Is local government GIS supporting the vision of the NSDI?

I have been following and participating in the development of the National Spatial Data Infrastructure (NSDI) for the last twenty years and until very recently was ready to throw in the towel. I was disheartened with the report card issued by the Coalition of Geospatial Organizations (COGO) that gave a C-grade to the efforts to build the NSDI. Not so much by the grade itself, but by my feeling that this was like sending a report card home to the parents of a kid who dropped out two years ago.

Recent legislation introduced into the US Senate entitled the “Geospatial Data Act of 2015” has given me a sliver of hope. If the NSDI is to achieve its vision then local government will need to be at the table and involved. One of the things that has been missing from the NSDI vision is clear direction and expectations on how and what local governments should be contributing.

In the United States, local government consists of more than 42,000 cities, over 3,100 counties, and numerous special districts. These local government agencies have large variations in geography, population, and essential services provided. While there are many differences between local government entities, one commonality they share is a growing reliance on geospatial data and Geographic Information Systems (GIS) to support the essential services they provide their citizens. GIS is used in land stewardship and land use planning. GIS is used to design and manage public works projects and infrastructure (roads, water, sewer, fiber, and electricity). GIS supports environmental health, human services, and public safety. GIS applications and geospatial data have proven vital in disaster response and recovery efforts. GIS is used to draw and analyze political districts during the redistricting process and helps map voting precincts for elections. GIS has become a foundation of our society and soon all local government will rely on geospatially enabled technologies to provide these essential services to their citizens.

The geospatial data developed and used by local government GIS has value beyond providing essential services to their citizens. The geospatial data developed by local government is highly accurate and current because the essential services provided by local government demand high levels of accuracy and the most current information. Many of the essential services provided by local governments actually require the assembly and maintenance of geospatial data, thus they are the natural stewards of this spatial data ‘infrastructure’. Geospatial data developed locally is needed by state and federal agencies.
program and is being leveraged by the private sector to support all types of business functions. The Federal government has long recognized the value of geospatial data developed by local government. The cost to produce geospatial data nationally at local level accuracies would be astronomical. In response to the need for coordinated development of geospatial data, Executive Order 12906 was signed by Bill Clinton on April 13, 1994 to establish the National Spatial Data Infrastructure (NSDI). The NSDI is defined as the technologies, policies, and people necessary to promote sharing of geospatial data throughout all levels of government, the private and non-profit sectors, and the academic community.

In February of 2015, COGO released a document entitled “Report Card on the U.S. National Spatial Data Infrastructure” that concluded “…the Federal government has not been able to envision the NSDI Framework concepts that were first laid out in Executive Order 12906”. The report went on to identify that “A new model for Framework data needs to be adopted, and this new model must acknowledge the importance of local partners”. In order for the NSDI to be a success, the role of local government needs to be clearly defined. The report card focuses on the seven framework layers, but the new vision for the NSDI has moved away from focusing on the seven framework themes and has expanded the vision to include 16 categories described as National Geospatial Data Assets (NGDA). The shift in focus away from the framework layers may have something to do with the way some government mapping data has been eclipsed by the availability of privately owned mapping resources. Just like there has been no clear definition of how a local government should be contributing to the NSDI, the relationship to private mapping resources also lacks definition.

The development of Google Maps and other web-based mapping platforms like Mapbox, OpenStreetMap, Bing, and Esri’s ArcOnline combined with smart phones and other mobile devices has dramatically expanded the consumer base for geospatial data.

Google Maps has arguably become a ‘pictorial’ representation of the original NSDI framework themes and has met the demands of a significant portion of the consumer place-based mapping needs of the general public (a national map). Six of the seven original NSDI framework layers are included on Google Maps. There is Cadastral data (parcel lines in some areas), Imagery (not orthos but the general public sees it as imagery), Transportation (streets and the ability to navigate from point to point), Elevation (shaded relief - not contours per se), and Governmental Units (type a City or County name and see the boundary). Geodetic Control is not included in Google Maps as it does not have a mass appeal. This ‘pictorial’ representation may fall short of the NSDI vision for the framework data but to the general consumer of geospatial data the NSDI framework data is available and being put to use. What grade would COGO give Google Maps?

To help reinvigorate the NSDI, the “Geospatial Data Act of 2015” was introduced to the US Senate and will “…require federal agencies to implement standards, assist in eliminating duplication, avoid redundant expenditures, accelerate the development of electronic government to meet the needs and expectations of citizens and agency mandates, and improve the efficiency and effectiveness of public management.” It will also provide a clear definition for geospatial data and metadata, require an accounting of the costs associated with the acquisition or creation of geospatial data, and will improve government transparency with the availability of public information. Will the Geospatial Data Act be enough to complete the vision of the NSDI?

One of the precepts of the NSDI is that geospatial data developed to support the essential services provided by local government should be shared and used regionally, nationally, and even globally to eliminate duplication of effort and save tax dollars. It is unfortunate that local government as stewards of the geospatial data ‘infrastructure’ in the context of the NSDI is implied instead of mandated from state and federal government and certainly not funded which has led to inconsistencies in geospatial data development at the local level.

For example, in California there are no adopted standardized geospatial data models in place for use by local government. This lack of standardization does not negatively impact the local government GIS, but without adopted standards, their ability to contribute geospatial data to the NSDI is somewhat diminished. Not having standards has also led to private vendors obtaining the data and standardizing it for regional or statewide use and in some cases selling it back to the local government that provided it. Compiling a layer such as parcels from local geospatial data into a statewide coverage would require cross-walking the attributes and making contacts with

---

**Did you know...**

Spokane, Washington (site of GIS-Pro & NWGIS 2015) was recently named by the Wall Street Journal as one of the “6 Great Small Cities for Food Lovers”!
the individual agencies. California recently attempted to compile a statewide coverage, but gave up on this effort and purchased the statewide parcel data from a private vendor. GIS programs in local government are not always concerned with their geospatial data being incorporated into the NSDI which has opened the door to private entities like Google and Microsoft to fill the void of an incomplete NSDI.

What criteria should be used to evaluate local GIS programs and their spatial data to determine if they adequately support the taxpayers within the jurisdiction? How can local government insure that geospatial data is developed and made available to support the government functions at regional, state, and federal levels? How can we tell if a local government GIS program is capable of supporting the geospatial data infrastructure needs of the Nation (the NSDI or the privatized versions)? How do we define a local GIS program as being successful?

URISA's GIS Management Institute has developed the GIS Capability Maturity Model. This is a complex self-assessment system used to evaluate the status of an individual GIS program. The status and availability of the seven core framework layers are included in the evaluation, but how and if the framework data is being provided to the NSDI is not identified. It is not clear how this Maturity Model helps local government track their progress towards supporting the vision of the NSDI.

The National States Geographic Information Council's (NSGIC) Fifty States Initiative developed ten criteria that identify the characteristics of a successful state GIS program that are used by NSGIC to evaluate the status and GIS capabilities of each state. Some of the ten criteria include having strategic and business plans, clearly defined authority and responsibility for coordination, and statewide coordination efforts that can be a conduit for federal initiatives. The ten criteria can be used by state GIS coordinators to help them work towards common goals. It is not clear how these criteria are used to gauge the State GIS program’s success towards supporting the vision of the NSDI. If state government is to play a significant role in the vision of the NSDI then each state could benefit from adopting legislation similar to the Geospatial Data Act to codify the state’s responsibility with respect to building the NSDI.

Local government GIS programs are developed without the benefit of common goals or accepted criteria that define the characteristics of success. GIS professionals look to peers in similar jurisdictions for best practices or search technical publications for success stories and attend user conferences to exchange ideas and share experiences. These actions help improve the local GIS programs but do not provide a means to understand progress toward common goals, define roles as data stewards for the NSDI, or gauge their level of contribution to the development of the NSDI.

