



LAGIC Technical Services Quarterly Report

LAGIC-LSU Contract: 2008-2009

October - December, 2008

January, 2009

Summary:

During the second quarter of the 2008-09 contract, LAGIC and Environmental Systems Research Institute (ESRI™) completed development on *phase one* of the LouisianaMap 2.0 geospatial portal basemap based on the ArcGIS Server v9.3. LouisianaMap 2.0 geospatial portal is now available: <http://map.la.gov/>. Plans will be made to phase-out the old LouisianaMap web site during the 3rd quarter. In December, an ESRI developer visited the LAGIC office. LAGIC Technical staff worked with ESRI implement the code enabling the Portals default functionality and capabilities for all Web mapping applications. Two white papers detailing the LouisianaMap project and default mapping capabilities were published and made available online (See Appendix for details).

During this period, multiple data services were designed and implemented for the LouisianaMap portal. These services have been designed to *a)* showcase the mapping capabilities and resources provided by the LouisianaMap portal, and *b)* establish a common platform for distributing geospatial data services and resources to GIS professionals.

Finally, due to the increased data volume, minor hardware upgrades (*e.g.* external and internal hard disk drives) were purchased during this quarter.

Administrative & Staff:

1) Staff:

LAGIC Technical Services employs the services of two full-time professionals, and one part-time graduate assistant.

During the latter half of September 2008, LAGIC was informed by the OES Acting Director that a budget cut would be implemented for the 2009-10 fiscal year. As a consequence, LAGIC was forced suspend new-staff hires in order to meet revised budgetary constraints. Notice of this change was issued to a candidate who had recently been offered a position.

2) Training:

LAGIC has participated in a handful of online training seminars focused on Web mapping services and open-source GIS data services. Subjects included open data standards published by

the Open Geospatial Consortium (OGC). Additional training focused on geospatial database management.

LAGIC technical staff continue to develop in-house user guides, white papers, and procedural manuals for various software systems and services (*e.g.* ArcSDE, ArcGIS Image Server, *etc.*). These documents will be available to technical staff, and distributed to GIS council members on request.

Data Management & Services:

1) LAGIC Data Services:

Upgrades to the LAGIC geospatial data collections and services were completed in this quarter. These updates included:

a. Database System Management:

LAGIC is currently hosting a majority of static geospatial data assets within a SQL Server 2005 Database Management System. Geospatial assets are directly accessible via ArcSDE spatial database engine. Clients primarily comprise of in-house users. However, numerous Web-based mapping applications hosted by LAGIC access these data layers.

LAGIC has also configured a test environment for the open-source PostgreSQL DBMS platform. The software has been installed on a virtual server, and is currently undergoing evaluation as a low-cost and/or *ad hoc* geodatabase server platform.

b. DBMS Organization:

Currently, the LAGIC DBMS consists of six (6) geospatial data services hosting approximately 680 feature class geometries, rasters, and tables:

- i. LAGIC in-house/production database (25 feature classes)
- ii. Louisiana Spatial Data Infrastructure (LSDI) [UTM & GEOG] (254 feature classes, 3 raster datasets, and 39 data tables)
- iii. US Census Bureau TIGER/Line - Second Edition 2006 (42 feature classes, 9 data tables)
- iv. LOSCO Data Catalog (302 Features, 12 tables)
- v. Louisiana Geographic Names Information System (GNIS) (2 feature classes)
- vi. Louisiana Recovery Authority (LRA) - Louisiana Speaks datasets (42 feature classes)

Ad Hoc databases include:

- i. Homeland Security Infrastructure Program - Freedom (HSIP-Freedom) (132 feature classes)
- ii. Elections Database (3 feature classes)
- iii. Weather Database (18 feature classes)
- iv. TIGER2006 Second Edition - WGS-1984 (42 feature classes)
- v. NAIP 2007 Test Service (2 raster datasets)

LAGIC's primary spatial data inventory system is maintained within the LSDI schema. The LSDI data structure is hierarchically organized according to *framework data layer category*

(i.e. data theme), feature name, data provider, and year of publication. In order to accommodate various performance enhancement strategies for online publication, it was necessary to organize the data according to both Geographic and UTM coordinate systems.

All data are securely maintained, and are accessible via policy-based usernames and passwords.

Data and metadata records receive continuous QA/QC for continuity. Additional changes and edits to the data are made as needed.

