

ITAG 2004

Seattle, Washington

Vertical Industry Breakout: ELECTRIC

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1. Annual Geospatial Technology Report (GTR)

- A. How can we increase the response rate to the GTR survey? We want to achieve 500 participants to improve statistical reliability of trends analysis.**
- Provide a ticket to a webcast for the responder
 - Provide data from last year's form so the responder need only enter changes in data
 - Remind the responder on a regular interval to complete the form
- B. What will increase the use of the GTR to users? To vendors?**
- Provide a summary of contents with a teaser "what's in it for me?"
 - Provide the list of companies responding
 - Market the report outside of the GITA community
- C. Should we consider adding questions on annual budgets? More granularity on spending data?**

- Requiring additional budget information will reduce the willingness to complete the report and runs counter to the effort to increase the response.
- Additional granularity is too difficult to interpret budgets to be useful. Companies' organization structure allows budgets to be spread across multiple departments.

D. Are data types current? What about the data sources?

- Add areas for GPS, Field Survey, governmental land base sources, who enters data, who owns data, and the organizational structure and processes for entry/maintenance.

E. Other questions?

- Architecture
 - Hardware - servers
 - Operating Systems
 - Memory
 - Disc space
 - Processor
 - Field Devices
 - Operating systems
 - Configuration
 - PDA-tablet-PC
 - Ruggedized - non-ruggedized
 - Wireless
 - Terminal Servers
 - Standards
 - Data Exchange
 - Interfaces
 - Symbology
 - Data Warehouse/data marts
- Outsourcing
 - IS
 - Planning/design
 - GIS Records Maintenance
 - Applications
- Business drivers
 - Cost
 - Deregulation
 - Legislative issues
 - Accuracy - accounting and accountability
 - Accuracy - operations
 - Efficiency
 - Data Access
 - Asset management
 - Reliability
 - Customer Service

2. Top Ten Lists

Applications

- Change Engineering Analysis from A group to B group
- Change CIS Integration from B group to A group
- Top Ten Applications GTR includes 9. Conversion/Data Capture which doesn't seem like an application consistent with the rest of the list

Technologies

- Change Disconnected Data Access in A Data Access Disconnected/Connected
- Add example (XML) to Nonproprietary Programming in B

3. **Critical Industry Issues**

Critical Industry Issues - GITA can assist with training sessions, and lessons learned sessions. Information from forums such as GEOXchange could be maintained in a historical archive available to the members.

1. Upgrading Software Versions
 - a. Costs-benchmarks
 - b. Customization
 - c. External drivers
 - Operating system
 - Database
 - Hardware
 - d. Vender support for older systems
2. Enterprise integration - mergers/acquisitions
3. Process improvement
 - a. Data accuracy
 - b. Up-to-date
 - c. Change management
4. Strategic Planning
5. Staffing/Resource Management
 - a. Outsourcing
 - b. Aging Workforce
 - c. Organization turnover

Vertical Industry Breakout: Gas

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1. Annual Geospatial Technology Report (GTR)

A. How can we increase the response rate to the GTR survey? We want to achieve 500 participants to improve statistical reliability of trends analysis.

- Don't restrict to just GITA members
- Include or perhaps partner with other agencies such as AGA (American Gas Assn), EEI (Edison Electric Institute) etc.
- Advertise more -- consider advertising in other industry-related magazines
- Publicize the 'value' of the info (ROI, staffing, etc.)
- As we continue to grow the report, specifically target the Top 10 industry issues identified
- Consider affiliation with professional benchmarking organization (such as TBE)
- This type of organization can, at a very low cost, host the survey on the web where folks can get immediate access to the latest responses, and in graph format. Participants wouldn't have to wait to get the final, groomed, censored report.