Each local government GIS program is different in terms of immediate concerns, challenges, and resources, however criteria can still be established similar to the Fifty States Initiative and the Maturity Model and then applied to local GIS programs to help understand how they can work towards common goals to achieve the vision of the NSDI. There is certification for individuals in the form of GISP, where individually we are reviewed against a set of criteria that establishes a base line of professionalism. This same type of certification can be applied to local government GIS programs. A possible list of criteria for evaluating a local governments’ GIS program and their ability to contribute geospatial data and resources to help achieve the vision of the NSDI could include:

- The governing board understands the value of contributing their geospatial data to the NSDI and GIS funding is included in annual budgets.
- GIS staffing levels are proportional to the population and infrastructure served. For example, a city or county with a population of 50,000 may need at least one full time GIS professional. At a population of 100,000 three professionals, etc.
- GIS data is regularly maintained to describable tolerances and easily accessed via the Internet or some other means.
- The agency is dedicated to work towards adopting standard data formats and data models so the geospatial data produced and maintained can be easily incorporated into the NSDI.
- There is at least one staff member with some time dedicated to coordinate with external agencies on geospatial data development and to work towards the vision of the NSDI.
- There is a GIS strategic plan and needs assessment that is updated at least every five years. The strategic plan would have timelines and resource needs tied back to moving the GIS program towards the vision of the NSDI.
- The local government completes the GIS Maturity Model every five years and publishes the results.
- There are active training programs to educate users on the value of GIS and the vision of the NSDI.

While this list is not complete, defining success is the first step in achieving it. If the NSDI is to achieve its vision there needs to be common goals and measurable criteria for evaluating GIS programs at the local government level with respect to their ability to contribute to the vision of the NSDI. Having measurable criteria could assist local governments in defining resource needs and provide GIS staff with the ability to communicate program status to their governing boards. State and federal GIS program coordinators could use the criteria to evaluate continued on page 4
the development of GIS in local government and direct assistance to those entities that need it. Having criteria to evaluate local government GIS programs would help the GIS profession by establishing expected levels of service, setting common goals towards supporting the vision of the NSDI, and defining success. Without stronger support from local government, the NSDI will continue to be a C-student.

About the Author
Matt Price, GISP, has been involved in geospatial data development for over 20 years. He is a native Californian and has an A.S. in Computer Information Systems, a B.S. in Surveying Engineering, and a Masters in Geography. He is currently the Chair of the Central Coast Joint Data Committee. He has been the GIS Manager for Santa Cruz County, California for the last 12 years and has taught advanced GIS classes at West Valley Jr. College since 2006. He can be reached at matt.price@santacruzcounty.us.

URISA Member News

(May 21, 2015) - Huge congratulations to William Huxhold who has retired from the University of Wisconsin-Milwaukee after a very distinguished career. Bill was president of both URISA (1984-85) and UCGIS (2000) and has been a deserving recipient of every URISA award including being inducted into URISA’s GIS Hall of Fame. He was instrumental in the development of GIS professional certification. In honor of his accomplishments, the Mayor of the City of Milwaukee declared May 21, 2015 to be William Huxhold Day. View the Mayor’s proclamation here.

(June 16, 2015) - Scott Taschner, Principal and GIS Specialist at GIS-Pros has been awarded professional GISP certification by the GIS Certification Institute (GISCI).

Take the Next Step! Earn Your Master’s in GIS Management

Salisbury University’s M.S. in GISM — now in its eighth year — is designed specifically for the working GIS professional who seeks the management credentials needed for career advancement.

Specialized Program
- Combines management and technical proficiency
- Customized for those in government, business and non-profits
- Earn education credits for GISP® certification

Convenient and Accessible:
100% online
- Earn degree full time in 13 months or part time in 2 years

Value-Added Education
- Complete coursework on your schedule
- Open to international students

For more information contact: Dr. Stuart Hamilton
410-543-6460 • sehamilton@salisbury.edu

www.salisbury.edu/msgism

APPLY NOW
Join URISA and IAAO for the 20\textsuperscript{th} Anniversary of the GIS/CAMA Technologies Conference

February 22-25, 2016 • Hyatt Regency Savannah - Savannah, Georgia

We’re going back to the ‘birthplace’ of this conference to celebrate the milestone 20th anniversary! This annual conference and exhibition is cooperatively presented by URISA and the International Association of Assessing Officers. This conference is designed to foster collaboration and integration of data, technology and functionality.

Call for Presentations • Submissions due: September 21, 2015

The educational program is developed through a review of submissions received through the Call for Presentations. The 2016 Conference Committee welcomes the submission of individual papers, complete sessions, panels and lightning talks and has proposed a list of suggested program tracks and topics for consideration (note that all abstracts received will be reviewed and considered for the conference program regardless of the list below).

We welcome topics of interest for all levels of expertise, from beginner to expert. As always, International topics are encouraged. To celebrate the anniversary of the conference, we’d also like to include a few presentations that explore how a specific technology or topic has developed over the twenty years that this conference has been in existence, while also incorporating a look to the future.

GIS Technologies
• CAMA GIS 101
• Web services
• Showcase your mapping system
• Aerial imagery and remote data collection used for assessment
• Mobile technologies
• GIS-centric database uses in mass appraisal
• GIS and CAMA sketch data
• Past, present and future

Parcel / Cadastral Mapping:
• Parcel editing systems
• Topology and related parcel errors
• Legal descriptions
• Cadastral data limitations/disclaimers (legal issues)
• Conversion case studies
• Requirements for moving into the parcel fabric (successes, lessons learned, alternatives to…)
• Real-world applications of standards (Cadastral, GIS etc…)
• Metadata
• Authoritative land/property records data
• Past, present and future

Integrating GIS & CAMA Data
(object-level /sub-parcel data possibilities):
• Manufactured housing
• Agricultural soil subtypes
• Mixed use properties
• Special Districts
• Condominiums
• Building footprints
• Severed mineral rights
• Addressing
• Commercial & Residential (multi-tenant properties)
• Business personal property
• Natural gas—storage and transmission
• Oil and gas valuation
• Zoning considerations
• Water rights
• Past, present and future

Professional Development
• Management challenges
• Effective communication strategies
• Public relations
• Office administration
• Career paths
• Past, present and future

Using Assessor’s CAMA Data and GIS for Emergency Planning
• Damage assessment
• Hazard mitigation
• Generation of accurate building layers for 911 / Emergency Services
• Data sharing (before and after an emergency)
• Cost sharing initiatives for expensive, big data, such as imagery
• Workflow support
• Valuation support
• Emergency support
• Past, present and future

Valuation
• Residential, Agricultural, Commercial valuation models
• Modeling to identify over/under valued properties valued by appraisers
• Spatial multiple regression
• Valuation appeal hearings, how to build a better case
• Desktop review using results of remote sensing / batch analysis processes
• Physical inspection vs. desktop evaluation
• Past, present and future

Data Sharing & Tax Policy Issues
• Licensing agreements
• How technology can help you share, protect and use your data
• Cross-organization technology and data cooperation – MOUs
• Case studies and success stories
• Water rights
• Legislative barriers/solutions
• Public private partnerships
• Centralized or decentralized GIS?
• Who is using your data and for what?
• Investment properties
• Vacation rentals
• Past, present and future

Again, this list is not comprehensive. All abstracts will be reviewed and considered regardless of the suggested topics in this table.
The 4 Keys to Building Rapport
Tearing down the WALL

By: Mark A. Vickers

Emily, a sales manager in a large organization, was having significant challenges with her team. Communication with team members was inconsistent, and she continually struggled to motivate them. Her team was regularly missing their monthly objectives, and failed to provide meaningful status updates.