Ad hoc databases are created as needed, and are often the result of a special request or technical project. Due to the nature of their function, some of these systems (e.g. HSIP-Freedom) may become permanent database services.

c. *File-based Organization:*

Data provided on the LAGIC DBMS geospatial database is also available online for broad distribution. Data layers have been exported as ESRI Shapefile format, and include comprehensive metadata. These assets have been compressed to ZIP format, and are accessible for download from the LAGIC web site data catalog(s): <http://lagic.lsu.edu/geodata/>.

d. *Miscellaneous Data Services:*

Geospatial One Stop (GOS):

LAGIC maintained metadata continue to be accessible via the GOS Federal data catalog. Metadata records are harvested according to an automated schedule, ensuring that the latest updates are propagated to the GOS search indexes.

2007 NAIP

LAGIC Technical staff have optimized the 2007 NAIP aerial photography (1-meter, true-color photography) acquired from the US Dept. of Agriculture. During this second quarter, LAGIC successfully published the NAIP imagery via ArcGIS Image Server.

Image Server publishes image services, providing distributed data services that allow compatible client applications to consume the image data quickly and in real-time.

2) LouisianaMap Data Services:

LAGIC data assets have been replicated and transferred to the LouisianaMap data server(s) maintained by the Division of Administration, Office of Electronic Services (OES). Additional details are provided in the Technical Support and Applications Development section.

a. *Database System Management:*

To accommodate additional datasets (e.g. 2007 NAIP imagery, HSIP-Freedom, etc.) LAGIC requested increased storage space on the storage area network. A 800GB LUN was assigned to the 1SPGISSDE server. Additional data resources are obtained from the SDE data layers maintained by LAGIC, on the LSU Campus.

b. DBMS Organization:

To ensure efficiency and replication needs, the organization of the LouisianaMap data servers mimic the structures maintained on LAGIC servers(see above).

c. Data Replication Services:

Interest has been expressed to extend the LouisianaMap data services capabilities to members of the LGISC and Louisiana geospatial community. This has prompted LAGIC Technical staff to explore data replication strategies that can be utilized across heterogeneous networks and the Internet. As time permits, capabilities testing will be incorporated within the LouisianaMap services program (see below).

Technical Support and Applications Development:

1) LouisianaMap:

LAGIC developed two technical white papers for LouisianaMap 2.0 Web Mapping Portal. The first document identifies the general programmatic goals and objectives of the geospatial portal within the context of the allocated information services (IS) and technology (IT) infrastructure. Accordingly, this first document establishes the business, technical, and hardware requirements necessary to implement the portal. The second white paper examines the LouisianaMap user interface (UI) from a technical requirements perspective. This paper was produced with the intention of aiding the phase-one development services provided by ESRI contractors. Drafts of these white papers have been made available by request to the GIS Council. Final editions are expected to be published during in the third quarter.

Through a contract with LSU/LAGIC and ESRI, phase-one development on the core functionality of LouisianaMap application services concluded in December 2008.

The portal was made publically accessible in mid-December, 2008. Following extensive testing, an official press released is planned for Q3.

a. Data Services:

LouisianaMap currently supports a number of active geospatial data services and mapping applications. These services can be categorized as Basemap and LSDI Data services:

- Basemap services include: the US Census Bureau's TIGER/Line 2006 [map], Satellite and High-resolution aerial photography [imagery], and a service consisting of both satellite and basemap features [hybrid].
- Supporting the basemap services are the LSDI geospatial data services: thematic map services that feature data layers represented in the LSDI framework. Available services include Biological, Cadastral, Demographics, Imagery, Land Use, and Transportation.

When combined, the basemap and Data services can be used for various *ad hoc* mapping services have been published for the purpose of exposing the interactive mapping capabilities of the LouisianaMap portal. These include address matching and geocoding services (hosted by ESRI), 2008 presidential election results, and the LOSCO public marinas and boat launches.

All data services are accessible via Web-based clients, and compatible GIS software platforms, including Google Earth, NASA World Wind, Gaia 3.2, and all contemporary ESRI products (e.g. ArcGIS Desktop and Server).

