MetroGIS Coordinating Committee: Meeting Minutes
Tuesday, February 3, 2015, 1 pm – 3:30 pm
Metro Counties Government Center, 2099 University Avenue, St Paul
[Draft Minutes]

Attendees:

Brian Fisher, Houston Engineering (Chair)	Joe Sapletal, Dakota County
Chad Riley, Carver County	Dan Falbo, ESRI
Jessica Fendos, Ramsey County	Ron Wencl, U. S. Geological Survey
Doug Matzek, Washington County	Nancy Read, Metro Mosquito Control Board
Len Kne, University of Minnesota	Matt McGuire, Metropolitan Council
Ryan Mattke, University of Minnesota (Borchert Library)	

Staff:
Geoff Maas, MetroGIS Coordinator

1) Attendee Introductions
Attendees introduced themselves and their agency;

2) Approval of Agenda
Agenda was approved by the attendees with simply a switch of items 3 and 4 in the running order.

3) Shared Tiled Imagery Basemap Discussion
Matt McGuire (Metropolitan Council) gave a brief but informative presentation on shared imagery and the technical requirements for making it come together. He proposed a discussion on the value of a shared tile/tiling scheme for imagery with the aim of serving mobile applications and other purposes.

The discussion included specifics of current image caching, tiling schemes and how imagery could be shared with out the construction of a service. Matt's slides are attached to the end of this document.

Chad Riley indicated that at present Carver County is providing MnGeo with their raw tiles after we've received them from the vendor, often they are only georeferenced and used in a handful of image services that are fed by Carver County. He asked if the counties would be expected generate the tile cache and then load it up.

Dan Falbo indicated that ESRI's Community Base Map might be a way to facilitate this, as it contains pre-built materials to facilitate loading and serving authoritative data and imagery after the user does the processing. He indicated that with the exception of the city of Minneapolis, there is not a strong metro county or agency presence in the Community Base Map.

Link to ESRI Community Maps Programs:
http://www.esri.com/software/arcgis/community-maps-program/features

Joe Sapletal indicated that Dakota County was considering moving to Community Base Map, the only red flag for them was the data projection.

McGuire: From what I've observed both Carver and Washington counties are presently using the Web Mercator projection.

Falbo: Several Greater Minnesota counties are standardizing on it (Web Mercator) as well;

Chad Riley states that there are templates established in Community Base Map (CBM) and you simply set your data sources to them; Carver County has also been considering participating in CBM as well, indicating there would be significant value to do it. Counties still can maintain their own basemaps, maintaining things at say, a 1:600 scale, but CBM would be incredibly useful for emergency response uses, rural county uses and mutual aid work (police, fire, etc.) between adjacent counties and communities.

Doug Matzek said that Washington County was taking a look at it too.

Riley: We are close to committing to it, it's not a huge task, mostly automated now, not a lot of effort.

McGuire asked if the tiling scheme could work in a separate way; with recognition that the hardest part would be to manage the imagery data. He also asked if there were any reason for using other (non Web Mercator) projections?

Nancy Read and Joe Sapletal indicated that USNG grid maps might look irregular in the Web Mercator projection, i.e. not square;

Falbo: I would be happy to set up a group to go over the Community Basemap materials, perhaps have a subgroup meet at the Council, I can connect those interested with ESRI Staff that are close to the CBM. Falbo encouraged McGuire to find a list of participants and determine their interest and that ESRI would be willing to set something up.

Jessica Fendos indicated that Ramsey County could create more or larger scale cache tiles to meet user requests and is able to work with parcel-level detail (maintaining a 1:240 scale), and that at present, the entirety of Ramsey County is around 40 GB.

Riley indicated that Carver County has had requests for that as well, to facilitate working with vector features and has had to work around it, building the caches with those layers, but not generating tiles at that level.

Fendos asked if users can just publish to a common server/cloud or do we have to physically push the imagery to an FTP site.

