

INDUSTRY TRENDS AND ANALYSIS GROUP

TAMPA, FLORIDA 2009

FINAL REPORT



ITAG FINAL REPORT 2009

TAMPA, FLORIDA

KEY ISSUE TOPIC: STIMULUS PLAN – WHAT NOW?

FACILITATOR: Joe Francica, Editor-in-Chief & Vice Publisher, Directions Media

KEY ISSUE DISCUSSION QUESTIONS:

- What are the opportunities for the infrastructure community to participate in acquiring funds from the U.S. Stimulus plan?
- Who are the decision-makers to distribute the technology funds?
- Who gets to spend the technology money first? (Federal, State, Local)
- What Federal body will most likely have the most influence on the geospatial technology spend?

STIMULUS PLAN: WHAT DOES IT MEAN FOR YOUR VERTICAL MARKET?

ELECTRIC

Liaison: Cynthia Salas— cindi.salas@centerpointenergy.com

No information gathered.

GAS

Liaison: Matt G. Thomas—mgthomas@spectraenergy.com

1. What are the opportunities for the infrastructure community to participate in acquiring funds from the U.S. Stimulus plan?

- For gas and pipeline, the opportunities appear limited. It was noted that some of the funds going towards infrastructure improvement (i.e. roads, bridges, etc.) may actually negatively impact the gas & pipeline infrastructure. It will be interesting to see if there are any related funds identified and contributed to the gas and pipeline companies to help offset increased maintenance costs that may come of new roads being built and/or relocated.

2. Who are the decision-makers to distribute the technology funds?

- Again, this dynamic seems limited within our particular vertical markets. Contacting your local government representative was suggested by several.

3. Who gets to spend the technology money first?

- It has become evident that state and federally-affiliated organizations are getting first shot at the stimulus monies.

4. What Federal body will most likely have the most influence on the geospatial technology spend?

- It appears that technology monies, as they relate to the stimulus, are most closely aligned with the Department of Transportation. The Department of Homeland Security is also one agency that may come into play.

Some key questions that were raised in the breakout session:

- How does data accuracy come into play? Could this be cited as a potential safety improvement that could be leveraged into application for stimulus funds?
- Can GITA play a role in providing cost savings matrices (similar to project-based ROI documents only on a more “general” level) that could also be leveraged into application for stimulus funds?
- What is the gas/pipeline industry’s “Smart Grid”? Without such a singular, identifiable, industry-wide program, how can gas/pipeline verticals compete for money with the other verticals?

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WATER/WASTEWATER

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For some the stimulus money is a boon to business. If a company is ready to perform the design and build for utilities they will reap the benefits. There are questions though about how to acquire the money. No one in our group was knowledgeable in how to go after the money and when. There will be business in getting to know that process and assisting smaller utilities in applying for the money.

It is important not to just build the new infrastructure but plan for the maintenance of the new facilities. If there is not money or resource to maintain new infrastructure then it will deteriorate quickly and become a burden to the utility and the customers.

The impact of other agencies beginning projects with stimulus money on the water utilities could be huge. Should the utility budget money to respond to the impact of having to relocate facilities to get out of the way of these projects or plan to become part of the project and acquire money under the same umbrella to complete the work that is necessary?

Pooling resources under a consortium might be a good way to operate. Those consortiums could become the new normal if they continue to exist after the stimulus money is spent. These relationships could become very valuable and if maintained help in the long run to better manage our resources.

PUBLIC SECTOR

Eric Hoogenraad— ehoogenraad@abbotsford.ca

- Most infrastructure projects have a strong geospatial component
- Focus on stimulus funded projects, look for embedded geospatial opportunities
- Shovel ready projects mostly already exist, new projects will emerge
- Focus should be shifted to geospatial to enhance successful future project completion
- Is there a direct funding source in the stimulus package for geospatial technology
- Access to approved stimulus projects available on webcasts
- Stimulus facts listed on “recovery.gov”
- Oregon state projects found on “GoOregon.com”
- Opportunities for geospatial training/re-training

INDUSTRY BREAKOUT SESSIONS

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TOP APPLICATIONS LIST

1. Intelligent Network Systems
2. Smart GRID – High Importance
 - DMS. Smart Meters, Hand, Communication
3. Clean Energy/Reducing Carbon Footprint
4. Trouble Call Technology
5. Engineering/Work Order Design

6. AMR, NGIS Management
7. Vegetation Management
8. LIDAR

TOP TECHNOLOGIES LIST (2008)

