

# Appendix G

**Recorders Transcription (unabridged) ver. 3/12/08**

## **MetroGIS Workshop - January 24, 2008** **“Meeting Shared Geospatial Needs Beyond Data”**

### **Presentations**

Jim Bunning (Scott County) – sharing in many departments; shares SDE database with Dakota County, standardized datasets, share costs, imagery. Have shared web apps between Carver, Scott, and Dakota Counties.

Tim Loesch (DNR) - Sharing Infrastructure - Have 1000 users of GIS data, have infrastructure designed to mirror their site. Foresters manage their data set from 60 sites, updated daily. Uses data custodians for managed data, plus warehouse with portal tools, metadata with attribute lists. Project was successful because it was voluntary but benefits became obvious. Share infrastructure with Ag group, can both access each other, had security issues with open connectivity (Service Level Agreement).

Dan Ross - MNDOT- Have 1000+ desktop installs, have moved to web (less management and support) use web services and templates. These templates reduce development time to hours, not days, for new projects. Public can access up-to-date road conditions. Use web services to automate data and eliminate data entry error. Have people in the field only collect x, y coordinates, other info is populated by service. Building common functions that multiple business sections (and external) can consume as services. Comment: we should develop a GIS portal to share web services.

Randy Knipple (Dakota County) - OpenMNND Project- collaborative open source web mapping solution. Received a federally funded grant(\$75,000). Used existing open source software efforts. Use MapServer as engine and GeoMoose as browser client interface. GeoMoose can use WMS on its own, doesn't need MapServer. A question- why is everyone spending efforts to develop separate web apps.

Nancy Read – Geocoder Project – MetroGIS-funded collaboration to develop open source cascading geocoder code and set it up as a service using MetroGIS Address points, Parcels, and TLG Street Centerlines. Will be available in April. Serves as test project for developing applications through MetroGIS.

Ben Verbick – Logis – member cities pay annual fee, Logis provides staff, applications, servers; most participants connected by fiber network, some dial-up. Philosophy on fee is equity in service, foster participation (paid for it, should use it). Identify business needs at idea forums and user group meetings. Involve IT depts. and buss. depts. from all cities. Only 4 staff; do end user support and development. Success due to participation, but also hard to get consensus. Obstacles – data source control, timing.

Jim Fries & John Antenucci – Extended enterprise – adjacent local govt., State, Fed., vendors/suppliers, businesses (worldwide), citizens, visitors, non-residents. Context for sharing beyond data includes Applications, Infrastructure, and Institutional Arrangements. Examples:

- Chester Co., PA – associated with IT office, county agencies, cities, school districts, utilities. Always document and share benefits summary, get to policy-makers. Capture effort through personnel records. Paid for 70% from general fund, 20% (?) fees from organizations participating.
- King Co., WA (Seattle) – institutional environment to collaborate and share funding; “matrix” funding, parts of interest to only some are paid for by participants only.

- Louisville / Jefferson Co., KY – sewer district paid to start, once built, other agencies “subscription”, using Service Oriented Architecture, share design & code.
- Knoxville, TN – utilities board GIS built services that can be called from Word, Excel, Access
- Michigan Center for Geographic Information – building services
- Pennsylvania Geospatial Tech. Office – can load data into SDE, geocoder, has plume model service

## Part 1: Sharing Applications

John Antenucci: Let’s revisit efforts to share. Let’s approach sharing of apps; take an inventory.

Gordon Chinander: Emergency service zones with DataFinder, LMIC share imagery through WMS,

Chris Cialek: Aerial photography, WMS service, LOGIS uses it.

John Antenucci: Apps, services.

Alison Slaats: Datasets, map services.

Tim Loesch: We share 200 data layers through downloading and direct access protocols. DNR Garmin is used worldwide. Data Access; Landview.

Rick Gelbmann: Data Finder site, LMIC and Met Council.

Pat Cummens: ESRI makes a lot of data; ArcGIS, online developer network; clearinghouse.

Randy Knippel: GeoMoose has .NET client with 3 counties.

Bob Basques: GeoMoose; internally Gizmo. 140 layers internally, 40 via WMS.

Chris Cialek: LMIC, GeoGateway provides search engine for datasets. DNR type council for Datafinder, 5-6 state agencies.