B. What will increase the use of the GTR to users? To vendors?

- Giving examples of use—
 1. Tying to business cases
 2. Use as a reference document (for business case, or for presenting to a new vendor)
 3. Use for driving requirements for software integration, etc.
 4. Educational institutions for curriculum/program development
 5. Use for defining new standards
- Provide "executive" level summary
- Provide report in usable 'digital' format, with ability to edit
 1. Have some PowerPoint slides already prepared
 2. Have some ground rules for use; must have GITA logo on slides

C. Should we consider adding questions on annual budgets? More granularity on spending data?

- No to more; yes to more granularity
- Just a note---user companies don't really find the current level of information of much use and are reluctant to give it out because they know vendors will start calling. Vendors care about money spent, both inside and outside the companies.
- Just a note---it is difficult to get meaningful numbers without very carefully crafted questions.
- Questions must be better defined (include whether or not \$ are 'loaded'----do they include labor burden or other adders?)
- When you compile the finished report, give better information about the # of responses to different ranges
- Correlate \$ ranges to size of company
- Ask participants to identify where other technology \$ are spent (ERP, mobile data, etc.)

D. Are data types current? What about the data sources?

- Data conversion issues of old have been replaced with different data-related issues:
 1. Data maintenance
 2. Data quality
 3. Data integration
- Data conversion is a lesser issue today and could be a subset of a larger data issue
- Consider a new category called Data Integrity, which would include some of the above and/or data ownership and retention
- Could have a second tier of data questions that are optional for participants; or perhaps an additional targeted survey distributed at another time

E. Other questions?

- GIS as it relates to records management--Do you have a records management system? Is it linked to GIS?
- What are your practices/policies concerning data sharing?
- See section about – need to address Data Integrity (quality, completeness, etc.)
- Data ownership - Who in your organization has the documented/undocumented accountability for the GIS data?
- Add "Data Type" column to 'software' question (data type might be "land data")

2. Top Ten Lists

For Applications, same as currently shown, except:

- Eliminate 10, Business Geographics/Marketing
- Consider adding Risk Management, Damage Prevention, Dispatching

For Technologies, same as currently shown, except:

- Eliminate 8, Nonproprietary Programming
- Consider adding
 1. Information security
 2. Wireless communication (including cell phones, PDA's, etc.)
 3. LIDAR
 4. Platform upgrades

3. Critical Industry Issues

- A. Corporate Vision/Strategic Plan
- B. Regulatory Compliance (including pipeline integrity support for LDC's)
- C. Data Integrity
- D. Damage Prevention
- E. Enterprise Integration
- F. Data Sharing Sensitivity (including homeland security)
- G. Records Management (digital vs. hard copy)
- H. Competition for Internal Money

Vertical Industry Breakout: Local Government and Public Works

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1. Annual Geospatial Technology Report (GTR)

- A. How can we increase the response rate to the GTR survey? We want to achieve 500 participants to improve statistical reliability of trends analysis.**
- Give every member & non-member a survey
 - Give the attendance a small gift for filling out the survey
 - Have each moderator promote the survey at their session
 - Make it a focus at the Annual Meeting
 - Get OGC involved with the survey
- B. What will increase the use of the GTR to users? To vendors?**
- User
 1. Get the GTR out to other organizations OGC, ESRI
 2. Provide real-time examples to the report
 3. Provide case studies If possible
 4. Ask the users a question on the survey what will make the survey more useful to you?
 - Vendors
 1. Get the raw data to the vendors
 - Increase the price for this data.
 2. Increase the responses to the survey
- C. Should we consider adding questions on annual budgets? More granularity on spending data?**
- More info on spending habits?
 - What kinds of needs has your organization identified for budget spending?
 - How much money are you cutting back on?
 - Have you received any grant money?
 - How much?
 - From where?

- Page 7 of the survey
 - What are your Conversion costs? How does that compare to your person work needs (FTE)
- Tiered Survey, which dials down for the user and vendor community.

D. Are data types current? What about the data sources?

- Under the Landbase Sophistication part of the survey add the following information:
 1. LIDAR
 2. Digital Terrain Modeling
 3. Other types of 3-D modeling
- Under General Info Part of the Survey add:
 1. How many parcels do you work with or have?
 2. Under the Landbase Sophistication part of the survey add the following info under the Intelligent vector data
- Addresses linked to parcels and or buildings
- Under the Enterprise systems part of the survey add:
 1. Integration between utilities and landbase
 2. Shareable with other enterprise systems
- General Info Question add public works to the please list the types of GIS users.
- General info Question are you a
 1. Regional Government/District government
 2. State Government/ Providence

E. Other questions?

- Under the Geospatial System Information add a part for the following Database software
 - Oracle
 - SDE
 - SQL Server
 - Access
 - Cybase

