special Interest Group Meeting Chuck Cmeyla, John Hunt and Pamela Kersh

#### Special Session Track – 1:00pm to 4:00pm

Texas Federal Geographic Information Workshop Claire DeVaughan, U.S. Geological Survey

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

ESRI TECH SESSION: Emergency Management and Situational Awareness Craig Morgan **Brushy Creek** 

Cap Rock

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ESRI TECH SESSION: GIS Implementation Planning-Providing a Roadmap for an Organizations' GIS Shomali Sengupta

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

Accessing Disparate Data - There is a Better Way Daryl Scott, City of Dallas Public Works & Transportation

Exploring One Community. Developing an Environmental Baseline Study Scott Sires, Brookhaven College Cap Rock

Pheasant Ridge

Pheasant Ridge

#### Session Track III – 1:00pm to 2:00pm

ESRI TECH SESSION: Working with Imagery: Now and the Road Ahead Brig Bowles

ESRI TECH SESSION: What Tools in ArcGIS Desktop Can Help You Do Your Job? Pam Kersh

Storm Water GIS: Managing a Large Scale GIS Project Elizabeth Young, City of Fort Worth

City of Fort Worth Storm Water GIS Inventory Coordination and Quality Control Jennifer Jacobs, Jacobs Engineering Group

ESRI TECH SESSION: Publishing Your GIS Content Online Karen Lizcano

Driftwood

Cap Rock

Pheasant Ridge

Pheasant Ridge

Spicewood

#### Session Track IV – 2:15pm to 3:15pm

Monitoring Hydrilla Growth on Lake Tyler Using Multispectral Satellite Images Arun Kulkarni & Kiran Parimi, The University of Texas at Tyler Cap Rock

Standardize Map Production and Use Through ArcGIS Server Previn Wong, San Antonio River Authority

Getting to the "AHA!" in Data Interoperability Toni Jackson, San Antonio Water System

Save Time Performing Routine Tasks Josh E. Turner, The Geospatial Group Pheasant Ridge

Driftwood

Pheasant Ridge

ESRI TECH SESSION: ArcGIS 10 Overview Brig Bowles

Spicewood

#### Session Track V – 3:30pm to 4:30pm

Cumulative Effects Assessment Toolbox Ty Summerville, PBS&J

Flex vs. Silverlight – Moving Beyond the ADF Brian Besier, IT Nexus

ESRI TECH SESSION: Publishing Your GIS Content Online Karen Lizcano

Driftwood

Pheasant Ridge

Cap Rock

Water Distribution, Sanitary Sewer and Stormwater Geospatial Network Modeling of Municipalities and Utilities Randy McDaniel and Shar Govindan, Bentley Systems Inc Spicewood

#### FRIDAY, APRIL 2

#### 9:00am to 11:00am

Downtown Fort Worth Walking Tour Douglas Belardi

#### 10:00am to 12:00pm

Geeks for ArcGIS Server Meeting John Hunt

#### Cap Rock

Meet in Lobby

#### 10:00am to 1:00pm

East Texas GIS & GPS User Group Meeting Justin Cure

Meet in Lobby

## Presentation abstracts

#### WEDNESDAY, MARCH 31

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

What Lies Beneath? A Detailed Look at the World Underground and the Tools Used to Map It Dennis Heath, Tri-Global Technologies, LLC Brandon Baker, Green Equipment Company Cap Rock

Just beneath the ground surface lays a very complex and dangerous network of utility infrastructure. Many of these utilities (electric, gas, water, telecommunications) spatial locations have never been properly documented.

Facility owners are beginning to realize that with its work force nearing retirement they may loose critical spatial knowledge of its own aging infrastructure. Combining these concerns with federal and state regulations designed to help protect local communities; utility stakeholders are beginning to incorporate global positioning system (GPS) receivers with electromagnetic utility line locator technologies to help manage their underground facilities within their geographic information system (GIS) and one-call ticket management systems.

In this presentation, we will take a closer look at how the combined technologies were used to:

 (1) reduce one-call ticket volumes for a telecommunications company saving \$1.25MM annually;

- (2) perform a detailed utility depth of cover analysis looking for shallow pipe for a high pressure gas transmission pipeline company;
- (3) reduce excavation damage of previously unmapped and unidentified fiber optic lines on a military base being converted to civilian use;

(4) identify and locate external coating damage and external corrosion on pipelines for a gas pipeline company;

(5) identify illegal taps on a gas pipeline in Kazakhstan;

(6) map sanitary sewer and storm water sewer networks and previously unidentified laterals for a city municipality;

(7) accurately map centerline facilities for use in High Consequence Analysis structure count for a pipeline operator.