Falbo indicated that ESRI has a means to harvest them from your site, the authoritative or local authority has to generate the tiles but then ESRI can collect them.

McGuire indicated that he would need to do some additional research on the top and then get in touch with interested participants and ESRI.

4) Updates on the Metro Regional Centerline Collaborative MRCC project

MetroGIS Coordinator Geoff Maas provided a contextual background and brief update on the progress of the MRCC initiative. In February, the MRCC endeavors to have its sample data and data model published to the MetroGIS website for a public review period of 30-days. The data consumer community will encouraged to

5) Placing Data in the Land of 10,000 Lakes: Borchert Map Library Role in Archiving Minnesota's Geospatial Data

Ryan Mattke from the Borchert Map Library at the University of Minnesota gave a presentation on the potential for the Borchert to be a primary resource to the geo-spatial community of Minnesota for storage, archiving, preservation and curation of the many datasets being produced in the state. Ryan gave a similar presentation to the State Geospatial Advisory Council in January 2015 and was met with significant approval.

Historical data they would maintain could be tabular or spatial data, and resources are available to make analog materials (paper maps, maps on other physical media) part of the library's collection.

Ryan asked the group about their level of interest in the concept of a centralized/aggregated service model and if they considered the Borchert Library at the University of Minnesota to be the best or most appropriate place for archiving geospatial data? Responses were favorable to both question from the perspective of being able to direct old data requests and the

Mattke indicated that moving forward there might be a need for formalized agreement between partners and some language around a formal process for data transfer, but that the Borchert Library is looking forward to setting things up and getting the process started.

Participants indicated that one of the most tangible advantages would be that data producers no longer have to manage old data and handle requests for old data; they could direct the users to the Borchert Library. Participants also expressed that a review of existing policies and their consistency for retention and responding to requests would be a helpful to the effort.

**6) Continued role of the of the Technical Advisory Team.**

Fisher and McGuire queried the group on the continued role and future of the TAT. In recent years it has not been active on significant projects in play in other areas of MetroGIS and is no longer consistently employed in the way it was in the early days of MetroGIS. Of late, the TAT has been convening generally only once a year when a relevant topic appears. After a brief discussion the following decision was made on how to conduct the TAT moving forward:

- Maintain the Technical Advisory Team as part of MetroGIS;
- Maintain one (1) annual in-person meeting *(February seemed to be an appropriate time as it is after the annual publication of the MetroGIS Work Plan and before both the March Coordinating Committee meeting and April Policy Board Meeting, giving the technical practitioners the ability to review and respond to the document and its project list prior to action on it in the year)*
- Retain the ability to convene the TAT as needed or at the request of the Coordinating Committee.