Randy Knippel: Virtual birdseye, mashups from Hennepin County.

Rick Gelbmann: Natural Resource Digital Atlas that uses ArcReader, provides natural resource info of the region, now extended to include 4 additional counties.

Dan Ross: Crash records are shared and built.

Tim Loesch: DNR web app, fire department, first responders data.

Dave Brandt: We share with 11 cities in the county, for a fee.

John Antenucci: Let’s categorize. Sharing infrastructure, technology, let’s leave aside for a moment how do we share stuff more. What would your organization do to prevent sharing?

Randy Knippel: Require us to focus internally. Cost through fees, require licensing, have to sign license, stop communicating with other organizations. Not be open to the idea

Nancy Read: Require every policy maker to sign a license.

Jim Maxwell: Stop communicating.

Bob Basques: Unplug the external network (laughs).

Dan Ross: We can’t stop, it is public information, or 90% of it is.

Randy Knippel: required to provide data.

Nancy Read: Put a value on it.

John Antenucci: How about apps? What would you do if you wanted to prevent sharing of apps?

Perry Mulcrone: Who owns the code? The entity that pays for solution, if hire a contractor who actually pays for it owns it.

Bob Basques: City could copyright the info. Unless you open source it the city owns the code.

Bills-city would copyright it, but still be able to share it.

John Antenucci: Do we have to share apps with the public?

Mike Eberle: Signed paperwork that you retain all copyright.

Perry Mulcrone: Whoever pays the salary owns it.

Steve Elkins: If you use open sources...

Randy K: make sure when apps are available. Would be an ongoing debate when apps are available, don't do it just because you can. Make sure it's a good idea. Aren't required to share data. What is the driver to share apps? We aren't required to put them on the Web.

Rick G: not adhere to standards and ignore what others are doing.

Gordon C: ? On who owns apps- if county/state paid doesn't the public own it? Courts uphold intellectual applications. Example: if artists are commissioned by the receiving company, the receiving company owns.

Tim L: Restrict sharing would be shifting priorities and a reduction in funding in getting data

Rick Gelbmann: Prevent sharing by not adhering to standards (laughs).

Gordon Chinander: Who owns the app? If county or state creates it, does it belong to the taxpayers?

Perry Mulcrone: I'm not a lawyer, courts will uphold intellectual property for people who create it or pay for it to be created.

Tim Loesch: Shifting priorities or reduction in funding would restrict sharing.

Gordon Chinander: if everyone started charging for data would be a major problem, we wouldn't share.

Bill Swing: If we stopped enlightening policy makers...no communication, no enlightenment.

Nancy Read: If our board couldn't trust other entities to provide services.

Pat Cummens: losing trust in what's being shared. A barrier, if people have too much Money, don't have to share

BobB-Can build internal-if someone wanted work redone would stop sharing

Bob Basques: Flip a switch to make it available to the public if administration wants to do it a different way.

David Bitner: Administratively, it is a lot easier on professional services than to buy software. You still get support. If you don't have a large internal staff, buy services.

~John: Who saves money buying products versus services?

BobB: can save money buying little modules, little apps.

Pat Cummens: Barriers; trust. You must have faith in what you are getting, the metadata.

Paul Weinberger: A lot of what we do is internal funding. A department comes to us and asks for an app. We can hire consultants. This increases the cost. The city of Minneapolis outsourced with UNISYS, this adds huge costs to any project. If we share data it adds to our costs. It restricts what we can do. Our department couldn't get MN/DOT information right away.

Ron Jabs: Security of info comes up. Concern about someone else manipulating the data, someone else looks in. We rely heavily on mapping, there are weak links sensitive areas of infrastructure. Such as someone tampering with things on site. Others could tamper with infrastructure. Have to cover liabilities, need comfort level.

Rick Gelbmann: My original focus is on short term benefits. Have limits.(quick ROI)

Chris Cialek: have contract language with contractors to prevent sharing

Bill Swing: Culture can impede sharing.

Dave Brandt: Staffing can prevent sharing, ability of staff and type of background

Pat Cummens: Look at job descriptions, how much sharing. People are judged on what they do for their company.

Alison Slaats: Eliminate Datafinder, ignore customer needs.