2. Top Ten Lists

Asset Management

Inter- Enterprise Integration (System & End user)

- With applications
- With data
- Share data with other government departments or services (EAI)

3. Critical Industry Issues

- A. Infrastructure Management
- B. Information Sharing policies
 1. In local government
 2. Outside local government
- C. Legal & Financial Accountability
 1. GASP 34
 2. Asset Management
 3. Risk Management
 4. Capital Investment programs

D. ROI Analysis

1. What is it?
 2. Political support needed?
 3. Improved services
- E. GITA should do the following for the above issues
1. Find and publish Best Practices
 2. Drive National Leadership
 - Policies
 - Standards
 - Practices
 3. Inform the membership of the standards & policies that are in place through
 - Workshops
 - Webcasts
 - Papers
 4. Create a committee that meets on standards

Vertical Industry Breakout: Pipeline

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1. Annual Geospatial Technology Report (GTR)

- A. How can we increase the response rate to the GTR survey? We want to achieve 500 participants to improve statistical reliability of trends analysis.**
- In the top ten list we need to be more descriptive in what the lists are talking about. The listing is too vague, we need an explanation next to each of the topics.
- B. What will increase the use of the GTR to users? To vendors?**
- See above
 - Need to add definitions to the top ten lists.
- C. Should we consider adding questions on annual budgets? More granularity on spending data?**
- No – it represents nothing unless you know more information about an organization. Just seeing dollars spent will not tell you overall impact to an organization.
 - Do need to add under software section what discipline you are using the software for – is it facility management, document management, integrity management, etc.
 - Hardware needs to be more generic – don't need to know manufacturer or how many.
 - Also need to ask the question if they use an rdbms and if so, which one, Oracle, Informix, sqlserver, etc.
- D. Are data types current? What about the data sources?**
- Yes but why do we need to know all this cost info – it shows you nothing unless you have a picture of the entire organization
- E. Other questions?**
- We need to re-consider the dollar questions unless we decide to put a company profile section in to give it more meaning.
 - Need to ask the users these questions:
 1. What do they think is the next emerging technology?
 2. How would they use it?
 3. If research dollars are spent, what should they be spent on? I.e. – 20 years ago the fax was a leading technology. It solved some remote communication problems.
 4. If you could fix one thing related to GIS, what would it be?

2. Top Ten Lists

1. Integration of operational, facility, and maintenance data.
 Facility data is pipe, valves, coatings, etc.
 Maintenance data is xings, inspections, etc.
 Operational data is regulatory data, class, maop, hydro, etc.
 landbase – property, structures, etc.
2. Risk Management – Probability X Consequence
3. Regulatory Compliance – Integrity Management Regulations, Documentation, Reporting
4. Field Force management, field operations, reporting, field computing, mobile computing
5. Work Process Management – Process, asset management, inspection, and maintenance.
6. Planned outage management – is this SCADA
7. Environmental Management – Includes permitting, wetlands, nwi, spills, remediation, archi sites, liquid hca's, and endangered species.
8. SCADA – see SCADA data in GIS – See GIS data in SCADA for planning, emergency response, etc.
9. Engineering Design – routing a new pl, utilize existing data for new const. Land, fac, env, modeling
10. Land Management – Tax, R/W, Sec twp range co., state, environ., non facility data

New Topics –

- Threat Assessment – For integrity Management
- Acquisition Data - from purchasing a new company
- Public Awareness – API 1162 New Regulations
- Reporting – DOT Reporting, FERC Reporting, SEC Reporting, Tax Reporting

Top 10 Technologies

Add

- Data sharing between users – internal users, external users, public
- Data Sharing Between Applications – Data access
- No. 6 should go to: Data Maintenance Tools – Input, Edit, Delete, Modify for in office and remote users

Vertical Industry Breakout: Telecommunications

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1. Annual Geospatial Technology Report (GTR)

A. How can we increase the response rate to the GTR survey? We want to achieve 500 participants to improve statistical reliability of trends analysis.