The core issue Emily faced is all too common. Anytime you are communicating with people, your ability to create rapport is key to your success. Emily did not realize that there is a WALL between her and the team, and her responsibility to take the WALL down as quickly as possible.

Two simple questions helped Emily realize she had not built rapport, or developed any form of relationship with her team members.
1. Have you spent time building a relationship with your team members?
2. Do you know what they like, want, and need at home and at work?

In Emily’s case, the answer to both of these questions was no. She was attempting to manage people with whom she had no relationship other than being “the boss”.

Establishing strong rapport does not mean learning everything about your customer or employee’s private lives, but rather, showing them that you care about them and what is important to them.

Taking the WALL down
The wall between you and other people can be removed by developing your skills and maintaining focus on four key concepts:

W - Watch
A – Ask
L – Listen
L – Learn

W - Watch
Observe any master of rapport, and you will see a person who has a keen awareness of their surroundings including other people and how they react.

What to watch for before the first word is spoken
When you enter into a rapport building situation, your observation skills will help you determine good starting points for your conversation.

Before the first words are said, take a few seconds to take stock of the surroundings.
If you are meeting someone in their home or office look for conversation starters or anything that might create common ground.

You might look for:
- Any item that is given a place of prominence
- What is on their desk and side tables
- Pictures
- Awards, memorabilia, or collectibles

If they are coming into your office you will have fewer clues so pay close attention to what they are looking at. When you notice that they are paying special attention to something, it may be a sign of a potential conversation starter.

As you are building rapport
Once engaged in a rapport-building conversation, your skill at observing the reactions of the other person will help you guide the conversation in the most productive direction.

Pay close attention to:
- Their eyes
- Their body positioning
- Their gestures
- What they look at during the conversation

Caution
When you are observing people as part of rapport-building, never make an assessment based on a single “sign”.

People are called “individuals” for a reason and each will respond in their own way. Look for combinations of signs and signals, and changes over the course of the conversation to understand more accurately how they are responding to you.

A - Ask
Asking powerful questions will provide you the most reliable way to create rapport. Beyond just asking powerful questions, having a strategy with preplanned questions frees you to focus more intently on the other person.

As you consider the questions you will use to build rapport, choose questions that will:
- Show you taking an interest in them
• Build a relationship based on the needs of the other person
• Show your understanding of your area of expertise
• Gather important information to direct the conversation

By asking questions that show a genuine interest in the other person’s wants, needs, and interests, they are more likely to open up to you.

If you have similar rapport-building situations on a regular basis, take the time to develop a question library that you draw from when building rapport.

Caution
During the rapport-building segment of a conversation, it is easy to slip into the “I” mode, telling the other person everything about what you do. Your objective is to get them into “I” mode.

Keep the rapport-building about them. They should be doing most of the talking.

L - Listen
You have asked your powerful questions and now it is time to employ the most important rapport-building skill – listening.

So many professionals ask all the right questions, but they don’t really listen to the answers they are given. These professionals assume they are building rapport, but they forget to really listen:
• Intently to the words
• For changes in tone, volume, or speed
• Vocal cues for emotions like excited, contemplative, annoyed
• For vocal cue and body language changes
• Watch for changes and correlations between words/vocal/body to establish base line responses

In addition to paying close attention to what the other is saying, become an expert at listening to what is not being said in your rapport building discussion.

There are two specific situations to be aware of: the one word answers, and intentional omissions and avoidance.

If you’re asking powerful questions and all you’re getting back is one word answers, odds are you’re going down a track that the other person is not interested in pursuing.

In addition to single words answers, it is not unusual for the other person to provide partial answers as they omit the details in an attempt to avoid complete disclosure. In many cases, the omitted information is exactly what you want to learn, but they are not yet comfortable sharing. Make a quick mental note and find a way to come back to that point later in the discussion.

Caution
Rapport building should never feel like an interrogation. Remember that your objective is to get to know as much about them by letting them know and feel that you care about what is in their best interest.

L - Learn
Learning how to build rapport is about trying things, watching and listening, observing the end result and learning from it so that you adjust your approach the next time.

There’s no one right way, or a magic process to building rapport so it is important to learn what works for you and the situations you work in.

Become an ACTIVE student of rapport building:
• Learn what works for you with different people and different situations
• Become more aware of how others react to you
• Try new approaches when encountering roadblocks
• After each attempt at rapport building do a critical assessment
• Watch how others build rapport

Less than one month after Emily began focusing on removing the WALL with her team, people who were distant became engaged both personally and professionally, and overall team performance began to improve.

Become a student of building rapport and over time you will see your ability to generate rapport will develop quickly and your success rate skyrocket.

ABOUT THE AUTHOR:
Mark A. Vickers is a Certified Professional Coach, a Gitomer Certified Advisor, and Certified World Class Speaking Coach. Mark is a communications consultant focused on helping you and your organization achieve Excellence through improved communication and speaking skills. He is known for creating and delivering specialized and innovative programs to help his clients. For more information about Mark and his workshops, consulting, certification programs, please visit: http://speakingisselling.com/

Did you know that URISA has an Active Policy Advisory Committee?
URISA actively works to advance and support the GIS profession and GIS professionals. That work requires developing clear positions on critical issues and advocating for those positions. Check out some of their recent great work online.

The Policy Advisory Committee (PAC) is advisory to the URISA Board. It monitors local and national activities, advising the board when it feels action is necessary and recommends appropriate responses. Contact PAC Chair Bruce Joffe at gis.consultants@joffes.com.
The National Center for Transit Research, Urban and Regional Information Systems Association and the Transportation Research Board are jointly presenting the 9th National GIS in Transit Conference, on September 1-3, 2015, at the Hamilton Crowne Plaza in Washington, DC. (Note that Labor Day is September 7 this year.) Watch for the announcement of our closing keynote speaker, an innovative GIS in Transit Tools Exchange, and additional session details!

Head to the Conference Website for all of the details:
- Detailed Conference Program
- Exhibitor & Sponsor Opportunities
- Registration & Venue – registration discounts until July 13

Conference Highlights

Keynote Address: Connecting Cities and Citizens to Outsmart Traffic Together
Paige Fitzgerald, Waze Connected Citizens Data Exchange Program

The Connected Citizens Program is an ongoing partnership between Waze and various international government agencies to share publicly-available incident and road closure data in order to accomplish two goals:
1. To get Waze-reported incident data into the hands of government officials that can address the reported incident, whether it’s a five car pile-up or a pothole.
2. To give Waze drivers the best real-time, location-based information on what’s happening on the roads, whether during a commute or a unique crisis situation.

Preconference Workshops:
- Asset Management: Planning, Strategy, and Implementation

Nearly 60 presentations in breakout sessions including:
- SmartBus: GIS and on-board Bus Technologies (AVL, APC, AVA)
- Washington DC: A Case Study in Enterprise GIS Implementation
- Innovative Technologies
- Transit Asset Management
- High Frequency Transit Service
- Land Use and Public Transit
- Safety and Emergency Management
- New Spatial Tools
- Small and Medium Transit Agencies
- Building Organizational Readiness and Collaboration
- Surveys for Transit Markets
- Stop and Station Accessibility
- Bus Stop Management
- System Wide Accessibility
- Transit Needs and Service Gaps
- Several additional sessions are being finalized!
As a mature organization URISA sometimes focuses on the details of the immediate and not as much on the bigger picture and how things work together. It has been a while since we had our Constitution, By-laws and Policy Manual all aligned and up to date. Recent adjustments to some documents were not reflected in other documents and, in general, confusion reigned.