Texas GIS Data Acquisition Challenges the Time-Space-Government Continuum Felicia Retiz, Texas Natural Resources Information System Cap Rock

Texas has a long and rich legacy of cooperation across all levels of government in developing and sharing important geospatial datasets. The dominant model of providing no fee access to data has built millions of dollars in statewide collections of imagery, elevation, hydrography and topographic maps. A new model has been established that brings greater efficiency to developing key data sets and is creating new opportunities for achieving greater value and access to data. The new High Priority Imagery and Datasets contract has dissolved traditional barriers to partnerships and barriers to efficiently acquiring data from pre-qualified data providers.

3D Mobile Mapping Dave Henderson, Topcon Positioning Systems

Driftwood

The building and management of a Geographic Information System and infrastructure asset information requires an organization to collect reliable and accurate field data.

Pressure for organization's to do more with less, increasing operational efficiency and productivity while reducing operating cost is a major theme. This combined with limited resources and capital constraints, while still maintaining high quality standards of data accuracy and reliability is a market driver to find alternative solutions for the acquisition of infrastructure asset data.

A new paradigm for the acquisition of field data has recently emerged, allowing GIS, Surveying and mapping professionals to capture highly accurate 3D data at highway speeds, safely from a vehicle.

3D mobile mapping systems allow a user to collect millions of points at once, and then distill that information down, for use in many different applications. This flexible system acquires accurate 3D "point cloud" data integrated with 360 degree spherical color digital images.

From the 3D model user's can extract GIS feature / attribute and metadata information for storage and access in their GIS database. Data can be accessed at any time from the office, and information can be mined and extracted based on the user's changing GIS mapping requirements.

The visual imaging information combined with point cloud and feature / attribute information provide stakeholders with a thorough and complete dataset of infrastructure asset information.

The People Behind the People! Shane Diaz, Columbia Regional Geospatial Service Center Spicewood

In the ever changing world of 911 and GIS there are countless improvements taking place and advances in technology are leading to new standards in 911. Phone capabilities are ever increasing; allowing text, picture, internet, and video to be shared within seconds. All of these technological advancements need to be considered in our emergency response. These professionals deal with life and death issues each day. Yet there are a few select individuals, who without their

services and skills would make the jobs of these responders much more difficult and perhaps even hinder them in their response time.

The GIS professionals that create, rectify, and develop the data that drives the 911 service, are rarely known by the public. These are truly unsung heroes. This session will give us a bird's eye view of the details and editing practices put into place by these individuals. We will discuss concepts, tools, and methodology used by these professionals that provide the basis for emergency services, thus allowing a look at, the people behind the people.

4-H Youth GIS Partnerships in Action: Alert, Evacuate, and Shelter Jeff Sallee PhD, Oklahoma State University Spicewood

The 4-H Youth Development program has a long history of improving communities through the application of science and technology. 4-H is located in every county in every state. These youth are always interested in taking on new projects, learning new technologies, and finding practical applications. Volunteers and professionals are the key to helping 4-H youth develop into caring, productive citizens.

Across the state of Oklahoma teams of youth and adults have formed to use Geographic Information Systems (GIS) to help prepare their communities for potential emergencies. Oklahoma 4-H teams have selected projects ranging from locating storm sirens to distributing emergency maps. Each of these teams has partnered with a local EMS agency to address a community need while developing their geospatial skills. When conducting 4-H GIS, two goals should be kept in mind: public service and youth development. Partnerships are important to the success of youth and GIS. This educational program would not be as successful and effective without these partnerships.

This session will highlight examples of Youth GIS work and tell the story of their projects and partners. Participants will learn about 4-H and how effectively youth can apply GIS technology to community service and disaster preparedness.

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

Mapping of Buried Assets in GIS for Future Access Ashok Wadwani, Applied Field Data Systems, Inc.

Cap Rock

The cost of building, operating, and maintaining buried assets is enormous. In addition, a typical utility ticket may contain several buried assets with abandoned features. Utilities and municipalities are looking for a cost effective way to efficiently manage assets, minimize operating costs and quickly restore outages.

The use of passive markers to locate buried assets started several years ago. Due to advances in GPS technology, the integration of GPS with passive markers became a reality. However the passive markers did not provide any information regarding location and attributes of the assets. With the availability

of RFID markers, low cost GPS and easy to use field data collection software, municipalities are now using RFID markers with GPS receivers to locate, and identify buried assets before digging and in addition bring this data into GIS for analysis and future navigation.

The presentation will cover how this technology is being used now.

GIS and GPS for Historical Preservation David W. Allen, City of Euless

Calloway Cemetery near Euless is the final resting place for many of the pioneer families in Northeast Tarrant County. The cemetery board wanted to document the graves at the cemetery so that it could reopen for new burials, and the City of Euless supplied the GIS work to do this. As a sideline, a website was built to aide in gaining information about the people interred there as well as provide an excellent resource for genealogical research. Learn how this process was undertaken and see the results of the GIS, GPS, and web design work done for the cemetery.