- Get a free copy of the output! (let respondents know this)
- Vendor encouragement (vendors encourage their customers to participate)
- Web-based/online form (more convenient) sent via email, with embedded link to the survey
- Available for attendees to complete during the conference (e.g., at the cyber café)
- Clearly identify the benefit to the user (for completing the survey and receiving a copy of the report)

B. What will increase the use of the GTR to users? To vendors?

- Provide info with clear benefit, especially to the end users
- Trending information is VERY useful
- Capture the business value of the survey in a statement on the 1st page of survey (sell users on the importance right up front)
- Value to telecom is a harder sell than electric (for example), where cooperation is critical (less obvious in a more competitive industry like telecom)
- Do the survey at the conference, associate completion with perks, like entrance to president's reception (e.g., "completed survey ⇔ open bar")

C. Should we consider adding questions on annual budgets? More granularity on spending data?

- More detail means more time means less convenience
- Most respondents lack detailed budget info for their organization
- Compilation problems

- Inconsistent data from multiple users from the same company
- Multiple counting?
- Different areas within same company may not be counted correctly (e.g., telecom business within an electric utility)
- For each project, associate the key indicators, the applications and tools used, and the effectiveness/outcome of the project (ROI, metrics trending up or down)
- What's the value proposition for both past projects and for current or future work

D. Are data types current? What about the data sources?

- Multiple data sources are not coherent
- Different coordinate systems
- Time lag between survey/platting and commercial availability of the landbase – need to be doing a lot of the construction and installation work during this period, so this time is critical

E. Other questions?

- Is everyone using the same sources?
 1. Within one business
 2. Across multiple business or entities (businesses, utilities, municipalities, counties, states, ...)
- Coordination between telecoms and municipalities
- Paper to digital mapping
- Common standards and processes, especially problematic as more work is outsourced to contractor engineering and other groups
- What is the driver for the project/work?
 1. Cost containment
 2. Operations improvement
 3. Staff reduction
 4. Improving customer service
 5. Improving performance against key metrics/indicators
 6. Revenue stimulation
 7. Government mandate
 8. Regulatory issues
 9. Sarbanes-Oxley accounting and reporting
 10. IT requirements
- Who paid for the project/work?
 1. IT
 2. Engineering
 3. Operations
- Who realized the ROI/benefit for the project/work?
 1. IT
 2. Engineering
 3. Operations
- Who audited the project/work to determine whether/how the benefits were realized?
Degree to which the ROI or key indicator was affected?
- Recent projects completed?
Trending?
- Business case development
What timeframes are involved within the user business? (e.g., when can/should the vendors get involved?)
- What are the challenges/pain points?
- Do the projects map to a strategic plan? (this would be very high value to user businesses)

1. To a corporate-wide plan?
 2. To a departmental plan?
 3. Are they tactical or short-term (knee-jerk?)
 4. Does your business/entity HAVE a strategic plan? Departmental plan?
- Does your operational plan span your business sectors?
 1. Marketing
 2. Engineering
 3. Operations/dispatch/surveillance/assurance
 4. Planning
 5. Provisioning
 6. Accounting
 7. Sales
 - Does your business/entity follow standards?
e.g., TMF's eTOM

2. Top Ten Lists
OK as stated.

3. Critical Industry Issues

- A. Data quality?
 - Incorrect
 - Inconsistent
 - Incomplete
 - Redundant
 - Varying scales and quality
 - Distinction between physical network and data systems that represent that network, especially with number of touches to network over time (typically >60K dispatches per day in a tier 1 provider company)
- B. Network modeling and semantics across systems
- C. Multiple systems
- D. Managing paper records and inventory data – conversion and maintenance
- E. Systems silos
- F. Legacy systems and legacy assumptions that limit the utility of the systems and information
 - Closed world assumption is rampant (if the system doesn't know about it, it doesn't exist)
- G. Accessibility to data – who, where, when?
- H. Synchronization between groups, especially problematic with growing reliance on outsourced groups
 - Lack of face-to-face communication with increased outsourcing, remote groups, proliferation of teams working on similar issues
 - E.g., one group takes a pole out of service while another group is attaching a new cable to it
- I. Mix of applications
 - Technology changes require new applications to be developed
 - E.g., PON, long-loop DSL
- J. Market changes
 - Line losses
 - Product commoditization leads to lower prices, which in turn drives lower margins
- K. Wholesale/retail implications
 - Systems
 - Networks
 - Information exchanges
- L. VOIP

- New technology that breaks everything! (Systems, networks, assumptions, business models, network models – e.g., concept of circuits)
 - QoS & SLAs
 - Huge demand will drive rapid change
 - OSS deficiencies
 - E911 location services
 - Is location meaningful anymore? location on the earth's geography and/or location on the network topology
 - Design
 - Existing plant and investment – must reuse to leverage historical investment base → new life for old plant
- M. Documentation attrition – shrinking knowledge base in the systems and in the network
- Meta-data is problematic (hard to document, easy to lose)

Vertical Industry Breakout: Water/Wastewater

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1. Annual Geospatial Technology Report (GTR)

A. How can we increase the response rate to the GTR survey? We want to achieve 500 participants to improve statistical reliability of trends analysis.

