Missouri GIS Advisory Committee 2003-2004 Work Plan Annual Report

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This report covers the status of action items listed in the 2003-2004 Missouri GIS Advisory Committee (MGISAC) work plan. The work plan was developed from the MGISAC Strategic Plan and covers the July 1, 2003 – June 30, 2004 time period.

<u>MGISAC Vision</u>

Improving Missouri with Geographic Information Systems

<u>MGISAC Mission</u>

Foster cooperation among state, local, and federal agencies, educational institutions, private industry, and others in the field of Geographic Information Systems (GIS); provide guidance for the Missouri Spatial Data Information Service (MSDIS) in fulfilling the objectives of the Missouri GIS Strategic Management Plan (SMP); develop GIS standards for the state; provide an arena for discussions of relevant GIS issues; provide expert advice to the chief information officer (CIO) and the GIS community on GIS related issues; facilitate resolution of GIS issues impacting the state; coordinate and facilitate statewide training as needed; and work together with other states on standards and other GIS issues.

Theme Area 1: Outreach/Education/Training

Target Outcome: Increase visibility and understanding of the work of the MGISAC so the committee's purpose, mission, and work is understood more fully by state and local government agencies, the Missouri General Assembly, private enterprise, and others.

② *Action Item*: Post regular updates of committee and subcommittee meeting announcements, agendas and minutes to the website (Communications subcommittee, MGISAC webmaster).
② *Status*: The MGISAC web site meeting announcements have been kept up to date and meeting minutes have been revamped into a more maintainable format. Subcommittee meeting announcements have been posted as they have been received, although some subcommittee areas remained underdeveloped. Communication efforts are ongoing so similar work will continue in FY05.

② *Action Item*: Represent MGISAC at monthly ITAB meetings.
② *Status*: The MGISAC Chair is currently designated as the ITAB liaison. The position became an Ex-officio member of ITAB in 2003 and MGISAC was represented at all ITAB meetings including the planning retreat.

② *Action Item*: Participate in ITAB strategic planning session.
② *Status*: Tony Spicci, Ryan Lanclos and Tim Haithcoat all participated in this activity.

② *Action Item*: Provide an Annual Report to ITAB in June and provide updates (as necessary) at ITAB monthly meetings.
② *Status*: We will request time on July ITAB Agenda (June meeting canceled); participated in all ITAB meetings since being designated as ITAB ex-officio.

② *Action Item*: Post annual State's Activities and State Summary to National States Geographic Information Council (NSGIC) website.
② *Status*: Missouri submitted its information to NSGIC. The State Summary document is currently being formatting by NSGIC with an anticipated completion in July 2004.

② *Action Item*: Update State GIT Profile (Communications Subcommittee).
② *Status*: Incomplete.

② *Action Item*: Publish MGISAC outcomes work plan tasking elements to website and distribute to appropriate constituencies via e-mail (Various committees).
② *Status*: This item will be completed upon completion of this report.

② *Action Item*: Co-host the 2004 Mid America GIS Consortium (MAGIC) symposium with MAGIC. (E&O Subcommittee).
② *Status*: Complete.

② *Action Item*: Host a display booth in the MAGIC symposium exhibit hall and provide appropriate materials to conference attendees (E&O Subcommittee).
② *Status*: Complete.

② *Action Item*: Participate in the MAUG Conference (E&O Subcommittee).
② *Status*: Did have participation at the 2003 Conference (David Drum - MORENet, Jeff Schloss – MoDNR).

② *Action Item*: Host a display booth, participate in and/or sponsor the following state conferences/meeting: Missouri Mappers' Association (MMA), Missouri Society of Professional Surveyors (MSPS), Missouri Assessors, or others as appropriate (E&O Subcommittee).
② *Status*:   MMA – Hosted booth at 2003 MMA Meeting
                    MSPS – Did not participate in 2003 due to schedule conflicts; will
                    participate in next conference, September 23-25, 2004
                    Missouri Assessors – Sent members to conference

② *Action Item*: Participate / send member attendees to the following national conferences/meetings: NSGIC, FGDC, NASCIO or others as appropriate (E&O Subcommittee).
② *Status*:   NSGIC Annual – Tim Haithcoat - MSDIS, Tony Spicci - MDC
                    NSGIC Midyear – Tim Haithcoat - MSDIS
                    FGDC – Tony Spicci - MDC
                    NASCIO – Gerry Wethington - OIT

MMA – Jeff Falter – SEMA, Kevin Kuhlmann - City of Innsbrook, Tony Spicci - MDC
Digital Government – Jeff Falter – SEMA, Tony Spicci – MDC

② *Action Item*: Form a 2005 Missouri Conference Committee to begin planning the 2005 Conference (E&O Subcommittee).
② *Status*: Complete, committee has been formed.