Randy Knippel: Decrease role of trying to organize region.

Chris Cialek: Cut grants.

Gordon Chinander: Quit updating data.

Bill Swing: if we stop outreach, communicating, it will go down the tubes.

John Antenucci: Let's make a list of outreach things.

Jim Maxwell: Government Council.

Randy Knippel: Leadership, networking, not showing up for user groups.

Ben Verbick: Websites.

Alison Slaats: GIS external sharing.

Pat Cummins: Stop public...

Gordon Chinander: Regional government outreach.

Bill Swing: Intercounty sharing, awareness of neighbors.

John Antenucci: Legal, retain ownerships. Let's take a list and distill it to a half dozen areas. What we could do as an institution to facilitate sharing. Identify areas, be proactive. Make and add improvements. Let's go back to apps and services. Which apps have the greatest number of users beyond your organization's consensus?

Nancy Read: Geocoder. We needed it and data.

Dave Brandt: Driving force can cascade, multiple data layers/sources.

Bob Basques: Geocoder is the first shared app we've put together as a group.

John Antenucci: What is beyond Geocoder?

Bob Basques: Depends on money.

Dave Brandt: Imagery services, orthoimagery, WMS, LMIC, a catalog

Rick Gelbmann: Universal Data Services available via web.

Steve Elkins: Apps guide public policy, so we need a decision support tool

Brian Fischer: vote for WMS, Aerial photography is number 1 thing they use, use in GIS and CAD, extension of orthophotography service.

Randy Knippel: Real estate comparison.

Nancy Read: an application that enables rapid data update, address authorities tool that maintains databases collaboratively

Dan Ross: We don't want to be managing the local data. A different approach, putting hooks into local use, want data quality to be because of use not force

BobB- how geoMoose used to work was that way

Steve E- tools out there related to data quality might be a front end before loading data

TimL(DNR)-need to build service, a catalog of services, don't agree WMS is expensive,

DBrandt-agree, I have functions, query, mailing labels when I get requests it's for all Similar things

John Antenucci: Number one is a data update tool. Number two is an editing tool for discrepancies.

Bob Basques: People manage their data; I run the system.

Jim Fries: If I have a question...

Bob Basques: Metadata.

Jim Fries:...can it be sent back to the author.

Bob Basques: No.

Rick Gelbmann: It is a way to bring data in the address points apps.

Steve Elkins: A family of tools for data quality address; data becomes postally compliant.

Tim Loesch: Metro GIS could build a catalog of apps; there are more than we know. WMS image. We don't know where stuff is.

Dave Brandt: A functions query. Making labels for three main functions. Property, Mail, Aerial photography.

John Antenucci: Catalog listed, source, money or not.

JimM-almost worthless to have all apps unless we know about them, need some way to communicate what we have

ChrisC-3-standard data theme, disparate systems, accepted XML schema for land records, law enforcement, regional access to criminal analysis, we are far from standards.

What is the first step in making a catalog?

Tim Loesch: I'd like to see Met Council continue that.

Bill S-need a standard XML for land records and law enforcement. Data is difficult to get at.

Steve- need to catalog data, have a state register for services

John Antenucci: Metro Council set up.

Dan Ross: we have identical functions, what we could really use is a catalog of these, a services directory.

There are lots of agencies setting up similar apps. We need data and metadata, a way to find similar apps and services.

John Antenucci: Maybe also a registry and forum to see who else will participate. A collaboration registry.

Nancy Read: Basemap services.

Dave Brandt: like Google, ESRI.

Pat Cummins: A collection of basemaps.

Nancy Read: Something with labels.

Brian Fischer: Images and tiles; a map cache available via web service.

Nancy Read: Private business; what do they want?

Jim Maxwell: need datasets.

Bob Basques: A spatially enabled catalog. If you wanted data for an area, would get related apps for it

John Antenucci: Let's make a list.

1. Common Services
2. A universal data service, base maps etc.
3. Decision support tool
4. Image Service (orthotool) expansion
5. Comparable Valuation
6. Data Quality Toolset (update, edit, including compliance with standards)
7. A cataloging/registry service.
8. XML schema. Land base and other.

PC-Can we get a clarification of common set of tools? Where does geocoding, mailing labels fit in. The components themselves?