A blue ribbon panel was formed last fall to analyze and propose updates to these Core Documents. The panel’s charter initial charter was to make the bylaws clearer, harmonized with the constitution, and to reflect the current functional structure of URISA. No small task in itself, it became clear almost immediately that the Policy Manual would need to be reviewed and updates proposed as part of the overall process. This review and proposal process is nearing completion, and the materials are being forwarded to URISA’s Board of Directors for endorsement and adoption. The Board has been closely monitoring the review and the proposals and has helped to tweak the wording to be closely aligned with the functional organization of URISA.

The highlights of the changes to URISA’s Core Documents are:
- The Constitution, last reviewed in 1986, has not been touched.
- The relationship between the Board and committees was made closer, so the support and communication from and to the Board would be timelier and more effective.
- Several redundant sections in the Bylaws and the Constitution that said the same thing in slightly different ways were removed from the Bylaws.
- Overly detailed descriptions of responsibilities were clarified and simplified.
- Committees were defined in ways that have fewer overlapping responsibilities.
- The Policy Manual was significantly updated.
- Temporal content was moved from the Bylaws into the Policy Manual to ease its maintenance.

In July, the Board will review the final proposal and endorse it. We will then re-affirm our relationships with the various committees and fully publish the updated documents through our transparency initiative.

This hard work has set a solid foundation for URISA to continue supporting the geospatial profession.
YOU BRING THE BUCKET.  
WE BRING THE LIST.

In Spokane, those “someday” adventures become “today” adventures. Taste the creations of James Beard-recognized chefs and award-winning craft breweries and wineries, along with locally (and globally) inspired cuisine. Seek outdoor adventure with seasonal sports, biking and hiking on Riverside State Park trails, moonlight snowshoeing at Mt. Spokane, and more. Find indoor adventure with shopping that ranges from national retailers to one-of-a-kind boutiques, as well as Broadway shows and other artistic pursuits. Start putting check marks next to those bucket list items now.

1.888.SPOKANE or VisitSpokane.com
Mining U.S. Federal Agency Materials for GIS Nuggets

Dr. Barry Wellar Program Director, GIS Retrospective Project Principal, Wellar Consulting Inc. Professor Emeritus, University of Ottawa

Background

The GIS Retrospective Program began in 2013 with AutoCarto Six Retrospective, and is further defined by several papers in the International Journal of Applied Geospatial Research (Wellar, 2014, 2015, 2016 -- see the Reading List for details), as well as by slide presentations, papers, and discussions from the colloquium, “Using the Retrospective Approach to Mine for GIS Nuggets”, which was held February 13-14, 2015, at the Esri campus in Redlands, CA. A summary report, thirteen slide presentations, and six papers from the colloquium can be viewed at http://www.wellar.ca/wellarconsulting/. Upon review of the colloquium activity, Esri decided that it wished to support further investigations into the idea of using the retrospective approach to mine “the literature” for GIS nuggets. Discussions among principals led to the decision that the next step in the GIS Retrospective Program would be to hold an Applied Research Seminar, Mining U.S. Federal Agency Materials for GIS Nuggets, during the 2016 Esri Federal GIS Conference.

Seminar Objectives

A number of objectives define the GIS Retrospective Program. The following objectives are among those raised in discussions which are pertinent to the federal agency seminar project.

1. Share information about publications which describe retrospective research methodology.
2. Share information about publications in which retrospective research methodology is applied in reviews, evaluations, benchmarkings, updates, state-of-the-art surveys, state-of-the-science scans, state-of-the-technology assessments, content analyses, and other examinations of the literature on GIS technology, GIScience methodology, and the uses of GIS technology and GIScience methodology.
3. Demonstrate why an agency’s productions (analog and digital -- including text and numeric documents, as well as images, maps, photographs, videos, films, scans, graphics, and other representations of geospatial phenomena) should be mined for GIS nuggets.
4. Share information about publications that describe using the retrospective approach to mine agency materials for GIS nuggets.
5. Share information on how to mine an agency’s analog and digital productions -- including text and numeric documents, as well as images, maps, photographs, videos, films, scans, graphics, and other representations of geospatial phenomena -- for GIS nuggets.
6. Share information about productions which have been the source of GIS nuggets. In addition to the agencies themselves, contributions to this objective include inputs from seminar attendees and other interested parties reporting on their mining experiences.
7. Provide a framework and ideas for other federal agencies that may wish to host a similar seminar, and/or implement a practice of contributing to the literature on mining agency materials for GIS nuggets.

Rationale for Retrospectively Mining Agency Materials

A detailed discussion of the rationale for retrospectively mining federal agency materials is the subject of a report in progress. The following brief comments provide an appropriate level of detail for a seminar overview.

But first, there is a general point to be made for context purposes. That is, beginning with discussions associated with AutoCarto Six Retrospective, and continuing through the colloquium, numerous concerns were raised about the seeming widespread lack of knowledge about the existing literature on GIS technology, GIScience methodology, and their uses.

The general point of concern from a professional or scientific standpoint is that statements and publications are “put out there” without any awareness or regard that pertinent, precedent literature appeared in the public domain 1, 2, 5, 10, 20, 30, and even more years previously. And, beyond the general concern about casualness, superficiality, lack of grounding, weak research practices, etc., many specific concerns were expressed about the political, institutional, organizational, financial, and other consequences of published materials which misrepresent the actual foundations and evolution of thinking and doing in GIS and GIScience.

The message of those discussions for the seminar, therefore, is that it is prudent for agencies to assume that presentations about their holdings are breaking new ground for some and perhaps many seminar attendees, as well as for some and perhaps many other interested parties who access their presentations via a website posting.
In addition to that general reason for agency presentations, reasons related to such matters as return on investment, performance measurement, good governance, better decision-making, origins of policies, roots of programs, monitoring processes, identifying state-of-art changes, measuring state-of-science impacts, and evaluating state-of-technology shifts provide further grounds for agencies to make presentations which encourage the retrospective mining of their materials for GIS nuggets.

Finally, at a more detailed, day-to-day operational level, federal agencies directly and indirectly engage in and/or promote a variety of GIS-related and GIScience-related activities that involve significant expenditures of funds by the agencies themselves, as well as by other federal agencies, state and local governments, businesses, and other parties affected by agency operations.

It therefore follows that agencies which have an operational history of undertaking, supporting, promoting, or mandating activities such as the following will by definition have created bodies of material which could be an abundant source of GIS nuggets:

1. Examining and testing GIS technology to acquire geospatial data.
2. Using GIS technology to organize and catalogue geospatial data.
3. Using GIS technology to analyze and synthesize geospatial data.
4. Applying GIS technology to disseminate geospatial data.
5. Compiling geospatial data and generating geospatial information through analysis and synthesis activities.
6. Using GIS technology to disseminate geospatial information.
7. Using GIS technology to support policy formation, implementation, and evaluation.
8. Using GIS technology to support program development, implementation, and impact assessment.
9. Using GIS technology to support project design and implementation.

Clearly, the activities listed are less than even “the tip of the tip of the iceberg” when it comes to indicating why there is an abundance of agency materials which warrant being mined for GIS nuggets. An illustration of a more extensive list of terms which could be used to guide retrospectively mining U.S. federal agency materials is provided by Table 3, Examples of research and GIS verb forms which are sources of ideas for doing research and/or doing GIS. The table of verb terms can be found on page 23 of the colloquium report, Developing a compendium of ideas on using the retrospective approach to mine for GIS nuggets: Initial considerations.

Seminar Design Specifications
Three recommendations arising from a number of post-colloquium discussions provide the parameters for seminar design:

Build explicit continuity with the colloquium into the seminar objectives, content, and processes so that there is a cumulative aspect to the GIS retrospective program.