② *Action Item*: Record the participation of MGISAC members at conference/meetings (Communications Subcommittee).
② *Status*: On-going. MGISAC members directed to respond to David Drum

② *Action Item*: Create a link to the GIS Day web pages (E&O Communications Subcommittees).
② *Status*: Incomplete; event planned for November 2004.

② *Action Item*: Reference (on the MGISAC web page) MGISAC GIS Day activities (E&O, Communications Subcommittees).
② *Status*: Incomplete; event planned for November 2004.

② *Action Item*: Begin planning for 2004 GIS Day (E&O Subcommittee).
② *Status*: Incomplete; event planned for November 2004.

② *Action Item*: Create a summary of Missouri GIS Day activities and submit for annual report (E&O Subcommittee).
② *Status*: Incomplete; event planned for November 2004.

② *Action Item*: Organize a GIS awareness event at the Capitol for legislators and staff (O&E Subcommittee).
② *Status*: GIS Day held April 27, 2004. Complete.

② *Action Item*: Review and update (on an annual basis) the MGISAC brochure (O&E Subcommittee).
② *Status*: Incomplete; review needs to be done. (Committee held off on redesign until after GIS Day / MAGIC; will be addressed in fall 2004).

② *Action Item*: Coordinate GIS training events. (O&E Subcommittee).
② *Status*: On-going.

② *Action Item*: Maintain an active membership in NSGIC and designate a member to represent Missouri (MGISAC Chair and NSGIC liaison).
② *Status*: MGISAC is represented as an 'Institutional Member' and MGISAC Chair; Tony Spicci serves as NSGIC representative.

② *Action Item*: Develop and foster a liaison group of local government participants to coordinate state GIT activities with local activities (Local Government subcommittee).

② *Status*: Initiated the development of a Local Government subcommittee. The subcommittee is evolving and will likely formalize in the fall of 2004. A meeting is being planned, to begin information gathering directly from local government GIT users. The meeting may be one central meeting, or several meetings spread across the state. A survey has been developed and released through the MSDIS website. The survey is still open, and will continue in the near future. The initial purpose of the survey and meetings is to develop a mission and list of objectives for the group. The group intends to develop a name that will allow it to function as both a sub-committee of the MGISAC and an independent caucus of Local Government GIT users.

② *Action Item*: Capture participation in minutes and post to website (Secretary, Communications subcommittee).
② *Status*: The website has stayed current with the monthly minutes being posted in an appropriate manner.

② *Action Item*: Develop a delivery mechanism for pertinent GIT/MGISAC information to citizenry in a manner that is appropriate and understandable (Communications subcommittee).
② *Status*: Incomplete; will be addressed in next work plan.

② *Action Item*: Identify and post inventory of training opportunities on the web site and update quarterly (E&O sub).
② *Status*: This is being published through the MSDIS website; on-going.

Theme Area 2: Data Layers/Data Standards

Target Outcome: To promote accessibility of all GIS data within Missouri.

The outcome of these items is referenced in MSDIS work plan (Attachment 1).

Target Outcome: To facilitate the development of GIS information in Missouri.

② *Action Item*: Prioritize data development planning efforts (DDS and MGISAC).
② *Status*: Implementation team renamed Data Development Subcommittee, Ray Fox and Jeff Schloss co-chairs. No data development plans developed during the year, although activity beginning to ramp up.

② *Action Item*: Develop milestones for prioritized data layers (DDS and MGISAC).
② *Status*: No progress made to date. Data Development Subcommittee hosting meeting July 8 bringing together interested state, local, and federal agencies involved in data collection. Meeting participants are being asked to discuss their agencies current efforts and plans. Expected outcome is discovering areas of overlap to encourage cooperative efforts.

② *Action Item*: Publish data development plans for review, comment and subsequent revision. (DDS subcommittee).

② *Status*: Incomplete, see above.

② *Action Item*: Develop and submit a proposal to create a web based - statewide addressing geodatabase. (DDS subcommittee).
② *Status*: Incomplete, see above.

② *Action Item*: Assemble a listing of grant opportunities and publish to GIS community annually (DDS).
② *Status*: Incomplete, see above.

② *Action Item*: Report activities in which outside funds (federal, other) were leveraged against state assets to develop data (DDS).
② *Status*: Incomplete, see above.

② *Action Item*: Demonstrate how certain activities would benefit numerous agencies through the centralization of standards and development projects (DDS).
② *Status*: Incomplete, see above.