Randy Knippel: Three things we need. Put it in the parking lot.

Tim Loesch: Data quality tools set. Is this a way to get data back to the custodian?

John Antenucci; Yes, it is in number 5.

Rick Gelbmann: Is number 7 part of data services?

John Antenucci: Everyone gets \$50 to spend on three items. Put the number of the item on the bill.

Results of Vote:

Private:

1) 80 2)35 3)20 4)80 5)5 6)20 7)70 8)40

Public:

1) 235 2)155 3)105 4)50 5)30 6)170 7)240 8)160

PUBLIC Priorities:

1. Registry/Catalog Services
2. Common Services
3. Data Quality Toolkit
4. Universal Data Service
5. XML Schemas Initiative
6. Decision Support Tool

7. Image Service Expansion

8. Comparable Valuation

BUSINESS Priorities:

1A. Common Services

1B. Image Service Expansion

2. Registry/Catalog Services

3. XML Schemas Initiative

4. Universal Data Service

5A. Data Quality Toolkit

5B. Decision Support Tool, Universal Data Service

6. Comparable Valuation

Jim Fries: 25 responses to the survey—will this be a success? Only if lunch is good.

John Antenucci: Someone suggested expanding LMIC, others transparent data layers; common place names.

What is needed for Image Server Expansion?

Brian Fischer: Add coordinate system support, formalize the code, document code and release it out so people could set up their own services.

Gordon Chinander: Emergency services. High-resolution photos.

Jim Fries: What is the problem?

Gordon Chinander; I have permission to collect the data, there are storage problems.

John Antenucci: An image server. Better environment to store.

Chris Cialek: We do it. It would take planning.

Tim Loesch: A good addition to LMIC is authentication to protect those datasets. WMS authentication.

John Antenucci: We've done that.

Dan Ross: We do it internally, we don't expose it.

Randy Knippel: We have it online.

Dan Ross; Need access to a licensing agreement.

David Bitner: Looking at imagery, buying with licensing is cheaper. But buying and making public – there's more to it, look at the overall equation.

Bob Basques: I'd like to see it set up as a multi-node system but it would be more work.

Shasha Shekhar: A few years ahead, LiDAR data.

John Antenucci: How about a base map?

Pat Cummings: Metro and state basemaps with nice labels. Should be cartographically Rendered, someone needs to put them together so they look good, this takes time. Sometimes use toposheets as basemaps, maybe we could have a Minnesota version. Would be efficient if had a collection of basemaps

Dan Ross: One example is the Mn/DOT state highway map. The paper map is the same as the online version.

Pat Cummings: Topographic sheet draped on top of ortho map. Efficiency gained users.

Alison Slaats: for data in basemaps would want roads, landmarks multiple style sheets, Standardized but customizable symbology

Jim Maxwell: Are we talking about basemaps as data or images?

Many people: Both.

Jim Fries: In the private sector, why was decision support low?

Jim Maxwell: If you were going to use others SST, you'd need to know what they need.

Dan Cook: The DST is difficult as an elected official or from a decision making perspective.

## Part 2: Sharing Infrastructure

John Antenucci-anyone, charging for access by CPU cycles or data usage?

Jim Fries: This includes personnel resources.

John Antenucci: Twenty minutes for apps from this morning, until 1:20. What technology requirements are and implementation of sharing apps.

Tim Loesch: Business units organize IT prospects, pay for internal services.

Gordon Chinander: charge for access to network

Bill Swing: was charging for access, but not anymore

Ben Verbick: was charging some, but not GIS. It is a nightmare. Why control access? Gets competitive through other counties

Bill Swing: need for cost allocating, used device counts, county feels it's a very good assessment

John Antenucci: A notion of a virtual network of web based apps enabled for everyone.

What are the demands if quadruple apps served out and there is a large demand for your stuff? What are the obstacles? Could you dramatically expand with your infrastructure? Could infrastructure be ramped up to support outside entities?

Mike Eberle: That depends on workloads, need data storage, technicians and hardware on the server side, but our network could handle practically double.

Tim Loesch: Quadruple demands are technically feasible but funding... budget requires 1 year lead time, have different hardware.

John Antenucci: Budgetary issue?

Tim Loesch: Yes.

