MetroGIS DataFinder
Application for Geography Network Challenge (Data Sharing Category)

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Background

MetroGIS (www.metrogis.org) is a collaborative organization representing over 250 local governments and other organizations. MetroGIS was established to foster sharing of geospatial data in the seven-county Twin Cities Metropolitan Area of Minnesota.

DataFinder (www.datafinder.org) is the MetroGIS web site that provides the mechanism for sharing GIS data between MetroGIS participants. The DataFinder web site was designed to reflect current and future needs for access to GIS information by MetroGIS stakeholders. It currently includes features that allow users to find GIS data and metadata quickly. DataFinder tools include a GIS data catalog and a search engine interface (that queries the MetroGIS DataFinder NSDI Clearinghouse node) that provide quick access to over 70 metadata records. In addition, the DataFinder site features an online-mapping feature (five ESRI ArcIMS image map-services and associated HTML web clients), and on-line help and resources pages.

The Geography Network offers MetroGIS a great opportunity to extend DataFinder's current functionality to provide additional map services to the MetroGIS stakeholders. The inclusion of map services on the Geography Network would not only enhance the DataFinder functionality for our current users, but it would also encourage a wider audience to view, explore, and use geospatial information.

Project Objective

MetroGIS DataFinder has deployed five publicly available ArcIMS image web-mapping services on the Geography Network. The goal of these services would be to provide reliable, public map services for MetroGIS stakeholders and the public to view, explore and access map images via the Internet.

Although only five mapping services have been developed for this challenge, the intention is to use the experience gained from this process as a model to increase the number of MetroGIS DataFinder site map services to sixteen. The sixteen map services are based on categories that place spatial data sets, defined by the business needs of the MetroGIS stakeholders, into thematic or topical groups. The goal of this process is to provide a flexible model to use in the search for, and use of, spatial data sets.

Currently, on the MetroGIS DataFinder site, these thematic groups are used in the theme catalog to enable quick and intuitive searches using categories that stakeholders would recognize. We would like to extend the use of these categories to the realm of map services. We propose to ultimately create a map service for each of the sixteen categories. The beauty of this "thematic" categorization of services is that as new data sets are added to the DataFinder site, they will be added to the appropriate service(s) as well. This framework provides a structure that is scalable for future additions and improvements to DataFinder map services. The sixteen MetroGIS DataFinder categories can be seen in the data catalog found at www.datafinder.org.

Cooperation and Benefits of Data Sharing

Governmental agency cooperation is key to the implementation of map services on the Geography Network. We anticipate the result of providing map services will be a significant cost-effective access to data and information for local units of government. For example, it may limit the number of inquiries made by the public directly to these agencies. There is a movement in the Twin Cities metropolitan area towards using map services to provide geographic information over the web. The implementation of a centralized solution envisioned by MetroGIS in this

project will be a significant step towards a streamlined process that will eliminate duplicative costs in software and hardware for deployment of web based services to the public. An essential message from the stakeholders of MetroGIS is our mission statement that clearly states the importance and future of providing access to geographically referenced data. MetroGIS' mission is to:

> *Provide an ongoing, stakeholder-governed, metro-wide mechanism through which participants easily and equitably share geographically referenced graphic and associated attribute data that are accurate, current, secure, of common benefit, and useable.*

In providing web enabled image services to MetroGIS stakeholders, it is imperative that these resources are developed with the stakeholder community involved from the onset. Traditionally web applications provided information only for a defined project. Now with the advances in technology, map services will be available for any client application that is able to use that service. In addition, it is anticipated that stakeholders will design web applications to utilize the map services provided by MetroGIS in their own web pages. This is a major step in reducing costs and work duplication between agencies.

Map Service Details

MetroGIS would like to enter five map services into the Geography Network Challenge in the "Data Sharing" category. The map server for each service is www.datafinder.org

Service Name: MN_MetroGIS_DataFinder_Transportation
The "Transportation" service includes major highways, functional class roads, local roads, transitways, bus routes, transportation analysis zones, bus stops, bus shelters, park and ride lots, light rail lines and stations, transit taxing districts and airports. Municipal boundaries are also included for orientation. Data included in this service originated the Metropolitan Council, Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington, The Lawrence Group (TLG).

Service Name: MN_MetroGIS_DataFinder_GeneralMap
This "General" service includes county boundaries, municipal boundaries, highways, local roads, railroads, school district boundaries and 2000 orthophotos. The local roads and the orthophotos are only visible when zoomed in. Data included in this service originated the Metropolitan Council, Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington, and Land Management Information Center (LMIC) and The Lawrence Group (TLG).

Service Name: MN_MetroGIS_DataFinder_Orthophotos
This "Orthophotos" service includes orthophotos for the entire Twin Cities 7-county metro area from 1997 and 2000. Municipal boundaries and functional class roads are also included for orientation. Data included in this service originated the Metropolitan Council, Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington.

Service Name: MN_MetroGIS_DataFinder_PlanningDevelopment
The "Planning and Development" service includes generalized land use, historical land use, transitways and urban service areas. Municipal boundaries are also included for orientation. Data included in this service originated the Metropolitan Council, Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington.

Service Name: MN_MetroGIS_DataFinder_PoliticalAdministrative
The "Political and Administrative" service includes geographic data sets that define political and administrative boundaries including county boundaries, municipal boundaries, school districts, Metropolitan Council Districts, transit taxing districts, watershed management areas and zip codes. Data included in this service originated the Metropolitan Council, Minnesota counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington, and Land Management Information Center (LMIC).