The publication of additional data services are planned during the next quarter, and will be made accessible via the LouisianaMap portal infrastructure.

b. Applications Development:

Development of the LouisianaMap 2.0 mapping application platform has been the primary focus for the last three quarters. A number of key map applications and services have been developed, including:

- i. LouisianaMap 2.0 Base Map: Base-map of Louisiana constructed using U.S. Census Bureau's TIGER/Line 2006 Second Edition data layers. Map services are cached to 9 scale factors, resulting in highly-responsive, interactive mapping. Services include basic map manipulation functionality, including zoom in/out, and pan. Advanced functionality requiring advanced programming is currently being developed by ESRI developers (e.g. printing, geocoding/address matching).
- ii. Explore Louisiana 2.0 (BETA): Map application utilizing the LouisianaMap 2.0 base map. In addition to the functionality identified above, the mapping application includes an identify tool that can be used to reveal attribute details regarding user-selected parishes.
- iii. LOSCO Boat Launch & Lift Locator: Map application that reveals the location and details of publically-accessible boat launches throughout south Louisiana. Boat launch data was provided and maintained by the Louisiana Oil Spill Coordinator's Office (LOSCO).
- iv. Population Explorer: Map application utilizing the LouisianaMap 2.0 base map and demographic data for 2000-2007. Users can click on a parish to review the population changes.
- v. 2008 Election Map: Map application utilizing the LouisianaMap 2.0 base map and election results provided by the Louisiana Secretary of State office.

The map applications and services presented above are accessible via the LouisianaMap Web site: <http://map.la.gov/>. In addition to the Web-based interface, users can access these data services via ArcGIS compliant platforms, including ArcGIS ArcMap, ArcCatalog, ArcGIS Explorer, and Google Earth (with limited availability).

These enhancements are the product of a technical-services contract between LAGIC and ESRI. Details of this contract are provided in Appendix B. Phase-one included the development of basic functionality (e.g. geocoding, printing, bookmark, etc.) and a collection of advanced geospatial tools (e.g. identify, buffer, select, etc.). A second series of enhancements are currently being planned.

In future quarters, LouisianaMap will deploy a pair of geocoding services and tools for both novice and advanced data constituents. As an initial service, LAGIC staff will develop and deploy a batch geocoding/address matching service. The geocoding service will permit

clients to upload pre-formatted address data via a custom Web interface. Application services residing on the portal will proceed to extract, transform (*i.e.* georeference), and load non-spatial datasets using a geocoding service hosted by ESRI. Upon completion, clients will be able to interactively manipulate the mapped address. Additionally, clients can export the newly geocoded address table for future mapping uses.

Enterprise clients will benefit from the second proposed geocoding service. When deployed, the service can be used to dynamically georeference and map non-spatial data via industry standardized Web service protocols. Development of this tool will be achieved through a contract between LAGIC and Methods Solution. To ensure cross-platform compatibility, the geocoding service will employ open services architectures that will connect-to and dynamically georeference tabular data -- without the need to alter the source dataset. In general, the service functions by parsing each data record in order to identify geographic references stored within the data fields (*e.g.* city, town, address, *etc.*). These references are assigned a geographic coordinate to the record according to the GML open-source standards. For this initial test, reference data was limited to the USGS GNIS database for Louisiana. Future reference database are planned. Translation strategies have been explored, including a Geographic Markup Language (GML) based service that *geo-tags* XML based data.

Following a requirements analysis, a working prototype was developed and tested during Q4 of FY2007-08. The preliminary service demonstrated the validity of this geocoding approach. Modifications to the service are anticipated. However, delays are anticipated as a consequence of the recent budget cuts.

c. Data Replication & Distributed Data Services:

As indicated earlier, various LGISC members have expressed interest in extending data services to the GIS Council and Louisiana geospatial data community as a whole. The scope of these services have not been defined, and technical challenges relating to the replication and exchange of data across heterogeneous networks will need to be examined. Additional information will be compiled as time permits.

2) Custom Services

a. Image Services:

As mentioned earlier, LAGIC Technical staff have been experimenting with ESRI Image Server as a means for quickly distributing raster data to users. Initial tests suggest that there is a measurable performance increase when using the ArcGIS Image Server software. A test services is expected to be available online in Fall 2008.

b. Globe Services:

In addition to the services listed above, LAGIC has explored various strategies for publishing globe services. Samples included historic maps obtained from the US Library of Congress, demographic data, election results, hurricane maps, and more. These map services will utilize ArcGIS Explorer, Google Earth, and NASA World Wind globe/visualization software (when possible). Select globes are available on the LouisianaMap 2.0 web site.

c. *Ad Hoc Services:*

The success of the map and data services provided during the 2007 hurricane season has prompted a number of inquiries about similar resources during the 2008 hurricane season. LAGIC will entertain these requests as time and resources permit.