Theme Area 3: Missouri Adaptive Enterprise Architecture

Target Outcome: Integrate GIT into the Missouri Adaptive Enterprise Architecture Plan (MAEA) – providing guidance for the development and enhancement of the State Information Technology infrastructure.

② *Action Item*: Establish an Architecture Subcommittee to staff the Information Domain / GIT Discipline to assist with the development of the MAEA (Architecture subcommittee).
② *Status*: Working with the OIT and its architecture representatives a team was appointed from the MGISAC and other sources. These GIT representatives formed the initial Information Domain team and now represent just the GIT discipline area.

② *Action Item*: Disseminate geospatial standards for active review process with constituencies coordinated through the Local Government Review group. (Architecture and Local Government subcommittees).
② *Status*: see below

② *Action Item*: Disseminate the work of the subcommittee to the broader GIS Community for review (Architecture subcommittee).
② *Status*: see below

② *Action Item*: Identify and aid in the assessment of GIT product level information for integration into the MAEA (Architecture subcommittee).
② *Status*: The GIT Discipline within the MAEA has been described and documented within the architecture framework. The GIT Discipline covers all technologies and standards pertaining to the development of the geospatial infrastructure, its data and

metadata. The interaction with other domains has also been identified. Current work is focused on completing the documentation related to the following Technology Areas.

- Geographic Information Systems (GIS) – <u>all completed</u>
- Global Positioning System (GPS) - <u>underway</u>
- Internet Mapping Service (IMS) - <u>underway</u>
- Geospatial Metadata – <u>most completed</u> – <u>product evaluation underway</u>
- Geospatial Data Development Standards – <u>underway</u> – <u>some completed</u>
- Remote Sensing / Image Processing - <u>starting</u>
- Spatial Indexing
- Computer Assisted Design (CAD) – <u>MoDOT started</u>
- Cartography
- Analog-to-digital Data Capture Systems

These Technology Areas will be synthesized and summarized at product and compliance levels to create templates for integration and adoption of GIT within the architecture plans of state and other governance sectors.

Target Outcome: To promote interoperability and standardization among core data layers being developed by the state and local government agencies and organizations.

② *Action Item*: Develop for review and integration into the MAEA the geospatial transportation standards (Architecture subcommittee).
② *Status*: see below

② *Action Item*: Incorporate the geospatial metadata standard into the MAEA (Architecture subcommittee).
② *Status*: see below

② *Action Item*: Finalize the digital orthophotography quadrangle (DOQ) standard and publish to MAEA and MGISAC and web site (Architecture subcommittee).
② *Status*: There have been three (3) MAEA standards created and processed through the MAEA framework to date. These include the Geospatial Metadata Standard, the Digital Orthophotography Standard, and the Addressing Standard. Current work is focused on the Centerline Standard, Cartographic Symbology Standard, and Spatial Data Accuracy Standard.

Theme Area 4: Policy and Legislation

Target Outcome: Coordinate, monitor, and support policy and legislation that impacts geographic information within the state.

② *Action Item*: Designate a legislative liaison to monitor legislation and opportunities and report back to ITAB, MGISAC and OIT (MGISAC Chair).

② *Status*: Appointed a liaison in spring of 2003, however, that person did not contribute to MGISAC. The Chair recommends a new appointment for 2004/2005.

② *Action Item*: Assemble a listing of grant opportunities and publish to GIS community annually (Legislative Liaison).
② *Status*: Incomplete. Legislative Liaison did not participate.

② *Action Item*: Report instances in which outside funds (federal, other) were leveraged against state assets to support GIS activities (Legislative Liaison).
② *Status*: Incomplete. Legislative Liaison did not participate.

② *Action Item*: Demonstrate how certain activities would benefit numerous agencies through the centralization of standards and development projects (Legislative Liaison).
② *Status*: Incomplete. Legislative Liaison did not participate.

Theme Area 5: Statewide Coordinator

Target Outcome: Establishment of a state GIS Coordinator position.

② *Action Item*: Define the duties, roles, and responsibilities and create a justification package for the creation and hiring of a State GIS Coordinator. (MGISAC Chair, OIT).
② *Status*: A justification has been made and the Office of Information Technology (OIT) has agreed to support the position. MGISAC and OIT are currently looking for funding. As the position develops, duties and responsibilities will be defined.

Theme Area 6: Homeland Security \ Emergency Management

Target Outcome: Integrate GIT into Homeland Security and Emergency Management \ Response activities.

② *Action Item*: Review and develop a vitality process for the MERGIS Plan (HS Sub).
② *Status*: Incomplete. MERGIS is being moved to the Missouri National Guard, and the process will be reviewed when relocation is completed and needed support is identified.   MGISAC has been asked to participate and help support MERGIS.