John Antenucci: Time?

Tim Loesch: three to six months to plan, etc so a year.

Perry Mulcrone: We could support it now, use IT Infrastructure Library practices, no problems

John Antenucci: So you have an institutional process?

Perry Mulcrone: Yes, we do analysis.

Randy Knippel: Given everyone's good will, I can imagine the threshold. For us its technologically possible, what is benefit to tax payers? Someone will ask why are funds being spent here? We all have to answer to this.

Nancy Read: We maxed out our capability once already. We had a TV spot and after it aired we got overhit. It's not possible for us.

John Antenucci: What did you do?

Nancy Read: Waited for it to die down (laughs).

Rick Gelbmann: need to tie activity to their mission, we can absorb marginal costs and development costs as part of our mission.

John Antenucci: Is anyone outsourcing?

Pat Cummins: We contract with AT+T datacenter, easier to outside physical infrastructure and security, can host imagery data, fail over backup. Provide outsourcing for peak loads. Feds contract for use of two ESRI data centers

Brian Fischer: don't charge high enough fee to support. Amazon has service to buy only peak loads

Bill Swing: A follow up to Perry's comment—technology is changing so fast today. It is becoming less of a concern. Speed, storage, area networks; these we can ramp up as needed. Memory is dirt cheap.

David Bitner: Ramp up services, make it more limited in scope, but more efficient caching of tiles(like google). Easy to throw hardware at, better indexing.

Myjke Nelson: storage and bandwidth, hardware not a problem but support more difficult

Bob Basques: can serve everything outside, bandwidth can be a problem. Large transfers can cause problems

John Antenucci: Are there any best practices in GIS?

Perry Mulcrone: Use ITIL, good for standards, concepts and techniques for managing information technology, aids in implementation of a framework for IT Service Management and support

Bill Swing: GIS not much different than anything else, just use higher bandwidth, more of it

Dan Ross: We want architecture the same, swap components; use same protocols

John Antenucci: Who has GIS technology separate from IT? (4 hands go up)

Pat Cummins: Define infrastructure difference, IT/GIS separation.

John Antenucci: Who manages your boxes?

Chris Cialek: all have common IT services, email, shared applications, we have our own IT managers

Bill Swing - have to work together to reduce redundancy with IS/GIS, try to eliminate redundancy and exploit our respects for talents, talk about sharing common infrastructure for all of county

RGelb- GIS just recently now part of IS

John Antenucci: You represent an unusual mix. You may be independent, but this group represents an unusual profile.

?: There is separation

Myjke Nelson: We just shifted from being independent to depending on IT.

Tim Loesch: we are the same, consolidation of GIS/IT happens over time, seeing more of it, they are a part of IS, have their own UNIX admins.

John Antenucci: GIS is another app within a network.

Perry Mulcrone: found synergy in merging, getting GIS into IT has helped get GIS into all departments; best leverage is together, need redundancy though, in case of emergency, like 911 or critical parts of business

GC- agrees, certain apps are mission critical

John Antenucci: Someone mentioned other counties to use as backup for each other

Jim Bunning: We do, SDE backup from another county

John Antenucci: Any more?

Perry Mulcrone: We always...think redundancy., need redundancy

Sally Wakefield: Is all support and GIS/IS for her organization

John Antenucci: Jim has some observations about the survey and how you spent your money.

Jim Fries: There is a low interest/priority in a common development environment.

Randy Knippel: shouldn't matter what environment we use, need to expose the data. We should use open source.

Jim Fries:- you have the ability(staff) to open source, not everyone can

Alison Slaats: It would be better to collaborate with the same environment, but there can't be just one, how can we enforce one?

David Bitner: open source or not, not so important, open standards is. Need to treat it like an ecosystem, if there is a problem with one, there is a problem with all. Need to create more robust components.

Pat Cummins: Abide by standards, need plug and play web services

Bill Swing: Certain apps –certain standards.

Shasha Shekhar: there are many ways to share things, could agree on shared platforms but more important to be more data centric, need to reduce the number of environments (less integrations, problems, easier to staff, have specialists) Language used is less important than choices. XML and web services are good ideas. There are lots of choices.

JimF-What kinds of standards do you need?