Next Generation 9-1-1 GIS Anthony Haddad, Contact One, Inc.

This presentation will investigate the industry trends of 9-1-1, GIS and communications. Key elements which have an influence on the important role of GIS professionals in public safety, addressing and the appropriate use of technology will be identified. Areas covered will include GIS technology innovation, example projects, rules and regulations and how GIS professionals will impact the future of public safety.

Creating Better Maps: Cartographic Design Johnny Brown, Columbia Regional Geospatial Service Center Spicewood

Any GIS professional can create maps. Mash a few buttons, grab and label a few features to arrange in a layout and, "BAM!" a pretty map zips away to the plotter. It is easy to do but is it the best you can do? This session introduces users to principals of cartography that may be missing from everyday map production. Understanding the concepts and methods of cartography, and how they are applied will lead to well designed, effective maps that fulfill the requirements of their intended audience and purpose.

#### Driftwood

Cap Rock

Session Track III – 4:00pm to 5:00pm

Intuitive Mobile Solutions for Your Data Sharing Challenges Lon Cornell, TerraGo Technologies

Cap Rock

Organizations are now looking to the multi-million dollar investments

that have been made in GIS systems to deliver new competitive advantages, whether it is more efficient field operations and resources, more informed decision-making capabilities, or improved customer response time and service. The purpose of this presentation will be to highlight the impact of mobile locationbased technologies on traditional GIS departments and to help leaders anticipate the additional pressure their teams will face in this new world of anytime, anywhere access to spatial information.

Sign Inventory Allison Alford, Western Data Systems

Cap Rock

With the newly updated Manual on Uniform Traffic Control Devices (MUTCD) 2009 regulations for highway signs, now is the time to inventory your assets. We will discuss the various methods & equipment available to simultaneously meet the new regulations & populate your GIS.

Architectural, Historical Data Conversion and Management Process, as a part of an Enterprise Project, "Historical Site Management Tool" Amy K. Bellande Gwin, The Geospatial Group Driftwood

This paper describes the flat file to GIS conversation process for an enterprise spatial information system implementation called the Historical Site Management Tool, implemented by the Mississippi Department of Archives and History in various steps from 2007 - 2010. This data conversion will be melded together (2010) into an enterprise GIS SQL database, accessed by people with various permissions through a custom website interface to the SQL database, ArcGIS Server, and a custom Flex web map. Our goal for this integration was to create the most accurate, and the most efficient strategy for using their files to obtain geographic locations in the GIS. A central service that MDAH Architectural and Archeological division provides, other than architectural preservation for the state of Mississippi, is approving state and federal work permits. This approval requires that the work not disturb any existing architectural sites, nor any potential architectural treasures. These sites can be defined by various historical significances, defined by federal, state, and local prerequisites. These records were kept in files, sorted by a regional multipart pin code, and the file contained supporting documents, photographs, newspaper clippings, and sometimes nothing. In addition to the flat files, there was an Access database with additional information on the properties, including a file number. This paper outlines the methods we used to create geospatial data from a large file room of complicated file taxonomy and some-what accurate maps, as well as the considerations we

took including: future growth, integration into enterprise GIS, architecture design, data services, integration into the enterprise GIS. The process was specific to MDAH, but the roadblocks we faced are common to this type of conversion, and we found many efficient ways to overcome them.

Reconstructing and Preserving the Past with GIS Stefan Hildebrand, Dallas / Fort Worth International Airport

Driftwood

As the geography of an area changes over time in regards to physical and human activity it becomes all too easy to lose sight of the past in today's rapid urban growth and development. At DFW Airport the understanding of the past still plays an important role in decision making. GIS has provided the mechanism to document and compile a variety of historical information sources into one portal to gain perspective on the land before there were planes and terminals. By utilizing mapping technologies we have an excellent ability to guide decision making so as to minimize archaeological impacts and to assist in compliance requirements. This presentation will discuss some of the reasons why we investigate the past, how we organized the information, basic data design criteria, present day uses, and possible future development of the historical data.

Carter County 2009 Disasters – Blurring the Lines for Clarity James Allen, Carter County Charles Brady III, City of Admore

Spicewood

Disasters rarely occur at convenient times or with regard to manmade jurisdictions. GIS databases, however, are generally dictated by these manmade jurisdictions & their agencies' specific requirements. This inherent dichotomy presents a real conundrum when a disaster ignores these constraints. This is just one reason why Carter County and the City of Ardmore's GIS programs have been blurring the lines between the agencies for over a decade. During this time both agencies have merged the datasets to provide a seamless basemap with complete GIS coverage over the entire county. The independent yet parallel program design has benefitted both agencies over the years. This benefit was fully realized over the past year with the F4 Tornado that ripped through the county, and the wildfire that completely consumed over 95 square miles and affected over 250 square miles. This seamless interaction provides support and resources to both agencies that neither one could afford on their own. In the blurring of the lines between agencies, clarity is being brought to the GIS as a whole.