3) LAGIC Technical Services

a. *ArcGIS Server User Group*

LAGIC Technical Services is coordinating the ArcGIS Server developer's support group. Group members include public and private sector geospatial professionals. Currently, the User Group has an online presence hosted by Google Groups. The site supports a closed-membership of approximately 30 accounts. Members are permitted to contribute to the group, asking questions, sharing code, and promoting projects. LAGIC serves as the group administrator - filtering spam and maintaining membership.

b. *Ad Hoc Support:*

LAGIC Technical services staff have participated in, and responded to, various support requests, meetings, phone conversations, and more. Support requests are primarily issued by LGISC members and partners. Such requests generally involve questions surrounding GIS issues (e.g. trouble shooting, configuration inquiries, and implementation strategies).

LAGIC Technical Support Services:

1) System Support - LAGIC

a) *Systems Administration:*

LAGIC technical staff continues to maintain geospatial data systems and services (see above).

As per recommendations following the annual technology inventory, a number of hardware upgrades were purchased and deployed during this quarter. Hardware acquisitions include:

- i. Two Dell Precision Workstations were purchased for data and image processing.
- ii. One Dell PowerEdge Server to upgrade the SQL Server DBMS
- iii. One Dell Optiplex managed desktop to upgrade an existing 5-year old desktop.
- iv. Miscellaneous hardware purchases included external and internal hard disk drives, RAM upgrades, and ad hoc hardware repair.

Where ever possible, all outdated computer/hardware are upgraded, re-assigned, or scavenged for parts. Scrap is collected by LSU property management.

During this quarter, LAGIC began to examine the value of content management software (CMS) for its web presence. Migrating the existing LAGIC Web sites into a single CMS platform will streamline web site development, and permit other LAGIC staff to easily and efficiently contribute published content. Currently, LAGIC is investigating a handful of open source (i.e. free) platforms. This study will be used to define various technical, functional, and operational requirements. Selection of a CMS is anticipated before the contract's end. Migration to a CMS is anticipated during the first quarter of the 2009-10 contract.

b) Networking:

LAGIC technical staff continue to work closely with LSU ITS-NI with various small networking and/or enterprise IT issues (*e.g.* connectivity, security, *etc.*).

2) Technical Support -LAGIC

a) Ad Hoc Service & Support:

LAGIC technical staff members continue to support all LAGIC related IT issues and requests, and troubleshooting. These include, but are not limited to, technical training, systems preparation, network management, and systems management.

3) Support - LGISC

a) Ad Hoc Administrative Support:

- i. Participation in LAGIC Oversight meetings.
- ii. Technical staff continues to respond to miscellaneous technical request and support from both the GIS Council and LSU GIS Community.
- iii. LGISC LouisianaMap Subcommittee meetings.

Short-term Outlook:

In light of the recent budget cuts, the extent of our ability to provide technical services and support will be limited. The addition of skilled staff was necessary to meet many of the contract goals. Similar disruptions are expected with regard to LouisianaMap. The deployment goals and objectives established in the LAGIC contract will need to be re-evaluated. Economic uncertainty will require a complete re-evaluation of LAGICs existing contractual responsibilities. Furthermore, the will be less willingness to take-on ad hoc tasks that do not result in direct benefit to LAGIC.

LSU ITS has postponed announced changes to the LSU Active Directory until 2009. Proposed changes include a campus-wide upgrade to Windows 2008 Server and include upgraded group policy settings that are expected to cause short-term impact on LAGIC operations.

Appendix A: LouisianaMap 2.0 White Papers

1. **Title:** *LouisianaMap 2.0: A Services Approach to Louisiana's Geo-Enabled Web*

Last Updated: December 2008

Abstract: *LouisianaMap is the official mapping portal for Louisiana State government. LouisianaMap 2.0 is the latest generation of the portal, providing many of the capabilities, services, and functionality that has become the standard in Internet based mapping applications. The latest generation of LouisianaMap employs ESRI ArcGIS Server technology, making it possible to deliver map applications and data services to Louisiana's citizens, agents, and contractors. Portal clients accessing the system will be able to browse through live maps, access geospatial data and services, and integrate resources with third-party applications.*

Web Link: http://lagic.lsu.edu/lagic/whitepapers/2008/LAIGC-WP-20081217-00_lamap.pdf