Perry Mulcrone: web services, rich internet applications using mashups There is a mash up of Google Earth and Craigslist; got leverage off those two apps. They are cached in the background.

Jim Fries: The region needs some standards, what are those standards?

Bill Swing: XML schema.

Dave Brandt: arcIMS, mapserver, .NET. If everyone studies the same type of thing we can share knowledge as a whole. If we branch out to whatever is out there, we might lose some of that

Jim Fries: Are standards an issue, Patrick Hamilton, for the private sector?

Patrick Hamilton: We convert everything we get how we want it.

Jim Maxwell: need shared standards

Chris Cialek: monitor ISO efforts to develop standards, there is a standards committee that provides workshops

BobB- can't follow FGDS metadata standards, don't need it programmatically

Alison Slaats: have to figure out standards. Was a case study from ESRI- talk about UDDI standard.

Tim Loesch: we can't always control what platform-our group is antagonist against windows, we've used linux/UNIX, we can't control what skills our group has and is comfortable with. But really we only need to talk in a common language.

?? Steve Elkins: - has same problem, works in a shop where they are really against Microsoft. You cannot ignore metadata

Rick Gelbmann: There is a lot we don't control. By letting that go it eliminates the issue. At MetroGIS we've learned to share. No business will do what is not in its business interests.

Bob Basques: How to handle derived datasets? Who is responsible for metadata?

Steve Elkins: Who asked for it? Works in business where no metadata, no application

Bob Basques: The custodian is responsible.

John Antenucci: The more mashing with error sets, the more remarkably inaccurate.

David Bitner: We can follow a Wiki model, people out with GPS, pulling Tiger data. Crowd sourcing. At some point you have critical mass, and a good dataset.

John Antenucci: Let's define common XML schema.

Bill Swing: every data element for land records would have a common descriptive. NACO doing work. Law enforcement what defines an incident between Counties Through CrimNet created on XML standards for public safety

Pat Cummins: different communities working on data models, XML schemas for starting points on data standards

Bill Swing: Challenge. What is the condition of the progress we made?

John Antenucci: Has the second step been realized? Have external sources made the cut?

Myjke Nelson: will need XML. Common specifications.

Shasha Shekhar: There are some out there.

Mark Kotz(MC)- worked on pilot project with parcel dataset for 7 counties. Address points data, national street address standard. Will need XML use .shp now. XML doesn't help with anything if we can't agree on data standards. Land use codes- tried to find categories to use, was a tricky road to go down.

John: What have you been deciding to use in your regions?

Mark Kotz: national street address, .shp, local versions of schema

NR- schemas, a positive if we start building things based on standards

Pat Cummins: Part of the transfer process is identifying a target schema. Tools are becoming more common. Arkansas Geostore, Safe Software, ETL (Extract, Transfer & Load).

Gordon Chinander: XML is great for data transfer, points. Look at GML for lines and polygons?

Shashi Shekhar: XML used for many things. GML for geometries.

Gordon Chinander: No one is talking about it, pushing it.

??\*John Antenucci: XML...

??\*PC-

Chris Cialek: Web features is exploring, GML—the version hasn't moved forward. You still need to do the work up front. Still is ambiguous with XML

### Part 3: Institutional Arrangements for Sharing

John Antenucci: Management people are not technical, all work in institution. What are three to five institutional topics that are obstacles? Can we standardize data? Let Mark Kotz summarize what he said.

Mark Kotz: There are two scenarios: First, parcel dataset, no existing standard. Lets come up with attributes we can all agree on. We attempted to get a common parcel dataset-got county to get small set of attributes(test). Licensed dataset, let users test first, came up with another set. First a small set, then a larger one. We got all the registry users together and asked what they need. Counties; what can you provide? No one should do something for the whole if it doesn't return on investment. Came up with agreement, list of small, required data. Hard to agree on naming convention. Seed mining to clean data. National land dataset did a pilot project with 4 counties to see if it works. User forum –MetroGIS started it. We made a list of attributes that should be in a dataset. Agree on specifications. Example; Parcel data. Use type. Each county does it different. None of the counties maintain data in this format. MetroGIS funded them to write their data. It is not perfect for all, but generally a success. Second, an address point standard. Let's adopt a national standard and come up with a local version. Yes, it is realistic (4 counties). Negotiation. An existing standard that all can agree on is a nirvana.