### THURSDAY, APRIL 1

#### Special Session Track – 8:30am to 11:30am

ESRI TECH SESSION: Commercial Special Interest Group: Solve Problems and Improve Operations Linda Peters, Dennis Kaplan and Betsy Leal Spicewood

This group is committed to fostering a community of commercial GIS users to identify trends and best practices, get return on investment examples, gain insight into ESRI product development and listening and responding to user feedback. You will network and collaborate with your peers, hear from ESRI staff and see user presentations that will help you address issues and overcome challenges in your own organization. Anticipated topics include market optimization, best practices for building models, territory balancing and transportation management.

#### Special Session Track – 9:15am to 11:30am

ESRI TECH SESSION: Public Works Special Interest Group Meeting Chuck Cmeyla, John Hunt and Pamela Kersh Driftwood

Learn from our Public Works team and from your peers about what's happening in public works. ESRI's public works industry manager will review upcoming 2010 events and programs, and will lead a discussion and Q&A session on how GIS is being used within the work place. There will also be a demonstration of our new Public Works Resource Center. See first-hand what is available on the Resource Center, from application templates, free data and data models, to a site where you can post and share your custom applications or post questions to our technical support team.

#### Special Session Track – 1:00pm to 4:00pm

Texas Federal Geographic Information Workshop Claire DeVaughan, U.S. Geological Survey

#### Brushy Creek

The Texas Federal Geographic Information Workgroup (TFGIW) is comprised of representatives from Federal agencies whom have a direct interest in mapping and/or geospatial data in Texas. The meeting agenda will include agency recaps of current projects and initiatives, discussion about data needs, and other topics such as metadata, standards development, and collaboration opportunities. This meeting is open to anyone who has an interest in Federal activities in Texas or surrounding states.

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

ESRI TECH SESSION: Emergency Management and Situational Awareness Craig Morgan Cap Rock

Learn from our Public Works team and from your peers about what's happening in public works. ESRI's public works industry manager will review upcoming 2010 events and programs, and will lead a discussion and Q&A session on how GIS is being used within the work place. There will also be a demonstration of our new Public Works Resource Center. See first-hand what is available on the Resource Center, from application templates, free data and data models, to a site where you can post and share your custom applications or post questions to our technical support team.

ESRI TECH SESSION: GIS Implementation Planning - Providing a Roadmap for an Organizations' GIS Shomali Sengupta

A well written strategic GIS implementation plan provides an organization with a roadmap that fosters the development of a successful GIS implementation. The absence of such planning often leads to a system that doesn't meet the stakeholders' expectations. A Geographic Information System can encompass many potential applications, so it is important to establish an organization's specific requirements and objectives from the beginning. As a result, knowing the stakeholders' requirements for the GIS implementation is critical in its ultimate success. A system developed without such a plan can lead to chaos that results from trying to build a GIS with no priorities or end in mind. Conversely, a well defined Plan will assist GIS managers in procuring resources for future projects. Attendees in this session will become familiar with the benefits of developing and adopting a strategic GIS implementation plan.

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

Accessing Disparate Data - There is a Better Way Daryl Scott, City of Dallas Public Works & Transportation

Cap Rock

In 2007, the Pavement Management Program (PMP) at the City of Dallas implemented an automated pavement data collection system with integrated crack detection, video image capture, ground penetrating radar, and smoothness profiler. The system uses multiple proprietary software packages to collect, analyze, and browse the data. Although the City improved the quality of its pavement condition data, the sensor data and analysis could not be accessed through a single interface. In addition, GIS staff struggled to keep the field and office data synchronized and up-to-date. In a quest to streamline workflows, PMP adopted a database-as-API approach while it developed T-SQL stored procedures and user defined functions to provide simple, consistent, and secure external database access. Over time, PMP used the stored procedures and

user-defined functions to automate workflows and provide convenient data access via an Intranet site, ArcGIS, and stand-alone Python scripts. As a result, the system is much easier to navigate, use, and maintain than previously. This presentation will demonstrate the database-as-API approach, external database access using the pyodbc module, web site development with Python, and intelligent ArcGIS script tools using the ToolValidator class.