1. Web Services
2. Pen Computing/Mobile Computing/Field Devices/Tablet
3. Disconnected/Connected Data Access
4. EAI
5. Distributed GIS
6. Terminal Services (Citrix)
7. AMI/AMM
8. Database Security
9. Interoperability
10. Distribution Automation/SCADA
 - and its evolution into ‘Smart Grid/Intelligent Grid’
11. Business Intelligence (i.e., Executive Dashboards, real time)
12. 3-D Visualization

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TOP APPLICATIONS LIST

1. DIMP/Pipeline Integrity
2. Compliance
3. Damage Prevention
4. Business Process Management
5. Asset Management
6. Disaster Planning & Security
7. System Build-out & Maintenance
8. Gas Outage Management
9. System Planning
10. Work Management

TOP TECHNOLOGIES LIST

1. Mobile Technologies
2. Leak Detection
3. Web Services
4. Document Management & Workflow
5. LIDAR
6. Georeferenced Imagery
7. Wireless Access/Communication
8. GPS
9. Information Security
10. Spatial Data in RDBMS

PUBLIC SECTOR

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TOP APPLICATIONS LIST

1. Asset Management
 - a. Critical Infrastructure
 - b. Sub-Surface Utility Engineering
 - c. Right of Way Management
 - d. Work Order Management
 - e. Airport Management

2. Sustainable Growth
 - a. Economic Development
 - b. Land Use Development
 - c. Planning/Zoning
 - d. Permits/Inspections

3. Inter Operability
 - a. Data Integration
 - b. Land Records/Tax Records
 - c. Addressing (national & local, 911 rural)

4. Green Communities
 - a. Green Building Systems
 - b. Public Transport Options
 - c. Waste Management
 - d. Vehicle Routing (reducing carbon footprint)
 - e. Green Land Use Development
 - f. Alternate Energy Regulations/Permitting

5. E-Government
 - a. Geo-based On-line Services
 - b. Single Source Service Call Centre (311 initiatives)
 - c. Integrated Webmap Applications

6. Economic Impact
 - a. Budget Cuts (do more with less, innovative technology use)
 - b. Home Foreclosures/Tax Collection
 - c. Neighborhood “Closures” (schools/parks/services)
 - d. Re-development Strategies

7. Natural Resource Management
 - a. Public Land Development/Preservation
 - b. Forestry Management
 - c. Environmental Impacts
 - d. Waterway Development
 - e. Water Preservation

8. Social Services
 - a. Healthcare
 - b. Social Housing
 - c. Health Education
 - d. Facility Locating
 - e. Disaster Response

9. Emergency Response Management
 - a. Police/Fire
 - b. EMS, 911

TOP TECHNOLOGIES LIST (2008)

1. Enterprise Architecture
2. Work Management System
3. 911-311
4. Web Internet/Intranet
 - a. E-Government
5. GIS
6. Asset Trading
 - a. GPS
7. Wireless Solutions
8. SCADA
9. Mobile Computing
10. Intelligent Transportation Systems
11. Dashboards (situation awareness)

PIPELINE

Liaison: Matthew Thomas—mgthomas@spectraenergy.com

Note: Information will be available after GITA's GIS for Oil & Gas Conference in Houston, Texas, September 13-17, 2009.

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TOP APPLICATIONS LIST

1. Fibre Management — GPON Deployment
2. Enterprise Integration
3. Business Decision Support (Dashboards)
4. DSL, PON & VOIP Decision Support and expert systems
5. Field Force Automation
6. Emergency Management
7. Customer Access to Information
8. Mobility Support
9. Wireline/Wireless Integration
10. Landbase Conflation

TOP TECHNOLOGIES LIST

1. Web Portals (Customer Facing)
2. Web Services (WFS, WMS, SOA)
3. GPS
4. Spatial Databases (geo-database evolution)
5. Location Determination
6. Imagery
7. Wireless
8. Interoperability
9. System Security
10. LIDAR/IFSAR

Additional Comments on Applications

Off the list this year: NOC Integration. New on the list is Conflation. The installation of better cadastre and other 'foundational' data sets, and the conflation of utility and associated information to align with these more accurate frameworks. Initial implementations of cadastre was based on the assumption that extreme precisions wasn't warranted on a cost benefit basis, nor was it often available. As the uses and demands on utility GIS has increased recently, the need for more accurate land base data is becoming apparent, thus driving conflation and data acquisition work.

Business Decision support: There was some discussion that to be more specific, Business Decision Support continues to be an important driver for applications related to dashboards and providing views of data that are not a traditional 'asset management' view of the telecommunications network.