Provide a body of reading materials in advance of the seminar so that attendees can properly prepare for the presentations and discussions. And, conversely, presenters can reasonably assume that interested parties have internalized the reading materials, and they can therefore design their presentations accordingly.

For logistical and for effective communications reasons, the applied research seminar will be limited to presentations by a maximum of three or four federal agencies which have long and significant histories in the origins and evolution of GIS technology, GIScience methodology, and the uses of GIS technology and GIScience methodology.

Seminar Reading List
The initial version of the reading list will be posted no later than July 31, 2015 at http://www.wellar.ca/wellarconsulting/.

Update Notices
During the lead-up to the Esri Federal GIS Conference, February 24-25, 2016, occasional reports on seminar developments including information about participants, topics of presentations, background reading materials, links to resources, etc., will be posted at http://www.wellar.ca/wellarconsulting/.

Comments or questions about the Applied Research Seminar, Mining U.S. Federal Agency Materials for GIS Nuggets, may be sent to: wellarb@uottawa.ca.
ULA in Denver was a Huge Success

The event sold out 2 months before it started. Attendees were from Canada, Cayman Islands and more than 20 US States. A diverse group of GIS leaders both geographically and organizationally (private sector, local government, state government, federal government, nonprofit, academia). There is NO OTHER organization that can pull GIS talent from such a diverse background. UNIQUE content, taught by industry leaders with YEARS of practice, teaching future GIS leaders from a variety of disciplines the skills they need to move themselves, their organizations, and the industry forward!

Some of the tweets from the week:

**Scott Tometich @geoSkaht** - Learning how to support my evil GIS plan through organizational support today. Good stuff! #ula2015

**Teal Wyckoff @TealWyckoff** - Great first couple of days at the URISA Leadership Academy. GIS organization-specific leadership and management. Thanks #ULA2015 instructors

**Brian Sullivan @Talisn:**
- First day at @URISA Leadership Academy. Good group and lots of GIS diversity. #ULA2015
- Good morning discussions on employee relationships at Leadership Academy and how GIS influences folks. #ULA2015
- Day 2 @URISA Leadership Academy. Talking building a quality GIS team and justifications #ULA2015 GTCM (geospatial tech competency model)
- Day 3 @URISA Leadership Academy. Building Organizational Capacity today. Good discussions yesterday on hiring the right people. #ULA2015

**Jen Zumbado @jzumhan** - #ula2015 was enlightening; had powerful resources; & most of all an amazing group of peers.

**Alicia @sullival14** - Finishing up a great week at ULA 2015 #ula2015 #GIS #geoglobaldomination

**Jean Olson @runningjean** - Keynote speaker Cindy Domenico. Graduation day from URISA Leadership Academy! #URISA #ula2015 pic.twitter.com/M3OBawefCt

**Scott Tometich @geoSkaht** - Freshly graduated from @URISA #ULA2015! Great experience and awesome #geopeeps!

**JLyon @AR_TennisHack** - Home from #ULA2015 next event #ESRIUC excited to keep moving the City GIS forward

Scott Tometich @geoSkaht - Elevator pitches can happen at any time! Mine came the minute I arrived back to work from @URISA #ULA2015! #crazytiming

Working on ULA 2016 in Chicago. Stay tuned!
Start reviewing the abundance of education that will be presented at the conference in Spokane this October.

Our Online Conference Program details all of the pre-conference workshops, breakout sessions, meetings, networking events and keynotes. Review the abstract submissions and speaker biographies. Connect with your fellow attendees!

Conference Registration is open and the Grand Hotel is taking reservations for sleeping rooms.

Exhibit and sponsorship opportunities are detailed and available.

The conference is only 4 months away...see you in Spokane, Washington, October 18-22, 2015!
“Scale can be a frustrating concept,” wrote the authors as the opening sentence in the preface to this book. We agree, and also concur that the authors of Scale in Spatial Information and Analysis explain this “frustrating” concept with such comprehensiveness and deep understanding that for us it has lost that aspect and the process of learning more became a pleasurable exercise.

Although scale is a fundamental concept in the geosciences and plays a key role in geographic representation, measurements, analysis and modeling, the topic has rarely been addressed in a comprehensive manner. In this text, the authors link the concept of scale and its nuances with issues and challenges in cartography, spatial accuracy, spatial sampling, and spatial statistics/geostatistics. The book provides an extensive coverage of the concept of scale from the perspective of three phenomena: data (spatial and space-time), measurement (sampling framework to create data), and reality (matter, processes). The authors provide several forms of spatially explicit models that can be used to characterize the scales of spatial and space-time variation in data. The role of sampling is also explained in detail - sampling can affect data and requires appropriate data handling in spatial and space-time analysis. The authors also identify research needs concerning current scaling issues, and how the concept of scale may affect future developments from the perspective of space-time, model-based geostatistics, multiple-point geostatistics, crowdsourcing and geoportals, networks, and complexity science.

The text is highly coherent with a logical organizational structure with twelve chapters. Each chapter starts with an explanation of the fundamental theory and concepts, followed by well-chosen examples from the literature on spatial scale phenomena and its applications. Underlying geostatistical methods, models, and approaches are described and applied in each chapter.

Chapter 1 introduces geographic conceptualization concerns how spatial entities and distribution should be represented. Chapter 2 describes geospatial conceptualization and scale dependence. Chapter 3 focuses on geospatial measurement and related scale issues by reviewing spatial sampling such as sampling density and data support. Chapter 4 explains geostatistical modeling of scale based on variograms, which assume continuous indexing of locations over space. Chapter 5 discusses lattice data and their scale models, based on measures of spatial autocorrelation, for which neighborhood relationships play a central role in data analysis and scale. Chapter 6 focuses on geostatistical approaches particularly on variants of kriging techniques such as simple, ordinary, universal methods for upscaling, and geostatistical inverse modeling for downscaling. Chapter 7 explains the statistical and mechanistic methods for upscaling and downscaling of gridded lattice data. Chapter 8 presents geostatistical methods and other multi-scale methods for conflating multi-scale spatial data. In Chapter 9, authors present scale in digital terrain analysis. Chapter 10 describes a discriminant space-based strategy for area-class mapping. Chapter 11 introduces the fundamentals on informational analysis of geospatial datasets and research efforts made towards it. In the concluding chapter, the authors investigate the interactions between scale and uncertainty and seek to incorporate scale dependencies in uncertainty characterization.

The book gives extensive coverage of geostatistical methods and models from the perspective of scale. The geostatistical models and their association with scale and scaling concepts are profoundly explained. In addition to presenting theoretical and descriptive aspects of geostatistics, the authors provide the underlying formulas for the generation and application of these methods. However, while there are numerous equations and occasional diagrams, the text is largely lacking in pictures, graphics, and maps. Some well-selected illustrations and examples could have conveyed complex topics more easily to the reader.

Issues of scale have always been central to theory and research in geography, and, for this reason, many geospatial science books include scale in their content. The concept of scale in geospatial science has multiple referents (e.g. spatial scale, temporal scale, thematic scale, cartographic scale,
analysis scale, phenomenon scale, etc.). While this text provides broad and explicit coverage of the concept of scale in spatial information and analysis, and will serve as a useful reference tool, its content is geared toward more advanced users rather than those beginning to explore the field of geographic information science. Most likely, instructors and faculty will find this book more useful for graduate-level courses.

In summary, scale is an important component in geographic information science and has attracted substantial research into spatial analysis and modeling. Advances in the understanding of scale and the ability to investigate scale-related problems will be increasingly necessary, with the ever-expanding capabilities of geospatial technologies. This book should become a standard reference work in the GIS practitioners’ professional library. Providing a comprehensive resource on scale in spatial information and analysis, and state-of-the-art statistical methods for analyzing scale and for scaling data, it will also be useful to educators, geospatial scientists and students from various disciplines.