2. **Title:** *LouisianaMap 2.0: Web Mapping Capabilities & User Interface*

Last Updated: September 2008

Abstract: *This technical white paper will identify the core functionality and capabilities associated with the LouisianaMap 2.0 geospatial portal. Included sections will identify the technical requirements for the implementation and long-term sustainability of the LouisianaMap portal. Furthermore, this document examines sample applications that can best exploit the capabilities of the LouisianaMap Web mapping services. Finally, the technology, functionality, and concepts defined within this document will be organized and prioritized according to a desired implementation schedule.*

Web Link: http://lagic.lsu.edu/lagic/whitepapers/2008/lagic-wp-200809_lamap_gui.pdf



APPENDIX B: LAGIC-ESRI Contract Scope of Services & Scope of Effort

This contract has been executed between LAGIC/Louisiana State University and ESRI.

SCOPE OF SERVICES

1. Scope of Work (Describe the work the contractor will perform, description of the reports or other deliverables to be received, and a schedule of dates when reports or other deliverables are to be received. If applicable, reference attachment.):

ESRI has been asked to provide technical support for the implementation of LouisianaMap 2.0. The primary goal of the ESRI support would be to work with Louisiana Geographic Information Center staff to develop a prototype of the LouisianaMap 2.0 based on ArcGIS Server 9.3. ESRI will provide support for the following three activities: LouisianaMap 2.0 Technical Review, ArcGIS Server 9.3 Prototype, and Prototype Demonstration. This activity provides up to 40 hours of consulting, including travel and preparation time to support the technical review of the LouisianaMap 2.0 web application. The LouisianaMap 2.0 is currently in development by LAGIC staff. The LAGIC has requested consulting time for an ESRI ArcGIS Server developer to review the application to provide recommendations on the application. During this activity, ArcGIS Server 9.3 will be discussed to determine the functionality that is forth coming in the next release. It is anticipated that one ESRI Senior Technical Designer will support this activity.

2. Goals (Include broad, general statement of long-range end result of the project.):

The primary goal of the ESRI support will be to work with Louisiana Geographic Information Center staff to develop a prototype of the LouisianaMap 2.0 based on ArcGIS Server 9.3. LouisianaMAP.gov serves as the geospatial portal for Louisiana State government. LouisianaMap 2.0 will utilize the ESRI ArcGIS Server to provide map services to the general public and state agencies. The mission of the LouisianaMap is to provide a central location where Louisiana citizens, agents, and contractors can browse live maps, access geospatial data and services, and geospatially extend existing business data.

3. Objectives (Should be specific, measurable, aggressive but attainable, result-oriented & time-bound target(s) for accomplishment):

ESRI will provide support to complete the following three objectives: LouisianaMap 2.0 Technical Review, ArcGIS Server 9.3 Prototype, and Prototype Demonstration. Once the Prototype Application from the previous task has been developed, ESRI will present and review the functionality and interface of the Prototype Application with LAGIC staff over the course of two days at LAGIC facilities. ESRI will review for compliance with the LouisianaMap 2.0 objectives discussed in Activity 1 and solicit user feedback. comments and recommendations will be documented.

4. Performance Indicators (Indicate how the performance of each objective is to be measured):

ESRI will provide the support necessary to have a functional LouisianaMap 2.0 site on the web, an ArcGIS Server 9.3 Prototype deployed, and a demonstration of the capabilities of these web services

5. Monitoring Plan (Describe how you will evaluate and monitor program performance):

Program performance will be measured by the ability of the websites to meet our performance expectations as determined by live testing.

6. Name and title of the individuals responsible for monitoring the contract and approving all payments in connection with the contract:

E-mail address: **Joshua Kent** jkent4@lsu.edu and **Craig Johnson** cjohnson@lsu.edu

SCOPE OF EFFORT

Introduction

LouisianaMAP.gov serves as the geospatial portal for Louisiana State government. LouisianaMap 2.0 will utilize the ESRI ArcGIS Server .Net Framework to provide map services to the general public and state agencies. The mission of the LouisianaMap is to provide a central location where Louisiana citizens, agents, and contractors can browse live maps, access geospatial data and services, and geospatially extend existing business data. The primary goal of this contract would be to work with Louisiana Geographic Information Center staff to develop a prototype of the LouisianaMap 2.0 based on ArcGIS Server 9.3. ESRI will provide support for the following three activities: LouisianaMap 2.0

technical review, ArcGIS Server 9.3 prototype, and Prototype Demonstration. Following completion of this scope of work and the prototype presentation, ESRI will work with LAGIC to define the next steps and additional areas of support which may include enhancements, finalization and deployment of the application on the ArcGIS Server 9.3 platform. This future work may include the conversion of the existing the LouisianaMap 2.0 to ArcGIS Server 9.3. Future work will be separately contracted.