Exploring One Community. Developing an Environmental Baseline Study Scott Sires, Brookhaven College Pheasant Ridge

What's the difference?', a question this project investigated. How connected are the Earth's natural systems? How healthy are these natural systems and do my actions affect them? How much do I really consume? Brookhaven College students launched into a multi-year project to collect and analyze geospatial data for the purpose of reaching a higher understanding of the environment and our influences upon it. Learning is enhanced when the content of the course is related to the environment in which the study takes place. 16 students and 4 instructors worked with The GIS Institute to invest 9 days at Lighthouse Reef, Belize. Participants performed 6 days of surveys in 3 teams: Bathymetric Mapping Survey, Shoreline Debris Survey and the Biota Survey. 960 hours of collection samples were then loaded into the ArcMarine data model for visualization, analysis and revelations. This presentation is the experienced result of the inaugural field study.

#### Session Track III – 1:00pm to 2:00pm

ESRI TECH SESSION: Working with Imagery: Now and the Road Ahead Brig Bowles Cap Rock

Attendees will learn workflows and best practices for working with imagery in ArcMap and ArcGIS Server 9.3.1. This session also highlights the new paradigm in ArcGIS 10 and how imagery management and analysis tools become part of the core technology.

ESRI TECH SESSION: What Tools in ArcGIS Desktop Can Help You Do Your Job? Pam Kersh Driftwood

Attendees will learn tips and tricks for ArcGIS Desktop 9.3.1 to help them perform GIS tasks and workflows more efficiently and effectively. This session will also focus on beginner-level Python and geoprocessing skills to automate common tasks.

Storm Water GIS: Managing a Large Scale GIS Project Elizabeth Young, City of Fort Worth

Pheasant Ridge

The City of Fort Worth embarked on a project to map all Storm Water features inside the City limits. The City's goal is to develop a complete inventory of assets in order to respond to maintenance issues in a more timely matter, better respond during emergencies, improve customer service, and create a proactive approach to managing storm assets. This four year project covers an area 347 square miles with a guess at approximately 40,000 inlets.

This presentation will give an overview of the Storm Water Mapping project and the management of a large scale project with many moving parts. It will cover some of the project management tools and documents used to oversee the project, the lessons learned along the way and what we believed worked as a project management team.

City of Fort Worth Storm Water GIS Inventory Coordination and Quality Control Jennifer Jacobs, Jacobs Engineering Group Pheasant Ridge

The lack of an adequately mapped, detailed inventory of the City's storm water system has impeded the ability of staff to respond to maintenance needs, plan long-term capital improvements, and provide necessary emergency response information in a timely manner. The purpose of the Storm Water Geographic Information System (SWGIS) Inventory project is to develop a detailed inventory of the City's storm water assets in a GIS in order to facilitate these activities.

The scope of work for the project includes developing an initial schematic from engineering design drawings, field reconnaissance and survey, and schematic rectification, among other tasks, for the entire City over a four year period.

This effort requires the coordination 10-12 GIS Analysts and up to five field survey crews, among other personnel, at any given time in order to maintain the productivity levels necessary to complete the project on schedule. This presentation will discuss how Jacobs is dealing with the office and field coordination and quality control issues associated with a project of this magnitude.

ESRI TECH SESSION: Publishing Your GIS Content Online Karen Lizcano

Spicewood

This session will discuss how to best publish and distribute maps and data over your intranet or internet using ArcGIS. Those who are still utilizing ArcIMS applications are especially encouraged to attend.

#### Session Track IV – 2:15pm to 3:15pm

Monitoring Hydrilla Growth on Lake Tyler Using Multispectral Satellite Images Arun Kulkarni & Kiran Parimi, The University of Texas at Tyler Cap Rock

Aquatic plant infestations affect water quality and city water supply and impede commercial and recreational traffic through navigable waterways. It affects activities such as boating, swimming and fishing. Traditional field based mapping and monitoring of extend invasive aquatic plant present several challenges including inaccessibility of areas for ground truth data collection and indentifying rapid changes in aquatic plant location. This paper deals with monitoring Hydrilla growth in Lake Tyler. Hydrilla was first discovered on lake Tyler east in 1993, following the two years drought 2005-2006, it covered more than 1200 acres in 2007. Biologists from the Texas Park and Wildlife department estimate that one-fifth (537 acres) of the 2500 acre lake is covered in the fast growing nonnative plant. It is important to keep growth of hydrilla under control as it can be invasive and out-compete native spaces and cover too large area. There are several stake holders who have interest in how Hydrilla is managed as Lake Tyler is a main source of water supply to the City of Tyler. We analyze multispectral images from Landsat Thematic Mapper (TM), using ground truth data to identify areas such as aquatic emergent and sub-emergent and native plant groups. We analyze temporal images using various classifiers such as the maximum likelihood. . We evaluate results using measures such as the user's accuracy, producer's accuracy, overall accuracy, and Kappa coefficient.