Reviewed by: Semiha Caliskan and Russell S. Kirby, University of South Florida, Tampa

URISA Board Candidates Announced

URISA’s Leadership Development Committee recently presented its recommended slate of candidates to the URISA Board of Directors. The Board approved the slate, listed below, for its 2015 election. Those elected will begin their three-year Board terms following GIS-Pro & NWGIS 2015 in Spokane, Washington in October.

URISA is pleased to present the following list of candidates for URISA President-Elect and for Directors on the Board.

Approved Slate for URISA 2015 Election:
FOR PRESIDENT-ELECT:
• Tripp Corbin, GISP (eGIS Associates, Inc - Dacula, Georgia)
• Kim McDonough, GISP (Tennessee Department of Transportation - Nashville, Tennessee)

FOR BOARD OF DIRECTORS—(to fill 3 positions):
• Stephen Berry, GISP (Clark County Consortium for GIS – Winchester, KY)
• Keri Brennan, GISP (The Schneider Corporation – Indianapolis, Indiana)
• Corey Halford, GISP (City of Airdrie – Alberta Canada)
• Alex Hepp (EagleView/Pictometry – Rochester, New York)
• Brent Jones (Esri – Vienna, Virginia)
• Donna Phillips, GISP (City of Hayden, Idaho)

The official ballots will be distributed to the entire URISA membership in mid-July. To help members decide for whom to vote, candidates will provide a profile of their professional experience and a statement about their ideas for URISA’s future.

Board members whose 3-year terms expire on October 22 include Immediate Past President, Allen Ibaugh, Doug Adams, Danielle Ayan and Claudia Paskauskas. Carl Anderson’s presidential term will conclude and Rebecca Somers will be President at that time.
Welcome New URISA Members

Kathy Adelman — City of Danville—Danville, VA
Karlene Amos, GISP—Orange City, FL—Orange City, FL
Rachel Applebaum—Amherst, PA
Anton Balanevskiy—buffalo, NY
Jeff Barnhart—Groveport, OH
Samy Bouma Ngock, GISP—United Nations MINUSMA—Trenton, ON Canada
Linda Burbank, GISP—Unitil Corp.—Hampton, NH
Douglas Caldwell, GISP—US Army Corps of Engineers—Alexandria, VA
Eva Cancino, GISP—City of Naperville—Naperville, IL
Scott Carmine—Atlanta, GA
Jeffrey Cary—Town of Andover—Andover, MA
Xi Chen—Ann Arbor, MI
Ryan Cooper —Georgetown-Scott County Planning Commission—Lexington, KY
Christopher Cruz, GISP—West Valley College—Saratoga, CA
Barbara Deverse—Sparks, NV
Fred Doneit—Stamford, CT
Jennifer Dowling—Anchorage, AK
Jenni Ellsworth, GISP—WorldView Solutions Inc.—Richmond, VA
Alexandra Fredericks, GISP—CNTS (Cherokee Nation Technology Solutions)—Saint Petersburg, FL
Nicholas Gordon—GeoCGI—Ashburn, VA
John Gray—National Geospatial - Intelligence Agency—Henderson, NV
Lainey Greiner—Bernalillo County—Albuquerque, NM
Trista Hahn, GISP—Civil Design Inc.—St. Louis, MO
Bethany Hall, GISP—Rutherford County—Murfreesboro, TN
Charles Hanley—Seaside, CA
Craig Harmak, GISP—Florida Fish and Wildlife Research Institute—Tallahassee, FL
Jeff Harmon, GISP—City of Lake Oswego—Happy Valley, OR
Jonathan Heiss, GISP—Jacobs Engineering Group—Arlington, VA
Nathan Hendrix—Bernalillo County—Albuquerque, NM
Anthony Hewitt, GISP—Defense POW/MIA Accounting Agency—Kaneohe, HI
Jason Hickerson—Doyon Utilities—Anchorage, AK
Shonia Holloway, GISP—CH2M HILL—Hampton, VA
Raymond Jennings—Ooltewah, TN
Taylor Johnson, GISP—United States Geological Survey—Flagstaff, AZ
Min Sung Kim—Los Angeles, CA
Eleza Kollannur—Pune, Maharashtra India
Kyle Lampert—Nashville, TN
Del Leu, GISP—Atkins—Portland, OR
David Litke, GISP—Lakewood, CO
Sherry Loos, GISP—WSOS Community Action Commission—Kenton, OH
Ryan McCarley—Moscow, ID
Pam McKenzie, GISP—CAEN LLC—Calgary, AB Canada
Marci Meixler, GISP—Rutgers University—New Brunswick, NJ
Tricia Melville, GISP—Ministry of Land and Marine Resources—San Juan, Trinidad And Tobago
Joseph Miglio—Houston, TX
Dwain Miller, GISP—Prince George Electric Cooperative—Prince George, VA
Diane Munroe, GISP—Stantec—Lethbridge, AB Canada
Samer Musssmar, GISP—Khatib & Alami—Riyadh, 1 Saudi Arabia
Wolf Naegeli, PhD—University of Tennessee—Knoxville, TN
Kirk Nordyke, GISP—State of Wyoming, Game & Fish—Cheyenne, WY
Abimbola Olukuewu—Wiesbaden, Germany Germany
Lee Owens—Memphis, TN
Loren Pfau—Evergreen, CO
William Powell, GISP—City of Fairhope—Fairhope, AL
Jeffrey Reed—Pensacola, FL
Benton Rice—Quad Knopf—Bakersfield, CA
Andee Richards—Plant City, FL
Kendra Rodgers—Englewood, CO
Zack Roehr, GISP—Syndeste—Alexandria, VA
Dinesh Sharma, GISP—David Lock Associates—Milton Keynes, Buckinghamshire, United Kingdom
Brady Smith, GISP—Confederated Tribes of Siletz Indians—Medford, OR
Kishore Sundaresan, GISP—Ministry of Municipalities and Urban Planning—Mahooz, Al Manama, Bahrain
Arnaud Vedy—San Diego, CA
David Wagner, GISP—Greenman-Pedersen, Inc.—Lebanon, NJ
Jason Watson, GISP—City of Tuscaloosa—Tuscaloosa, AL
Renata Weir—Calgary, AB Canada
Dale White, GISP—Ohio Environmental Protection Agency—Columbus, OH
Chengyan Wu, GISP—Harris County Appraisal District—Houston, TX
Rebecca Wynd—University of California, Berkeley—Larkspur, CA
Nathan Wysocki—HDR Engineering—Colorado Springs, CO
Dongwoo Yang —University of California, Irvine—Irvine, CA
Hua Yang—Ellicott City, MD
Benjamin Young—Smyrna, GA
Since 1969, Esri™ has been helping organizations map and model our world. Esri’s GIS software tools and methodologies enable them to effectively analyze and manage their geographic information and make better decisions. They are supported by our experienced and knowledgeable staff and extensive network of business partners and international distributors.

A full-service GIS company, Esri supports the implementation of GIS technology on the desktop, servers, online services, and mobile devices. These GIS solutions are flexible, customizable, and easy to use. Esri software is used by hundreds of thousands of organizations who apply GIS to solve problems and make our world a better place to live. We pay close attention to our users to ensure they have the best tools possible to accomplish their missions. A comprehensive suite of training options offered worldwide helps our users fully leverage their GIS. Esri is a socially conscious business, actively supporting organizations involved in education, conservation, sustainable development, and humanitarian affairs.