Activity 1 – Technical Review of Existing LouisianaMap application

Duration: Four (4) Days Location: LA Geographic Information Center, Baton Rouge, La.

This activity provides up to 40 hours of consulting, including travel and preparation time to support the technical review of the LouisianaMap 2.0 web application. The LouisianaMap 2.0 is currently in development by LAGIC staff. The LAGIC has requested consulting time for an ESRI ArcGIS Server developer to review the application to provide recommendations on the application. During this activity, ArcGIS Server 9.3 will be discussed to determine the functionality that is forth coming in the next release. It is anticipated that one ESRI Senior Technical Designer will support this activity.

LAGIC Responsibilities:

Provide background and objectives of the LouisianaMap 2.0 application.
Provide access to the LouisianaMap 2.0 viewer code.

ESRI Responsibilities:

Provide up to 40 hours of consulting support.

Activity 2 – ArcGIS Server 9.3 Prototype

Duration: Seven (7) Days Location: ESRI San Antonio Office

This activity provides up to 60 hours of consulting time at the ESRI San Antonio Regional Office to support the development of an ArcGIS 9.3 Server prototype application. The objective of the prototype application is to demonstrate the capabilities and performance of the ArcGIS JavaScript API for use in support of the LouisianaMap 2.0 application. This prototype will be designed for use by the non-GIS oriented general public in the State of Louisiana and will utilize data being served by the LAGIC. It is anticipated that one ESRI Senior Technical Designer will support this activity.

LAGIC Responsibilities:

Provide background and objectives of the LouisianaMap 2.0 public application.

ESRI Responsibilities:

Provide up to 60 hours of consulting support.

Activity 3 – Prototype Application Demonstration

Duration: Two (2) Days Location: LA Geographic Information Center, Baton Rouge, La.

Once the prototype from the previous task is complete, ESRI will present and review the functionality and interface of the prototype application with LAGIC staff over the course of two days at LAGIC facilities. ESRI will review for compliance with the Functional Specifications and solicit user feedback. Comments and recommendations will be documented and if desired, ESRI can generate an additional proposal for incorporating those items into the prototype. It is anticipated that one ESRI Senior Technical Designer will support this activity.

LAGIC Responsibilities

Participate in Prototype Application and provide feedback and comments.

ESRI Responsibilities

Provide one day prototype application presentation.

Provide technical memorandum documenting LAGIC comments and feedback on the application.

Appendix C: A December 17, 2008 Memo Circulated to the LGISC LouisianaMap Subcommittee

MEMORANDUM
December 17, 2008

TO: David Gisclair, Chairman, Louisiana GIS Council, LouisianaMAP Committee, LAGIC

FROM: Bo Blackmon, DNR GIS Manager, DNR LGISC Member

I have read the very well prepared white paper submitted by LAGIC and have formed the opinion that the scope of LouisianaMAP as I interpret it does not reflect the entire original intent of LouisianaMAP and does not fulfill important GIS needs which I believe LGISC and state agencies are expecting. The service finder and routing functions will help many of the state's clients find an agency which can provide a service they need, but this functionality is very limited.

The missing functionality and what I thought was the original intent of LouisianaMAP is providing a state GIS portal so that users (state, federal, local agencies and the public) can access GIS data from multiple sources and map them together on the same interactive map. In my opinion, I think this is as important as the services aspect and in some respects, primarily GIS, I think it is more important.

LouisianaMAP should also be a repository for certain important GIS data which the data custodians cannot make available via web. Some of this data is available online from noncustodial departments who acquire, reformat, and make the data available on their own public GIS web sites for their own purposes. This would reduce the amount of data required in the LAGIC repository. Also, some of the most important static data on the latest GIS DVD set should be made available via LouisianaMAP. Louisiana is very fortunate to have several imagery and raster data sets: satellite imagery, aerial photography, and USGS maps. I believe these should also be available on LouisianaMAP.