Standardize Map Production and Use Through ArcGIS Server Previn Wong, San Antonio River Authority

Every organization that starts using GIS has a collection of disparate data usually stored in various places on the network or on users' local computer. Map production through this process usually results in an inconsistent operational picture. The San Antonio River Authority (SARA) has created an one-stop GIS portal for the agency's GIS needs. SARA, through the use of ArcGIS Server, has standardized the cartographic look of map production (Map Themes). These map themes are consumed throughout SARA through ArcGIS Desktop (via standardized page layouts) and through web applications. End users can also mashup various map themes and tools into their own web application to create even more focused mapping applications. Through the use standardization, SARA ensures every department portrays a common operational picture.

#### Getting to the "AHA!" in Data Interoperability Toni Jackson, San Antonio Water System

Pheasant Ridge

Driftwood

San Antonio Water System (SAWS) has been working for a year to clean the data in three data sets and prep for use in a new Asset Management software system. The lengthy, time intensive process to clean up this data was making it very expensive. In an effort to automate some of the processes and reduce the

cost of the data we started using the Data Interoperability extension and began to transform our data at a prodigious rate. Getting started with Data Interoperability didn't happen over night. Our team worked for a month before finally achieving success building transformers.

This presentation will walk through the process of creating a simple workspace to manipulate, organize and manage geospatial data and explain the different ways SAWS has been able to use more complicated transformers. We will also show you how you can "do more with less"... "Getting to the 'AHA!", by using Data Interoperability to reduce the cost of your data without hiring more staff.

Save Time Performing Routine Tasks Josh E. Turner, The Geospatial Group

Pheasant Ridge

Do you have to update source data as much as I do? Maybe you have a geoprocessing task that you repeat often. Whatever the case, if you haven't tried Model Builder, there's no better time than now. Model Builder is used to string many of Arc's toolbox tools together to be run back to back. Time savings are increased with every tool added to the string. The model itself is saved as a tool and the entire task can be completed with the click of a button. This is nice, but you still have to open Arc and run the tool. The real beauty occurs when the model is exported to a Python script, the script is added to a batch file, and the batch file is run as a Scheduled Task. Schedule the task to run when no one is using the data and the updates go unnoticed by everyone, including the updater. The presentation will walk through an example project and show how this process can basically eliminate a reoccurring geoprocessing task.

ESRI TECH SESSION: ArcGIS 10 Overview Brig Bowles

Spicewood

Experience how ArcGIS 10 will simplify many of the GIS workflows and tasks you perform every day, such as editing and map book creation.

#### Session Track V – 3:30pm to 4:30pm

Cumulative Effects Assessment Toolbox Ty Summerville, PBS&J

Cap Rock

The Cumulative Effect Assessment toolbox is a custom ArcGIS toolbox solution created by PBS&J for the U.S. Army Corps of Engineers, Galveston District to assist in the permit review process of direct, indirect and cumulative environmental impact analysis required by the National Environmental Policy Act (NEPA). The goals of this pilot project, which focused on Galveston Island, Texas, were to collect all input data and develop an ArcGIS desktop tool that can be used and maintained by novice GIS users. The simple solution allows users to apply standard methods and tools when reviewing permit applications. Prior

to this solution the Regulatory Branch of the Galveston District operated without standardized methods and tools when reviewing permit applications which resulted in frequent litigation related to cumulative effects assessments. This pilot project marks the beginning of an effort by the Galveston District to develop best practices for the analysis of environmental impacts of proposed development permit applications.

#### Flex vs. Silverlight – Moving Beyond the ADF Brian Besier, IT Nexus

Driftwood

Since releasing ArcGIS Server in 2004 ESRI has provided a variety of APIs (application programming interfaces) for its users. Starting first with the .NET ADF, the offering now includes a JavaScript API, a Flex API (Adobe Flex Builder) and recently, a Silverlight API (Microsoft Silverlight™/WPF™).

This presentation provides a comparison of each of these APIs using examples and a straight-forward discussion of what's easy, what's possible and what's missing or difficult to achieve with each API. We discuss what's available with ESRI's free templates, what it takes to learn and use each API, how to determine which API is a good fit for your organization and our experience developing GISweb applications in each environment.

ESRI TECH SESSION: Publishing Your GIS Content Online Karen Lizcano Pheasant Ridge

This session will discuss how to best publish and distribute maps and data over your intranet or internet using ArcGIS. Those who are still utilizing ArcIMS applications are especially encouraged to attend.