Hexagon Geospatial
5051 Peachtree Corners Circle
Norcross, GA 30092-2500 USA
Phone: +1 770 776 3400
Toll Free: +1 877 463 7327
E-mail: geospatial@hexagongeospatial.com
Website: http://www.hexagongeospatial.com
Hexagon Geospatial helps you make sense of the dynamically changing world. Hexagon Geospatial provides geospatial technology products and platforms to our customers, channel partners, and Hexagon businesses.

Cyclomedia Technology, Inc.
1250 I-Newell Ave., Suite 160
Walnut Creek, CA 94596
Phone: 800-790-3652
Email: usa@cyclomedia.com
www.cyclomedia.com
www.thedrivingdutchman.com
Cyclomedia is the market leader in systematic imaging of large-scale environments from cities to complete countries. Cyclomedia’s smart imagery solution creates Cycloramas – 360-degree panoramic photos – with high accuracy, providing current and clear views of street-level environments.
The Cyclomedia recording system is like no other. It uses patented technology to determine the exact position and orientation of every picture taken. By creating a dense network of geometric street images, Cycloramas are always focused on the correct address or feature from multiple vantage points.
Our solution revolutionizes the way asset and property assessment is managed and reported. It reduces field visits and provides accurate feature measurements with convenient spot-checking. It simplifies maintenance and enables automated inventory and controlled processes. It also saves valuable resources while simplifying the decision-making process, improving operations and increasing efficiency.
We provide ready-made solutions throughout Europe, North America, and Asia. Our technology is widely used in government GIS, public safety, and security markets, as well as in construction, infrastructure management, and insurance.
We provide a full range of services related to 3D mobile mapping. Data is captured and delivered worldwide.
Our primary market segments include:
• Property Taxation, Appraisal, and Building Inspection
• Transportation and Infrastructure Management
• Public Safety and Homeland Security
• Engineering and Construction Planning
Cyclomedia offers the following licensed products:
Content
• Cycloramas – Seamless, accurate 360° panos taken at street-level with our patented recording technology.

Developer Tools
• GlobeSpotter API – Integrate GlobeSpotter components into your user’s existing business workflow.

Hosting Solutions
• GlobeSpotter Cloud — Secure, scalable hosting service managed by Cyclomedia that’s free to customers.
• GlobeSpotter Server – Locally hosted option supporting all Cyclomedia’s content and software.

Loqate, Inc.
999 Baker Way Ste 320
San Mateo CA 94404-1566
Tel: +1 (800) 313-3910 (Toll free)
Tel: +1 (650) 273-5603
Fax: +1 (650) 273-4364
Email: webinfo@loqate.com
Web: www.loqate.com
Accurately Capture, Verify, and Geocode Any Address Worldwide
Almost all data has locations, and accurate locations power a wealth of business processes: Customer Relationship Management, data quality, delivery of materials, goods or services, fraud detection, insurance risk assessment, data analytics, store and territory planning.
and much more. New applications that harness the information in Big Data, location based services, customer analytics, and market intelligence need the accuracy and intelligence that only comes from great address quality. Loqate, the definitive source of everything location can power your applications with a combination of address capture, verification, and geocoding — all for 240+ countries. Loqate becomes the single global source for high quality, accurate location information.

**Silver Corporate Partners**

**Data Transfer Solutions**
3680 Avalon Park Blvd East, Suite 200, Orlando, FL 32828
Phone: (407) 382-5222
ajaugh@dtsgis.com

Headquartered in Orlando, DTS is a leader in asset management, geographic information systems, and transportation planning. We specialize in creating solutions to help clients automate their worlds, reduce their workload and organize their data through customized technology. DTS is comprised of seven divisions, each with its own scope of services. Often however, a single project spans several divisions before completion because we uniquely offer all the necessary cutting-edge services, integrated within one company.

**EagleView Technologies**
3700 Monte Villa Pkwy, Ste 200
Bothell, WA 98021
1-855-984-6590

eagleview@eagleview.com

EagleView Technologies offers Pictometry® Intelligent Images®. The high-resolution oblique and ortho images are captured and processed with patented technology and delivered through innovative analytical tools to allow for the most accurate assessment of properties. Used daily by GIS, assessment, public safety, defense, insurance, construction and utility professionals, Pictometry solutions bring field work to the desktop. Solutions are easily integrated into existing workflows through strategic partnerships and make it easy for users to make informed decisions and enhance productivity. To find out more please visit www.eagleview.com

Every day, new applications for Pictometry are realized. Discover how Pictometry can help you work better, faster, smarter and with optimal cost savings.

**Blue Corporate Partners**

**Blue Marble Geographics**
77 Water Street
Hallowell, Maine 04347
1-800-616-2725
pattickc@bluemarblegeo.com

For over two decades, Blue Marble Geographics has been at the forefront of the GIS data processing software business. Pioneering work in geomatics and spatial data conversion quickly established this Maine-based company as a key player in the GIS software field. Today GIS professionals are turning to Blue Marble for Global Mapper a low cost, easy to use yet powerful GIS software tool that everyone can afford and use. Blue Marble is known for coordinate conversion and file format expertise and is the developer of Geographic Calculator, GeoCalc SDK, Global Mapper and Global Mapper SDK.

**Connected Nation**
360 East 8th Avenue
P.O. Box 3448
Bowling Green, KY 42102
(877) 846-7710
info@connectednation.org

Connected Nation is a non-profit technology organization committed to bringing affordable high-speed Internet and broadband-enabled resources to all Americans. Connected Nation effectively raises the awareness of the value of broadband and related technologies by developing coalitions of influencers and enablers for improving technology access, adoption, and use. Connected Nation works with consumers, community leaders, states, technology providers, and foundations, including the Bill & Melinda Gates Foundation, to develop innovative technology to deliver critical information to leading decision makers.

**Thomson Reuters**
525 Folsom Street
San Francisco, CA 94105
Phone: 415.544.1300

Thomson Reuters is the world’s leading source of intelligent information for governments, businesses, and professionals, combining industry expertise with innovative technology to deliver critical information to leading decision makers. Our integrated Government Revenue Management (GPM) suite offers end-to-end software with services to ensure revenue through land and property tax administration. Meeting the needs of emerging economies, OpenTitleT is an affordable registry and cadastral tool with an all-inclusive approach to collecting, documenting, and recording the documentary and geographic information relating to property rights. At Thomson Reuters, our goal is to use state-of-the-art technology to develop and deliver sustainable tax and land administration solutions on time, within budget and configured to client requirements.

**Valtus Imagery Services**
212, 5438-11th St NE, Calgary, AB T2E 7E9 Canada
Phone: (403) 295-0694 Toll Free: (800) 661-6782
tammy.peterson@valtus.com

Valtus Imagery Services provides best in class solutions for the storage, management and delivery of geospatial information in the form of ortho-imagery and elevation data through web delivery systems.

**VESTRA**
5300 Aviation Drive, Redding, CA 96002
Phone: (530) 223-2585
MBraghin@Vestra.com

As a leader in GIS/IT, Environmental Solutions, Engineering, and Surveying, VESTRA has the depth of know-how and experience to help clients achieve success. VESTRA, an employee-owned corporation dating back to 1988, prides itself on our local presence and commitment to the community. Our mission is to be our clients’ most-valued consultant by providing cost-effective, innovative, and technically superior project solutions. Whatever your current or future needs, VESTRA’s full-service resources are available to support you on your next critical project.
geographIT

geographIT offers the depth of experience, insight, and innovation that only comes from more than two decades of GIS consulting, custom software development, and system integration projects successfully completed for state and local governments, utilities, transportation, and law enforcement sectors. Technologies have changed significantly since the early days of GIS, allowing for tightly coupled GIS/IT system integration, deployment on multiple platforms, and quicker implementation of cost-effective solutions. Founded in 1990 as Advanced Technology Solutions Inc., we were a pioneering GIS consulting company in Pennsylvania when GIS commercialization was still in its infancy. We rebranded as geographIT in 2007 to highlight our comprehensive and competitive offering of geospatial services and solutions. Contact us today (marketing@geographit.com) if you are looking to start GIS or improve the efficiency of your legacy GIS and IT systems.