- Respondents should get free copy
- Increase number of people to be included (are responses only requested from GITA members?)
Broaden the audience.
- Assure all verticals giving access in multi-vertical organizations (one response per organization may not cover every vertical under one company)
- If you are a multi-utility organization, list the contact that work within each vertical
- Use mailing list from other associations
- Get information from purchasing staff (may be critical people that are not tapped into within an organization for response)
- Develop register of organization managers who can get the surveys out (and completed)
- Who's involved with organization's GIS (do we know)?
- Provide other incentives for participation (discount to conference, sponsorship vouchers, T-Shirts, etc)

B. What will increase the use of the GTR to users? To vendors?

Users

- Many have not seen the report
- This question has the same concerns as question A (the increased response question), who is getting the report
- MEMBERS ONLY access to GTR on the web
- Include a copy with the GITA membership
- Respondents should get a copy of the GTR

- Advertise that the GTR has been published

Vendors

- Use for market research

C. Should we consider adding questions on annual budgets? More granularity on spending data?

- When responding to the survey, could not tell between annual budget or total budget spent to date (question needs clarification)
- Yes, there should be more granularity
- Add Total Budget
- Add Total Project Cost
- Does not account for in-house cost verses cost of contractual services (needs to differentiate between the two expenses)
- Need to define funding sources (some cost may not be included in organization's budget)
- Break data cost up into individual technologies
- Field data collection
- Data conversion cost should be broken into smaller categories (paper to digital, CAD to GIS, GIS version I to GIS version II)
- Software/Hardware
- Granularity by application (devices for field, Software for CAD, software for Web)
- Software and how it is used in the business (integrated into applications, or stand alone application processes – should include the business processes they support)
- A ratio of services to hardware to software (compare all three)

D. Are data types current? What about the data sources?

- Not really, include LIDAR Pictography, LBS, Ortho, Photography (stereo) Photogrametric
- Not spatially accurate
- No accuracy standards

E. Other questions?

- Driven by workplace practices, not technology
- Interoperability, not just software working together, but workflow management
- Change management (executive/political/silos) for acceptance of new practices and processes

2. Top Ten Lists

Technologies

- GPS
- GIS Software
- Mobile computing
- Redlining
- Field data capture
- Data exchange OGIS
- Physical Database
- Database Management
- Wifi/Wireless technologies
- Application integration
- Workflow integration
- Document management
- Orthophotography
- Imagery
- LIDAR
- Web Services
- Thin Client/Portal
- Non-proprietary source OLE/COM

Applications

- Workflow Applications
- Document Management
- Security
- cMOM Comp[liance
- Regulatory Reporting
- Asset Management
- Facility Management
- Management Information Systems
- Leak Detaction
- GIS Migration/Integration
- AM/FM GIS Migration
- Field Computing
- Modeling
- System Integration
- CMS
- CIS/CRM
- Outage management
- Engineering Design
- Planning and resource management
- ERP
- EAI
- Messaging
- Work Management
- SCADA
- Security/Incident Management System (IMS)
- LBS
- Routing

- Dispatching
- AVL

3. Critical Industry Issues

- A. Compliance
- B. Regulation
- C. Budget
- D. Integration
- E. Complacency
- F. Change Management
- G. Project Management
- H. Security
- I. Aging Infrastructure
- J. Compare Issues from Australia GTR for commonalities
- L. Have copy of report (GTR) for advisors to become familiar with
- M. Define objectives of report and how it is used
- N. Too much detail may deter response
- O. Bring together a joint conference with AWWA/APWA/CNCIS and Surveying community (include URISA)
- P. IMTech looking to expand (could be included with GITA)