Water Distribution, Sanitary Sewer and Stormwater Geospatial Network Modeling of Municipalities and Utilities

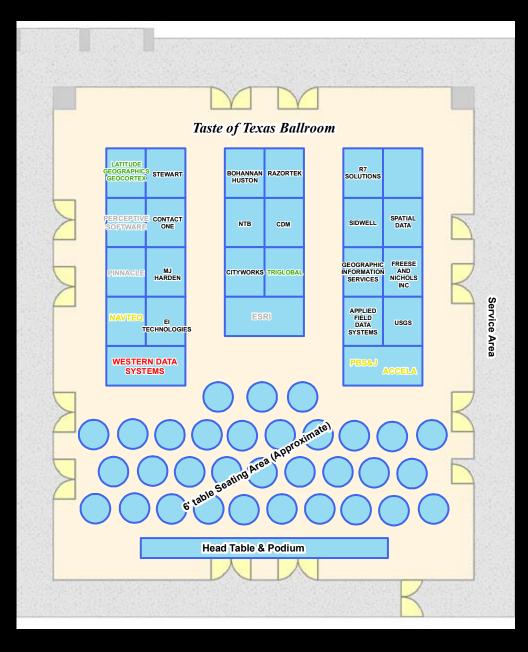
Randy McDaniel and Shar Govindan, Bentley Systems Inc Spicewood

GIS Data can be used to load hydraulic models which are used to analyze and design critical infrastructure important to every zip code in every country. Data from multiple GIS layers are fed into hydraulic calculation engines and converted into useful information directly within the GIS platform. This information can be used to analyze an existing system, do forensic analysis and also compare an unlimited number of 'What-if' future designs side-by-side in both tabular and graphical formats. Genetic algorithm optimization engines can be used to calibrate the system using field data, find potential problem areas and also design the system based on 'limited budget, best performance or multiobjective' criteria. GIS users can natively leverage the geodatabase architecture for modeling over extended periods of time. Geospatial modules help you allocate demands and loads from geocoded meters and elevation from digital maps automatically, while extracting data and topology from your geospatial data

sets, SCADA and external databases. GIS data can be interpolated to fill missing information and cleaned using geospatial tools. In addition to reducing construction and energy costs, water professionals can simulate contamination, fires flow scenarios, pipe breaks, and power outages and find the best operational strategies to address them. Water consumption, flow monitoring, land use, or census data from GIS can be loaded to automatically estimate and import sanitary inflows. Fully-dynamic engines are able to model overflows, looped storm and sewer networks, wastewater pump stations, and even open channels and detention ponds. GIS information processed with dynamic engines can be used to stay in compliance with NPDES and EPA regulations. GIS professionals are able to implement hydraulic and hydrologic tools and make important decisions for advancing human civilization.

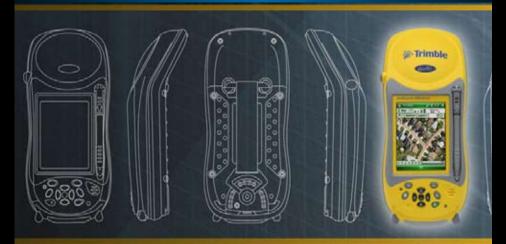
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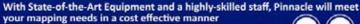
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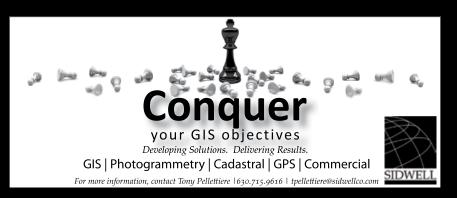
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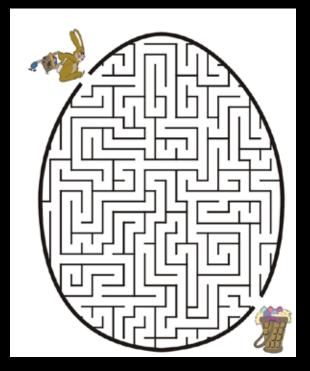








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We are a multi-disciplined engineering, architectural, environmental science, construction services and master planning firm with offices across Texas to better serve our clients.

Geocortex, a division of Latitude Geographics Group Ltd., provides a suite of proven products, services and knowledge that organizations use to deliver effective, successful web-based

mapping using ESRI's ArcGIS Server and ArcIMS. With success stories globally, we help clients create world-class web-based GIS implementations.

Geographic Information Services, Inc. (GISi) is an awardwinning GIS professional services firm with extensive experience providing successful solutions to state and local, federal, and commercial clients. Our staff members have a wide-ranging background in the design, development, and implementation of leading edge, yet practical geospatial solutions.

**MJ Harden** has been providing aerial acquisition, photogrammetric mapping, and GIS data management services to transmission and distribution utilities, government agencies, engineering firms,

and the transportation industry since 1956. MJ Harden's mission is to provide innovative geospatial solutions that make our customers more successful. Our services include:

- Aerial image acquisition
- LiDAR acquisition and processing





NFORMATION SERVICES, INC



- Digital planimetric and topographic mapping
- Digital orthophotography
- GIS consulting and implementations

As part of the GeoEye Corporation, MJ Harden continues to adopt the best technology and practices available to ensure high quality projects are delivered to the client on time and within budget. MJ Harden is ISO 9001-2000 certified and maintains a high level of product quality, with continuous quality improvement processes in place.