GeoPlanning Services, LLC

3564 Avalon Park Blvd E., Suite 1, #243, Orlando, FL 32828
Phone: (407) 608-4186
mroche@GeoplanningServices.com

GeoPlanning Services, LLC of Orlando, FL was founded in early 2009 is a full service provider of geospatial tools and analysis to support urban planning, logistics, real estate and economic development organizations.

For information about URISA Partnership, please visit:
http://www.urisa.org/about-us/become-a-urisa-partner/ or contact Wendy Nelson at URISA Headquarters.
Open Spatial Corporation
5701 Lonetree Blvd, Suite 109
Rocklin, CA 95765
(800) 696-1238
info@saniita.com
Contact: Colin Hobson

Open Spatial is a multi-national company delivering geospatial solutions based on Oracle and Autodesk technologies. Recognized for delivering applications to government and utility sectors, our solutions are based on internationally accepted open standards and world-class best practices. Open Spatial offers innovative spatial infrastructure solutions to managing spatial data from survey through to design, construction and ongoing spatial data management. Our clients efficiently manage cadastral, water, wastewater, stormwater, roads, electric and fiber networks.

Planning Communities, LLC
9131 Anson Way, Suite 304
Raleigh, North Carolina 27615
919-803-6862 (Office)
919-882-1206 (Fax)
contactus@planningcommunities.com
townsend@planningcommunities.com

Planning Communities, LLC provides a wide range of multi-disciplinary planning services for local, state and federal agencies, tribal nations and community organizations. Community, transportation, environmental and GIS services include local/regional planning, visioning/scenario planning, land use, socioeconomic, market and cost-benefit analysis, community asset mapping, tool/application support and development, process improvement/integration, consensus-building and facilitation.

Headquartered in Raleigh, North Carolina, Planning Communities has additional offices in Charlotte (NC) and Seattle (WA). Planning Communities is a North Carolina certified Small Professional Service Firm (SPSF) and is certified as a DBE in North Carolina, Tennessee, Florida and Delaware.

Sani - International Technology Advisors Inc. (SANI-ITA)
Sani - International Technology Advisors Inc. (SANI-ITA) is a privately owned Canadian company with its head office located in Ontario. The Corporation is a business partner and reseller of BAE Systems Geospatial eXploitation Products (GXP), TerraGo GeoPDF products, ImageSat products and Leica Geosystems products.

Somers-St. Claire GIS Management Consultants
3157 Babashaw Ct, Fairfax, VA 22031
Phone: (703) 204-0033
www.somers-stclaire.com
rsomers@somers-stclaire.com

Independent consulting firm providing GIS implementation and management consulting and education.

Temporal GeoAnalytics
P.O. Box 181431
Denver, CO 80218
Phone: 720-235-0390
info@TGAmaps.com

Temporal GeoAnalytics, Inc. (TGA) is a Land Use and Environmental Litigation consulting firm. We have expertise in using Geographic Information Systems (GIS) to develop, manage, and distribute complex spatial databases, as well as creating the presentation-quality visualizations and graphics needed for natural resource litigation and land use projects.

TGA specializes in the analysis of multi-faceted land use issues and environmental impacts over time. TGA is expert at acquiring and integrating historic and current spatial data to build the critical information you need to represent your case.

Using GIS, we transform complex issues into defensible, authoritative, and easily understood maps and graphics. Our clientele consists primarily of natural resource and environmental attorneys, oil and gas companies, mining companies, and land developers.

Leveraging GIS for Environmental, Natural Resource, and Land Use Planning is our core expertise. Geographic Information Systems (GIS) integrate and overlay unlimited layers of themed spatial and tabular data to illustrate and reveal patterns, context, and the intrinsic qualities of any location. A GIS is also a powerful analysis tool capable of querying data for location and its relationship to overall context. At TGA, we have an intimate understanding of these tools and their capabilities.

Working with you and other experts, we build a completely defensible, dynamic analysis data platform with interactive visualizations and related tables that clearly represent the qualities of your project and its relationship to larger political, environmental, and regional contexts.

Wellar Consulting
Ottawa, ON Canada
Phone: (613) 728-3483
wellarb@outlook.ca

Wellar Consulting services include design and evaluation of education and training courses and curricula for GISystems and GIScience programs; advice and workshops on the development of quantitative measures to assess information system and transportation system performance; critical reviews of IS and GIS RFPs; seminars on the safety and security aspects of interdependent infrastructures; professional opinion on land use planning and zoning issues; and, expert opinion on liability for safety-related incidents involving pedestrians, cyclists, and motor vehicle operators.

Federal Agency Sponsor
U.S. Census Bureau
4600 Silver Hill Road, Washington, DC 20233

The Census Bureau serves as the leading source of quality data about the nation’s people and economy. We honor privacy, protect confidentiality, share our expertise globally, and conduct our work openly. We are guided on this mission by our strong and capable workforce, our readiness to innovate, and our abiding commitment to our customers.
Mark Your Calendar!

June 22-26, 2015
URISA Leadership Academy
Denver, Colorado

September 1-3, 2015
GIS in Transit Conference
Washington, DC

October 18-22, 2015
URISA’s GIS-Pro & NWGIS 2015
Spokane, Washington

February 22-25, 2016
20th Anniversary GIS/CAMA Technologies Conference
Savannah, Georgia

September 5-8, 2016
URISA’s 2016 Caribbean GIS Conference
Barbados
(Contract pending)

October 31-November 3, 2016
GIS-Pro 2016: URISA’s 54th Annual Conference
Toronto, Ontario Canada
(Contract pending)

PRESIDENT
Carl Anderson, GISP—Vadose (MD)
carl.anderson@vadose.org

PRESIDENT-ELECT
Rebecca Somers, GISP—Somers-St. Claire GIS Management Consultants (VA)
rsomers@somers-stclaire.com

IMMEDIATE PAST-PRESIDENT
Allen Ibaugh, AICP, GISP—Data Transfer Solutions (FL)
aibaugh@dtsgis.com

SECRETARY
Ashley Hitt, GISP—Connected Nation (KY)
ahitt@connectednation.org

TREASURER
Doug Adams—Baltimore County (MD)
dadams@baltimorecountymd.gov
Jochen Albrecht—Hunter College (NY)
jochen@hunter.cuny.edu
Danielle Ayan, GISP—Booz Allen Hamilton (GA)
danielleayan@att.net
Amy Esnard, GISP—Hood River, OR
amilution@gmail.com
Valrie Grant GISP—GeoTechVision (Jamaica)
valrie@geotechvision.com
Kevin Mickey, GISP—The Polis Center-IUPUI (IN)
kmickey@iupui.edu
Claudia Paskauskas, PMP, GISP, SSGB, MCSD-VHB, Inc. (FL)
cpaskauskas@vhb.com
Martin Roche, GISP - Geo Planning Services LLC (FL)
mroche@GeoPlanningServices.com
Chapter Advisory Board Representative:
Christina Boggs – California Department of Water Resources
Christina.Boggs@water.ca.gov

RFP Distribution

URISA members, remember that URISA will distribute your RFP/RFQ announcements to our corporate and business members at no charge. Simply email your announcement to info@urisa.org (Subject: RFP Service) and we’ll send it right out for you!