Already on the list, but increasing in priority is New Service Delivery Support (Customer Care). This is driven by the increasing complexity of telecommunications services requiring various and more demanding transmission design characteristics. Some telecommunications firms continue to use GIS and network interrogation tools to determine Broad Band serving areas, others are using their GIS and Facilities systems, for example, to provide service availability data to Customer Service Representatives.

Verizon is an example of one of many firms that at least at the executive level are integrating wireless and wire line operations, systems and processes. This is reflected in the wireless / wire-line integration issue being represented on the top ten technology issues. In ATT&T OP Techs are being trained on RF engineering as part of wireless / wire-line integration.

Data integration is a big issue for telecommunications firms according to both telecom users and their service providers. Best practices indicate that there is a growing realization that Spatial Databases (geo-database evolution) does not mean building a monolithic corporate spatial database, but rather providing a spatial data store that presents various corporate data sets in a common spatially enabled structure for broader consumption both across the business and for that data for sharing on external facing portals.

Key issues include deploying middleware to present middleware, and consistency among the databases particularly around nomenclature where various datasets carrying similar data need to be determined.

Another change on the Top 10 Technologies List is that Web Portals have been re-defined to be specific to Public Web Mapping and external Customer Facing applications.

LIDAR/IFSAR has been corrected per a typo. No longer on our lists: Virtual Gloves (What the heck are those?) New on the list is Security technologies including ensuring GIS data is included receives standard IT security rigour, roles and permissions, FOIA and customer information privacy.

Visualization of BB availability is an example of an increasingly important issue that touches upon many of the top technologies and applications.

Presenting the data on executive dashboards, for example, will require a more mature geo-database model that allows for the integration of basic network infrastructure with service capability information not previously related to the GIS. Better and or new data sets that articulate more accurately where our facilities are, where our customers are, and the relative proximity of each to the other may need to be developed.

In regards to access to stimulus funding for Broad Band (BB) build incentives, definitions of what BB is and of the terms un-served and under-served must be clarified. Further complicating matters is that each telecommunications firm is tracking, analyzing, mapping and reporting their broad band footprints in different, non standardized ways. Even if a standard is developed there will be considerable resistance to exposing details of each firms' BB capabilities to each other, and data provided to government must be protected from misuse.

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TOP APPLICATIONS LIST

1. Road Congestion (Reduction)
2. Bridge Maintenance
3. Pavement Maintenance
4. Safety
5. Land Records (Row)
6. Asset Management
7. Emergency Preparedness
8. Regulatory Compliance (HPMS, NBI)
9. Easy Access to Data
10. Procurement/Contracts (Human Resources)

TOP TECHNOLOGIES LIST

1. Software Interoperability
2. Data Capture Technologies (LIDAR, Radar, Cameras, Lasers)
3. GPS (Accuracy, Repeatable, Networks, Real Time)
4. Real-Time Information
5. Intelligent Transportation Systems (ITS)
6. Communication Infrastructure and Protocols
7. Security (Geo-Security Technologies)
8. Multi Level Linear Referencing Travel Demand

WATER/WASTEWATER

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TOP APPLICATIONS LIST

1. Asset Management (Plant & Infrastructure)
2. GIS Migration/Integration
3. Knowledge Management & Workflow Applications
4. Field GIS/GPS Enabled Condition Assessment
5. Hydraulic Modeling
6. Water Quality and Collection System Analysis
7. Work Management
8. Leak Management
9. Conservation
10. Permitting

TOP TECHNOLOGIES LIST

1. Mobile Computing/WiFi/Wireless
2. GPS differential for higher accuracy
3. Field Data Capture
4. Multimedia technology enabled through GIS (Video, Digital pictures, etc.)
5. Data Exchange OGIS
6. Database Management
7. Application Integration
8. 3D Modeling
9. Sensor Web Technologies-remote monitoring of facilities
10. SOA and commercial web service consumption



STIMULUS PLAN RESOURCE LIST

The following references are provided as a resource for the stimulus package discussion at the 2009 ITAG Annual Meeting in Tampa.