~Who was the first to come up with this?

Ron Jabs: The MetroGIS user forum; topographic info needs. A thin slice of what was possible.

Dave Brandt: Policy makers couldn't decide what to do, thought it would be harder, but it was actually simplistic. If counties want to fix their data they can, if not, they don't. A lot is accomplished through informal meetings to address obstacles stated earlier.

Randy Knippel: Issues – how are going to resolve discrepancies with parcel lines?

John Antenucci: Who was partial in the first round? - - - Let it rest.

Ron Jabs: It wasn't purely ad hoc; there was a purpose.

Jim Fries: A lot of this is accomplished through informal interaction, can we use this to address these barriers?

Nancy Read: A backbone structure is helpful, i.e. a Metro GIS licensing agreement. I don't have to go around and get seven licenses.

Rick Gelbmann: How do we cooperate? We need a template. Who needs to be involved, actors. What processes? So we don't need to feel our way in the dark.

Randy Knippel: One of the biggest issues we face is the organization itself—elected officials. Some barriers to collaboration are we don't have universal support. It will be a battle. I don't think we're there yet. We need to quantify a return on investment; we need to make our case. - need to show value of sharing because it's an indirect investment not a direct one. MetroGIS-don't ask them to do something unless have a business need for. Don't have quantifiable numbers, too many assumptions. Should stick with qualitative info, how many users, etc.

John Antenucci: With different agencies, how do you collectively establish benefit of what you've done or what you plan to do?

Dan Cook: Taking that qualitative information but turning it into grant information, even if you don't see return on investment you are still making beans. Until we brought in marketing, we didn't do anything. Promote to the right audience.

Bill Swing: Lots of organizations are interested in this communication, CIO. Do we need a structure or are we going to run on volunteers and good nature? Various pockets need to get together. governors council (big topic) defragged all over the state, need a structure, a general IT side to governor, we should be more connected

John Antenucci: Does anyone want to respond to that?

Mike- just need something to use

Bob Basques: We need a date when everyone turns everything off.

Randall Johnson: This group, it is important that structure gets dealt with. It is a public policy issue. If this group feels important-MetroGIS has ability to make policy. Not going to stay in region

Tim Loesch: We can't do this without both formal and informal collaboration. MetroGIS connects geeks to geeks and geeks to policy makers. I'd like to see MetroGIS evolve into a structure at the state level. We need to coordinate the board, a GIS state office. we're not moving forward as a state because we don't have standards, no formal structure, we are used to informal processes.

Nancy Read: I can justify my investment when I'm getting money for it.

Randy Knippel: We're talking about symptoms. We don't have good political support for GIS; we all fight these battles as individuals. When seeing LMIC and MetroGIS almost disappear 2 years ago-no open awareness that GIS is a good public investment.

Pat Cummings: The organizational framework is ad hoc, informal. Incremental steps need to be taken to establish service agreements. There are no GIS problems; there are business problems. need both. Need to establish SLA (service level agreements)-many have moved to raising the level of awareness to decision makers, business doesn't care how it gets done, but gets support from talking to business units.

Perry Mulcrone: Survey drove GIS needs in Scott County. We need to have someone champion and market it. We need to sell it to business services. Create and promote it to each other so we don't duplicate services. Promote to services, build your apps.

New Person (observer)-need marketing to sell a solution to business units, develop a web service, create web services that promote business needs

Chris Cialek: My ears perked up about Chester County (document benefits every time they do anything) good at documenting benefits, need to translate to decision makers. Geek to geek network needs to move to geek to policy. The benefit to legislatures is not clear. Inroads have been made in the last year.

Steve Elkins: Observation. Business users, engineers, planners, technocrats. Nothing is getting into the hands of policy makers. Nothing in this generation is affecting what policy makers do. What is the relationship between home values, traffic volume and crime, access to jobs? We have all that information but we can't pull it together. To get policy makers involved we need to get all that data together.

John Antenucci: We need a tool set with more analytical data.

Steve Elkins: What are common questions we need to answer- shared datasets if we want support. Crime analysis.

Tim Loesch: We identify where we need easements to prevent forest fragments. We at the DNR have an educated base.