② *Action Item*: Develop and foster a liaison group of local government participants to coordinate state GIT activities with local activities (Local Government subcommittee).
② *Status*: The Local Government group was formed this year and is beginning to formalize its activities.

② *Action Item*: Help facilitate training local emergency responders in the use of the MERGIS tool and provide MERGIS support for local/state/federal response drills (HS subcommittee).
② *Status*: Submitted a grant to fund training that was not funded. MERGIS is being moved to the National Guard and they have expressed an interest in coordinating with MGISAC on this activity.

② *Action Item*: Develop (with the assistance of appropriate personnel) a GIS data security policy for inclusion in the Missouri Adaptive Enterprise Architecture. (HS subcommittee)
② *Status*: Task assigned to the newly created GIS Data Access Policy Subcommittee. Work continues.

② *Action Item*: Promote the development of QA/QC for infrastructure development items (HS subcommittee).
② *Status*: This effort has been initiated with support from the State's Homeland Security Office. A new subcommittee, GIS Data Access Policy will lead the effort.

② *Action Item*: Support and promote state and local agency data stewardship and assist in the development of plans for staffing, funding, training, etc (HS subcommittee).
② *Status*: Although not receiving the 2004 HS grant impeded this effort, the effort is now getting underway without funding. The Local Government group, MSDIS and the HS Subcommittee will continue to work on this.

Theme Area 7: Management and Oversight

Target Outcome: Coordination and oversight of GIS related activities in Missouri.

② *Action Item*: Review and approve quarterly reports as presented (MGISAC).
② *Status*: On-going; MSDIS has presented their reports in an orderly manner.

② *Action Item*: Jointly develop and implement with OIT/ITAB a plan or policy to trigger a review process on all major database development activities to ensure a GIT component if appropriate (DDS).
② *Status*: Incomplete. Planned activity for next work cycle.

② *Action Item*: Develop and implement an intergovernmental plan to coordinate and leverage local government geospatial activities in concert with state plans (DDS).
② *Status*: Incomplete. Planned activity for next work cycle.

② *Action Item*: Review and approve MSDIS annual work plan (MGISAC).
② *Status*: The MGISAC continues to review MSDIS activities and approved its most recent work plan.

Missouri Spatial Data Information Service
2003-2004 Annual Work Plan

Build or implement a survey to identify gaps in the statewide data inventory.

Strategy: Watch the development of the NSGIC initiative to build a national data survey / needs assessment. Once developed, implement within the Missouri Clearinghouse.
MEASURE: Completion of NSGIC survey tool and implementation on the MSDIS. MSDIS with MGISAC participation. Participation of personnel from MSDIS. Possible NSGIC national model development.

Current *Status*: Pending
The NSGIC initiative to build a national data survey / needs assessment is pending and will be implemented as soon as it is received.

Continue to develop an Internet mapping interface for MSDIS holdings.

Strategy: Increase utility of MSDIS Web site by continuing to developing the internet mapping user interface for interaction with the data elements compiled in MSDIS. This includes the development of new maps, evolution of mapping interface, maintenance, update, and upgrades to the mapper.
MEASURE: Continued evolution of the design and map services available on MSDIS-maps and MCDC-maps web site. MSDIS with MGISAC participation in review
Participation of personnel from MSDIS.

Current *Status*: Ongoing

- Updated School District Boundary Map Service with newest version of school districts dated January 2004.
- Updated mapper to ArcIMS 4.0.1
- Continuing work with Missouri State Highway Patrol on the Uniform Crime Report Mapping System.
- Used old MSDIS-Maps to fill in when MCDC-Maps had a system failure. Down time of less than 2 hours.

Develop and deploy a search interface for MSDIS holdings.

Strategy: Increase utility of MSDIS Web site for data discovery and query by thematically grouping data holdings.
MEASURE: Redesign of MSDIS Web site and development of milestones. This schedule will be developed jointly by MSDIS and MGISAC. MSDIS with MGISAC participation in review
Participation of personnel from MSDIS.

Current *Status*: Completed
Full working version is available as a link from new MSDIS website at
http://msdisweb.missouri.edu/datasearch/.
The data theme list is located at:
http://msdisweb.missouri.edu/datasearch/ThemeList.jsp

Work accomplished includes:
- Building an MS Access Database from FGDC I-site SGML format metadata.
- Manual editing of the database to add extra fields with relevant data like file sizes, theme key word information etc.,

- Design and implementation of interface with informative result output and Shopping Cart features.
- Completed – FGDC is in the process of harvesting the data.