- [Oregon Governor Announces *Stimulus* Map - All Points Blog](#)

Page title: Oregon Governor Announces *Stimulus* Map. Categories: ESRI.

apb.directionsmag.com/archives/5566-Oregon-Governor-Announces-**Stimulus**-Map.html - 35k - [Cached](#) - [Similar pages](#)

- [Stimulus Proposal #4 by John Palatiello: Funding The National Map ...](#)

Feb 9, 2009 ... Beginning in mid-December, 2008, when there began discussion of development of an economic *stimulus* proposal to be considered in Congress in ...

www.directionsmag.com/article.php?article_id=3023 - 76k - [Cached](#) - [Similar pages](#)

- [Update 1: A Third Proposal Regarding Geo and the *Stimulus* ...](#)

Page title: Update 1: A Third Proposal Regarding Geo and the *Stimulus*: Investing in NSDI. Categories: Google, Microsoft, Oracle, Intergraph, ...

apb.directionsmag.com/archives/5312-A-Third-Proposal-Regarding-Geo-and-the-**Stimulus**-Investing-in-NSDI.html - 48k - [Cached](#) - [Similar pages](#)

- [Three Geospatial Proposals and U.S. Economic *Stimulus*: Background ...](#)

Feb 5, 2009 ... What current efforts are underway to further the acceptance and inclusion of your proposal into the *stimulus* package? ...

www.directionsmag.com/article.php?article_id=3020&trv=1 - 52k - [Cached](#) - [Similar pages](#)

- [Impact of *Stimulus* on GPS - All Points Blog](#)

Page title: Impact of *Stimulus* on GPS. Categories: GPS.

apb.directionsmag.com/archives/5483-Impact-of-**Stimulus**-on-GPS.html - 34k - [Cached](#) - [Similar pages](#)

- [The U.S. Economic *Stimulus* Package - What's in it for Geospatial ...](#)

Page title: The US Economic *Stimulus* Package - What's in it for Geospatial. Categories: Geospatial Business.

apb.directionsmag.com/archives/5420-The-U.S.-Economic-**Stimulus**-Package-Whats-in-it-for-Geospatial.html - 57k - [Cached](#) - [Similar pages](#)

- [A Second Proposal Regarding Geo and the *Stimulus*: NSDI 2.0 - All ...](#)

A Second Proposal Regarding Geo and the *Stimulus*: NSDI 2.0. What if "a collaborative grassroots coalition" came together to develop a proposition "that ...

apb.directionsmag.com/archives/5311-A-Second-Proposal-Regarding-Geo-and-the-**Stimulus**-NSDI-

2.0.html - 36k - [Cached](#) - [Similar pages](#)

- [The U.S. Stimulus Package – The Rest of the Story for Geospatial ...](#)

All Points Blog covers breaking GIS, remote sensing, geospatial data, satellite imagery, mapping, GPS, tracking and location-based services news.

apb.directionsmag.com/archives/5441-The-U.S.-**Stimulus**-Package-The-Rest-of-the-Story-for-Geospatial.html - 42k - [Cached](#) - [Similar pages](#)

- [Federal Stimulus Estimated Jobs Map/Probable Projects Map - All ...](#)

Feb 18, 2009 ... Recovery.gov promises to map money spent from the just signed "*stimulus* bill," officially the American Recovery and Reinvestment Act. For ...

apb.directionsmag.com/archives/5423-Federal-**Stimulus**-Estimated-Jobs-Map.html - 36k - [Cached](#) - [Similar pages](#)

- [More Details on USGS Funding from Stimulus Package - All Points Blog](#)

Page title: More Details on USGS Funding from *Stimulus* Package. Categories: USGS.

apb.directionsmag.com/archives/5444-More-Details-on-USGS-Funding-from-**Stimulus**-Package.html - 53k - [Cached](#) - [Similar pages](#)

- [GIS Already in Use in Stimulus Allocation in Pacific Northwest ...](#)

GIS Already in Use in *Stimulus* Allocation in Pacific Northwest · Oregon Public Radio reports on a transportation planner, Jeff Selle, ...

apb.directionsmag.com/archives/5422-GIS-Already-in-Use-in-**Stimulus**-Allocation-in-Pacific-Northwest.html - 55k - [Cached](#) - [Similar pages](#)

- [Understanding Tech's Place in Stimulus - All Points Blog](#)

The New York Times has a very readable article about where tech may or may not fit into the goals of the *stimulus* package. It focuses on the three areas ...

apb.directionsmag.com/archives/5316-Understanding-Techs-Place-in-**Stimulus**.html - 35k - [Cached](#) - [Similar pages](#)

- [New York State Using GIS to Manage Stimulus Proposals - All Points ...](#)

A printout of all the programs in the federal *stimulus* is taped to the wall as well. Gilchrist said that staffers are, at this very moment, reviewing each ...

apb.directionsmag.com/archives/5432-New-York-State-Using-GIS-to-Manage-**Stimulus**-Proposals.html - 54k - [Cached](#) - [Similar pages](#)

- [Article: Three Geospatial Proposals and U.S. Economic Stimulus ...](#)

What current efforts are underway to further the acceptance and inclusion of your proposal into the *stimulus* package? Are you looking for endorsements? ...

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