Basemap Crossroads

Our basemap has served us well

- 5+ years old
- 10 – 12 million tiles served per month
- UTM projection
- ArcGIS Tiles
- 10 scale levels
- Regular and "Hybrid"
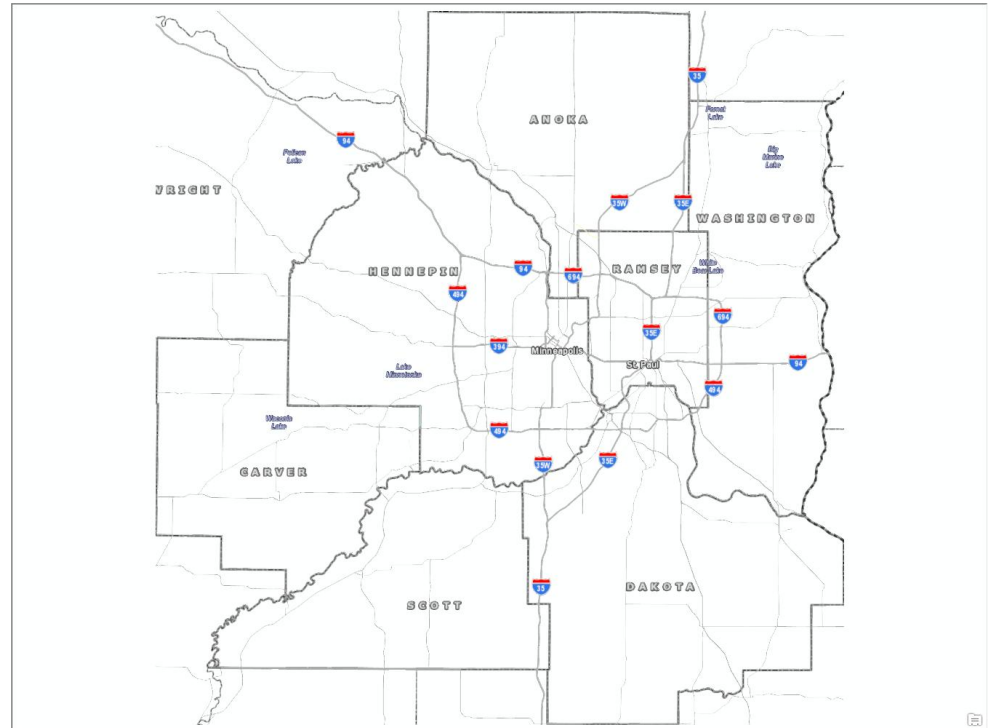
Current Basemap Practices

- 2 Metropolitan Council Basemaps
- MNGeo Image Services

- Internal Web Applications
- External Web Applications
- Desktop
- Mobile Applications

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Limitations on status quo

- Configuration
  - UTM projection limits customer choice
  - Basemap Scale levels are unique; discourages user basemap choice

- Imagery
  - Inefficient: Requires multiple services for imagery
  - Need high resolution imagery
  - Can't take it with us (ArcGIS Collector)

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County Imagery Basemaps

Same source and technology; different format

- Similarities
  - ArcGIS: 6 of 7 Counties provide ArcGIS imagery web services
  - 6 inch resolution imagery
- Differences
  - Projections (County Coordinates, UTM, Web Mercator)
  - Similar, but not identical scale levels
  - Origins (defines tiling rows and columns)

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Similar Scales

Anoka	Carver	Dakota	Hennepin	Ramsey	Scott
				240	
				360	
600	600	600	600	600	600
1200	1200	1200	1200	1200	1200
2400	2400	2400	2400	2400	2400
4800	4800	4800	4800	3600	4800
9600	9600	9600	9600	8000	9600
19200	19200	19200	19200	16000	19200
38400	38400	38400	38400	32000	38400
76800	76800	76800	76800	64000	76800
153600	153600	153600	153600	125000	153600
200000	307200	307200	400000	175000	307200

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Format, projection and style

	Anoka	Carver	Dakota	Hennepin	Ramsey	Scott
UTM Cache				🟩		
UTM Cache Decorated		🟩	🟩			🟩
UTM no cache	🟩	🟩	🟩			
Web Merc Cache						
Web Merc Cache Decorated		🟩				
County Coords Cache				🟩		
County Coords Cache Decorated				🟩	🟩	
County Coords Reg					🟩	

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Going forward

- Met Council Needs
    - Choose a projection
    - Plan for an imagery source
        6 inch resolution where possible
        Tiled "portable" format

A proposal

- Choose a tiling scheme
  - Origin north and west of Minnesota – the whole state could participate
  - Web Mercator

  - Counties continue to acquire high resolution imagery
  - Counties process their imagery into the shared tiling scheme
  - Council and/or other agencies can assemble and share a regional image basemap