### 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:

TB Associates Inc

- GIS/GPS
- Boundary Surveys
- Topographic Surveys
- Hydrographic Surveys
- Route and Utility Surveys
- Water/Wastewater Systems
- Bridges and Structural Design
- Hazardous Material Surveys
- Major Highways and Interstate Design
- Local Roadway/Drainage Improvement

In the GIS services area, NTBA provides clients with turnkey solutions for a wide variety of issues. Our services include:

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- Project design and management
- GIS needs assessments
- Database design, development, and management
- ArcServer implementation
- Data conversion and creation
- Asset Management/Work Order Management
- System integration with GIS
- GPS field collection and inventories
- User training and support
- Custom application development
- Enterprise GIS solutions
- And much more...

### RazorTek LLC is a GIS & Remote

Sensing-consulting firm located in Cordova, Tennessee.



Sharpen Your Technology

Established in 2002, the firm provides services and technology assistance to the ESRI user community, including both public and private sectors. RazorTek specializes in GIS training, feature extraction, product finishing, design, development and automation of complex systems for spatial data display and analysis. Data conversion from CAD into a GIS format and quality assurance services are also offered with our company.

RazorTek is also a provider for satellite (Digital Globe and GeoEye) and aerial imagery for both the private and government sector. RazorTek offers the capability of doing imagery processing and MrSID processing.

If more information is required for RazorTek capabilities with GIS and Imagery services please contact us by email (danr@razor-tek.com) or call us at 303-919-2971.

*The Sidwell Company*, the leading developer of GIS and professional mapping services, has been providing comprehensive mapping and land record information systems to local government for more than 80 years. Sidwell has been at the forefront of GIS technology since 1982, and offers GIS design and implementation; cadastral data conversion and development; Parcel Builder™, the premier software solution for mapping and land records management; aerial photography and photogrammetric services; project

SIDWELL

management; training and technical support services; and web hosting for GIS data. Sidwell is an employee-owned firm, and is an ESRI Business Partner, developer and reseller.

**Stewart Geo Technologies** (SGT) is a professional services organization dedicated to providing geospatial solutions to agencies engaged in the design, construction and



management of public infrastructure systems. Structured to accommodate time-critical and technically demanding projects, SGT supports its clientele with a broad range of geospatial technologies encompassing photogrammetry, orthophotography, and geographic information systems.

Operating as a division of PropertyInfo Corporation, a wholly owned subsidiary of Stewart Title Company, SGT has provided mapping services for almost a half century. SGT offers the following services:

- Aerial Photography
- Aerial Film Scanning
- Aerial Triangulation
- Digital Orthophotography
- Digitizing
- Digital Terrain Modeling
- GIS Application Development

- GIS Database Creation
- GIS Implementation and Training
- Image Plots
- Parcel Mapping
- Vector Land Base Mapping

### Tri-Global Technologies, LLC

Contact: Dennis Heath, GISP www.triglobal.net 866.364.5742

Tri-Global Technologies was formed in 1999 with the philosophy of providing the GIS industry with

the philosophy of providing the GIS industry with innovative yet simple mobile mapping and field data collection solutions while providing the highest caliber customer service and support.

With years of internal field data collection experience, Tri-Global understands the requirement for field proven and easy to use software that is designed with the field technician in mind. Tri-Global is also an Authorized Trimble Service Center offering both warranty and non-warranty related repairs on Trimble Mapping and GIS hardware. One could say that Tri-Global is one of the few developers that truly understands the Trimble Mapping and GIS product line both inside and out. In 2006 and 2007, Tri-Global received the prestigious Trimble Business Partner of the Year Award for its achievements and industry contributions.

Visit Tri-Global to learn about its suite of solutions independently designed for your field collection requirements.

As the Nation's largest water, earth, and biological science and civilian mapping agency, the *U.S. 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 largescale, 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 engages partners to develop standards and produce consistent and accurate data through its Geospatial Liaison Network





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## 2010 GISP CREDIT CHECKLIST

1 Day NON ESRI Training (8 hour) Classification Credits Earned	
Putting Geoprocessing to Work	EDU 0.2
Introduction to ESRI's® ArcPad Software	EDU 0.2
Training Instructor 2 Day ESRI Authorized Training (16 hour) Classification Credits Earned	EDU 3.0
Building Web Maps Using the ArcGIS API for JavaScript	EDU 0.4
Introduction to Geoprocessing Scripts Using Python	EDU 0.4
2010 SCAUG Conference in Fort Worth, Texas Classification Credits Earned	21
Attendee EDU (0.1 x # of days at	ttended)
Presenter CON (1 point per ir	nstance)

Map Gallery

Map Gallery Award Winner

CON 2.0

CON (1 point per instance) \_

## MEETING ROOMS