Considerations relating to acquiring approval from certain state agencies and advice from the Division of Administration Office of Electronic Services may have encouraged LAGIC to plan this LouisianaMAP development path for good reasons, but it is my opinion that these reasons should not totally direct the development away from the creation of the state GIS portal which would be the most important GIS showcase for the state.

Although I fully approve of the tie into Google for certain aspects of LouisianaMAP, Google functionality limits the GIS capabilities which the state requires for its portal. Creation of a selection of a Google viewer interface for certain functions or a real GIS interface for interactive mapping portal functions could be developed.

It is very important that the LGISC LouisianaMAP Committee produce a detailed functionality requirements document for LAGIC for the short and long term development of LouisianaMap and have it approved as a resolution by LGISC since LGISC will shoulder the responsibility for the LouisianaMAP which LAGIC produces. I recommend that the Committee include all aspects of the proposed LouisianaMAP which I have discussed: GIS portal for multi-source mapping, GIS data repository to ensure important data can be accessed with LouisianaMAP, and the service finder and

router for state agency clients. There may be other major functions which I have overlooked which should be included.

Appendix D: December 19, 2008 Memo Response to the December 17th Memo.

MEMORANDUM

Uncirculated

December 19, 2008

TO: Louisiana GIS Council; LouisianaMap Committee; LAGIC

FROM: Joshua Kent, Technical Services Manager, LAGIC

I appreciate the interest and concerns expressed by Mr. Bo Blackmon, as detailed in his memorandum dated December 17, 2008. However, I would like to clear up misconceptions regarding the LouisianaMap 2.0 portal goals and objectives as they relate to the white paper referenced in Mr. Blackmon's memorandum. Additionally, I would like to direct the attention of all LouisianaMap stakeholders to a more complete description of the program's goals, and objectives.

First, it was not clear which white paper Mr. Blackmon referenced. Until recently, the only completed and relevant white paper in circulation was dated September 2008. Accordingly, it is important to understand that the September 2008 white paper was drafted at the request of ESRI – a principal contractor supporting development for the portal's interactive mapping component. While not clearly stated, the intent of the document was to provide a technical overview necessary for contractors tasked with developing web mapping applications. Consequently, it's not a '*concept*' paper.

More appropriately, a draft white paper originally outlined in March 2008 is intended to provide the broad overview of the LouisianaMap goals and objectives. This document was made available to the LouisianaMap committee immediately preceding to the December 18, 2008 committee meeting [[link](#)]. In it are the foundations for establishing a functional requirements document that will, when finalized, formally define portal capabilities and intentions. While incomplete, this document currently details:

- The framework for interactive mapping applications (*e.g.* map applications and mashups),
- Capabilities of the data repository/cataloging services as they relate to the Louisiana Spatial Data Infrastructure (*e.g.* consumable data services and downloads), and
- Implementation strategies that will allow GIS professionals to utilize (*e.g.* mashup, share, exchange) geospatial services and resources inherent to the portal's technological infrastructure (*e.g.* real-time geocoding, data interoperability services, data replication services, off-site backup services, and more).

With regard to Mr. Blackmon's concerns for the original intentions LouisianaMap 2.0 – I want to make it clear that the portal's goals and objectives have never deviated from the original inception. The capabilities referenced in Mr. Blackmon's memorandum have been, and are currently, the primary goals of the portal. LouisianaMap is the State's official geospatial portal. When completed, the portal will provide the framework necessary for all within Louisiana's geospatial community to discover, access, use, and share geospatial information about the State. At no point have these intentions changed. The

committee will remember that the LouisianaMap 2.0 goals and objectives were first publically presented in April 2008, during a presentation to the Remote Sensing and GIS Workshop [[link](#)]. At no point since have criticisms or concerns been expressed.

To conclude, I concur with Mr. Blackmon's recommendation for a comprehensive functional requirements document that details the short and long-term development of the LouisianaMap portal. All aspects of the portal's core functionality and capabilities should be clearly defined so as to avoid similar confusion in the future. The purpose for publishing the aforementioned white papers has been to create an open forum for defining appropriate implementation strategies. To that end, I recommend that the committee consider the draft, March 2008 white paper as the starting point for a functional requirements document. Furthermore, it is my recommendation that the LouisianaMap Committee include a technology sub-committee from which realistic developmental expectations and recommendations can be obtained. LouisianaMap 2.0 can succeed only if there is clear, transparent coordination and collaboration among all stakeholders. The first step to achieving this will be to ensure an open and constructive discourse capable of defining our shared objectives.