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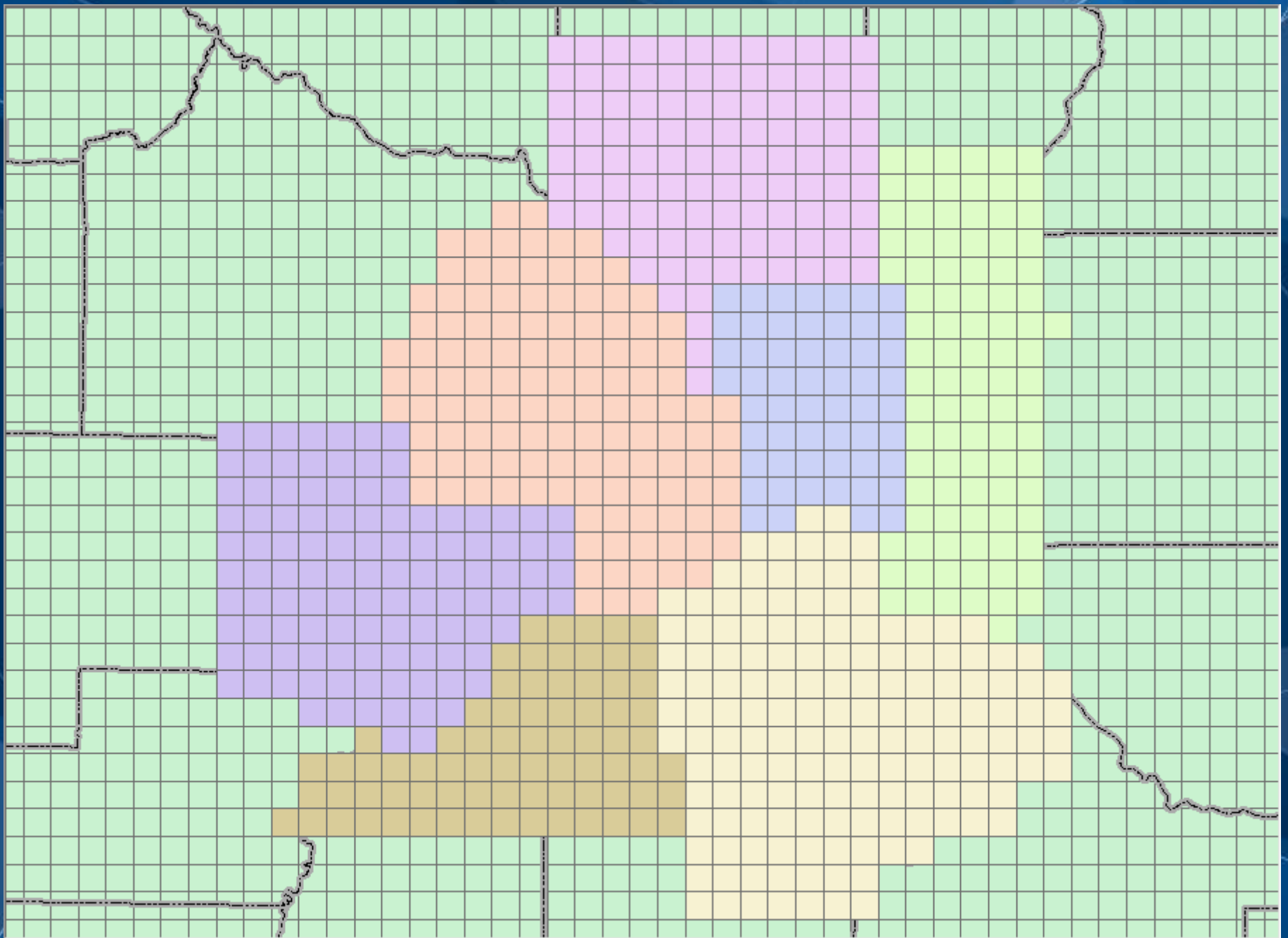
Question?

- Would Counties find value in sharing a tile scheme?
  - Projection
  - Scale levels
  - Origin
  - Styles
    - Plain Imagery
    - Others
- If so, what should the scheme be?

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