A MSDIS satisfaction survey has been developed (Completed February 2004. Results compiled and posted on MSDIS website May 2004). Following from the MSDIS satisfaction survey, a brief MSDIS feedback form was created in February 2004 and is currently live.

A second Local Government GIS needs survey was developed and made available on the MGISAC website in April 2004.

♦ **Convert metadata interface for MSDIS holdings from ISITE to Metadata Server.**

Strategy: *Increase utility of MSDIS Web site by converting our metadata records to a more stable and predictable format.*
MEASURE: Redesign of MSDIS metadata holdings.
Participation of personnel from MSDIS.

Current *Status*: Incomplete – pending funding.
Preliminary investigations have been made to solution out the compatible data formats, modifications required for metadata content, hardware and software requirements. All the metadata has been converted to Metadata Server compatible Extensible Markup Language (XML) format, metadata incompatibilities have been resolved, XML file content has been updated to contain additional information (like keywords) required. A pilot has been built and running on the MSDIS intranet server Emerson, using Spatial Database Engine (SDE) and IBM's DB2 v7.2. Full implementation of this project, and it's availability on the WWW to serve the community is heavily contingent upon availability of funds to MSDIS to obtain software licenses and hardware resources.

Although the Metadata server pilot was successfully implemented using DB2 and SDE the limitations of hardware and software cost have proved problematic – MSDIS is currently examining other solutions to accomplish these database tasks and others.

♦ **Duplicate HTML metadata for MSDIS holdings as XML.**

Strategy: *Increase utility of MSDIS metadata records by converting our metadata records to a format that imports into Arc Catalog more easily.*
MEASURE: Reformatting of MSDIS metadata holdings.
Participation of personnel from MSDIS.

Current *Status*: Ongoing.
XML format metadata creation went through several iterations; To the metadata content additional information like File sizes, download times were added; to make XML files Metadata Server compatible, ESRI specific keywords were also added to XML metadata tags. The XML files can be readily loaded in to ArcGIS and Metadata Server.

XML's are created as required for the data search tool, the files are updated with additional content, removing any inconsistencies, and used as a "backend" database in support of the MSDIS custom data search, providing style sheet information.

Currently 8400 XML files are available from MSDIS' public ftp. These XML's are tied to the search interface.

♦ **Duplicate existing coverage files as geodatabases for all MSDIS holdings.**

Strategy: *Migrating the entire MSDIS Clearinghouse to the geodatabase format and host both for a period of time. MSDIS will proactively evolve with changes in the software arena and make the site more usable to new start-ups*
MEASURE: Reformatting of MSDIS coverage holdings as zipped geodatabases.
Participation of personnel from MSDIS.

Current *Status*: **Revised.**
Preliminary investigation was done for an estimate of hardware, software resources requirement and Man hour estimate for this project. It was presented to the MGISAC that the benefits to be gained from implementing this solution currently do not outweigh the expected cost and utilization of personnel resources.

♦ **Develop and deploy a searchable clearinghouse component for MSDIS imagery / raster holdings.**

Strategy: *Increase utility of MSDIS imagery holdings by providing descriptive information and a searchable database of imagery records thus making them known and available to the state.*
MEASURE: Integrating the searchable imagery clearinghouse function within the MSDIS clearinghouse.
Participation of personnel from MSDIS.

Current *Status*: Completed.
Databases and interfaces have been developed. Some of the work in progress includes updating the Database with the new data obtained, adding shopping cart features, acquisition of individual sensor information, sample images and providing them from the Image Clearinghouse search results interface, building sample image browsers.
The WWW interface will be available by the end of Q3.
The vector and raster search are integrated with an online shopping system. It's available both from ICREST and MSDIS websites. The database is continuously updated with the relevant information of any new data that MSDIS receives.

State Architecture

• **Develop and maintain the data and infrastructure necessary to support Homeland Security Emergency Response.**

Strategy: *Coordinate with OIT, Office of Homeland Security, and MSDIS on the development of the communication infrastructure necessary to support Homeland Security efforts. Develop an action plan for the development of the databases and geospatial layers necessary to support homeland security planning, mitigation, risk assessment, and other operations.*
MEASURE: Completion of data development plans for identified data layers based on priorities set jointly by MGISAC, Office of Homeland Security, and OIT. Completion of secure access and password/firewall protected portal to homeland security data and related geospatial layers. Homeland Security; Participation of personnel from MSDIS on data development and QA/QC.

Current *Status*: Ongoing
Password protected ArcIMS map services have been successfully implemented and tested. A secure Web server (Apache+mod_ssl, https) installed for encrypted transmission of the data across the internet.