Jim Fries: What are you doing to prepare the next generation, Tim?

Tim Loesch: I'm no longer an evangelist of GIS. The community of DNR, if needs something comes to my desk, everyone is familiar with GIS. If new people have no GIS education they will be at a disadvantage.

Shasha Shekhar: Should we propose GIO, CIO to help ease a new administration?

John Antenucci: Having these positions are good, but not the end-all.

Tim Loesch: They are a civil service position, so they will not change.

Pat Cummings: GIO, CIO—half the states have this structure. You gain expertise but still have disadvantages. Everyone is grappling with organizational structure. DOA is setting up a GIO.

Shasha Shekhar: This is a good time to raise it to the state level.

Brett Budrow: In Wisconsin discussion of GIO, CIO, and state board...I have to say this discussion is uplifting.

Observer- Do we have support of governor for GIS?

Dan Cook: TIES is part of a committee to get student data shared. MetroGIS is a model for that and is doing it right. talk to legislature, method of getting there through government officials to lobby whole state is going that direction, example, guiding state in shared I.S. in K-12 education.

John Antenucci: So how do we pay for this? What we've talked about today will cost money. How to finance this?

Dave Brandt: Sell ads

Nancy Read: We want a sustainable way of funding. We've been hung up on equitable funding. One thing has kept organization going is funding through MetCouncil because they tax the whole region through straight property taxes

John Antenucci: What will/won't work?

Rick Gelbmann: I hope we can identify modules; pieces of a puzzle that represent costs. Actual costs, time, effort. Define what is needed and decide what to do with data. Come up with definable modules. Come up with which groups can tackle what. Some may be what Met Council needs; to take one could make it equitable. If what we can do is defined what we need to do marginal costs to make available nationwide. Identify organization that can take on in their own business need. Grounds to negotiate how it would work to minimize peoples cost.

Randy Knippel: Some will happen regardless. Basic services geocoding, mailing labels. We will develop solutions together. We need to make sure we have a forum so we can work together. Again, we need political support. We need to stand together. we can see examples in the state. Some GIS enterprises have been funded by filing fees in place at local levels. We need to rely on policy makers at local levels.

Dan Cook: Why didn't counties cooperate?

Dave Brandt: Administration was not open to that. We do not get value back.

Perry Mulcrone: Due to the economy in the next couple years we need to avoid chargeback. We are not charging schools for fiber. instincts are to run to hills because of funding. Keep model in place. Have collaboration like in place now and pick out goals you want to go after.

Randall Johnson: A dollar spent by one unit of government should be leveraged by all units of government. MetCouncil is original, has taxing abilities

Dan Ross: We need to look beyond borders, we serve the same customers so we should if we can.

Nancy Read: Service level agreements. Funding fuzzy things are a tough sell. could use private companies to host data for them

#### **Part 4: Summarization and Future Direction/Next Steps**

John Antenucci: Anything to add?

Randy Knippel: Why don't you just tell us? You cited examples, have your slides, what about Best Practices, you've been around the world, seen what everyone's doing

John Antenucci: We can post to the website.

Alison Slaats: We didn't talk much about catalog/registry service. We need a centralized way. Currently Datafinder, do we need to do that for broader needs?

Bill Swing: List of organizations, principals, who is doing XML studies. Take a step outwards; what are the organizations and what are they doing?

Nancy Read: We need a search tool for components. Who else is doing something similar?

Perry Mulcrone: LMIC is supposed to be where who is publishing what. SOA would say UBBI library.

Steve Elkins: A full fledged UDDI library?

Chris Cialek; There was a project wrapped up at the end of the year, not fully ---

Randy Knippel: Collaborative website, Sharepoint. Some kind of forum for collaborating.

Rick Gelbmann: How do we proceed? How do we organize this? I'm uneasy.

John Antenucci: You should be (laughs). The survey was the starting point. This is a step. We will distill and provide back to the committee. Next week we will get out another survey and develop recommendations

Randall Johnson: something will be done, rest assured, I appreciate everyone that came. Thanks to

PlanGraphics, they will develop an evaluation and give good comments, give a workshop summary.

Someone asked: When will it come out?

Randall Johnson: Around the first week of February, will come out with a workable program with strong recommendations