

Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		* If Revision, select appropriate letter(s): _____ * Other (Specify): _____
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* 3. Date Received: 09/01/2009	4. Applicant Identifier: _____
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5a. Federal Entity Identifier: _____	* 5b. Federal Award Identifier: _____
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State Use Only:

6. Date Received by State: _____	7. State Application Identifier: _____
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8. APPLICANT INFORMATION:

* a. Legal Name: State of Louisiana Division of Administration	
* b. Employer/Taxpayer Identification Number (EIN/TIN): 726000720	* c. Organizational DUNS: 965237944

d. Address:

* Street1:	1201 North 3rd Street
Street2:	Suite 2-130
* City:	Baton Rouge
County:	East Baton Rouge
* State:	LA: Louisiana
Province:	
* Country:	USA: UNITED STATES
* Zip / Postal Code:	70802

e. Organizational Unit:

Department Name: Division of Administration	Division Name: Office Information Technology
--	---

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr.	* First Name: Neal
Middle Name: _____	
* Last Name: Underwood	
Suffix: _____	
Title: Assistant Director Statewide Technology	
Organizational Affiliation: State of La Div of Admin Office of Information Technology	
* Telephone Number: (225) 219-4025	Fax Number: (225) 219-9465
* Email: neal.underwood@la.gov	

Application for Federal Assistance SF-424

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9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Commerce

11. Catalog of Federal Domestic Assistance Number:

CFDA Title:

*** 12. Funding Opportunity Number:**

0660-ZA29

* Title:

Recovery Act - State Broadband Data and Development Grant Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

State of Louisiana

*** 15. Descriptive Title of Applicant's Project:**

Louisiana Broadband Availability Mapping Project

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant LA-006

* b. Program/Project LA-a11

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date: 09/30/2009

* b. End Date: 09/30/2014

18. Estimated Funding (\$):

* a. Federal	3,600,000.00
* b. Applicant	0.00
* c. State	900,000.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	4,500,000.00

* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

- a. This application was made available to the State under the Executive Order 12372 Process for review on
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E.O. 12372.

* 20. Is the Applicant Delinquent On Any Federal Debt? (if "Yes", provide explanation.)

Yes No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications** and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Mr. * First Name: Neal

Middle Name:

* Last Name: Underwood

Suffix:

* Title: Assistant Director Statewide Technology

* Telephone Number: (225) 219-4025 Fax Number: (225) 219-9465

* Email: neal.underwood@la.gov

* Signature of Authorized Representative: Clifford Underwood * Date Signed: 09/01/2009

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*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
State Broadband Data and Development Grant Program

Grant Application

Submitted: September 1, 2009

By: Louisiana Division of Administration, Office of Information Technology

Abstract

The Louisiana Division of Administration, Office of Information Technology (“the Division”) is pleased to support the efforts of the Department of Commerce to improve the nation’s broadband infrastructure through the American Recovery and Reinvestment Act (ARRA) and the Broadband Data Improvement Act (BDIA). The Governor of Louisiana, Bobby Jindal, has identified the Division of Administration, Office of Information Technology as the designated state organization to request grant funds and manage the mapping and planning projects.

The Division seeks broadband funding from the National Telecommunications and Information Administration for the purpose of developing and maintaining a comprehensive, interactive and searchable statewide inventory. This inventory, implemented as a map, will depict existing broadband service, capability and availability. In this manner the geographic extent to which broadband service capability is deployed and available from a commercial or public provider throughout the state will be provided. The state data will be easily assimilated into the national broadband map pursuant to the Broadband Data Improvement Act (BDIA) Title I of Public Law No. 110-385, Stat. 4096 (October 10, 2008). The Division plans to utilize an independent contractor to collect the broadband data from service providers and to create the Louisiana Broadband Availability map. The Division will independently verify the data collected by our contractor using Louisiana Geographic Information Center (LAGIC) resources. Under the supervision of the Division, and with the assistance of LAGIC, the contractor will construct a broadband map consistent with the requirements provided in the Technical Appendix of the NTIA Notice of Funding Availability in the Federal Register

The Division projects a total project cost of \$4.5 million inclusive of both Planning activities and Mapping activities. In support of this program the Division requests a total award amount of \$3.6 million in federal funds composed of \$500,000 to support Planning activities and \$3.1 million to support Mapping activities of the State Broadband Data and Development grant program. The Mapping activity includes the data collection, verification, mapping and updating the data as well as the posting of the data to the NTIA nationwide broadband mapping site and providing the data in a format that can easily be displayed on the state geospatial portal; LouisianaMAP. The Louisiana Geographic Information Center will maintain the statewide map in a manner that both serves the public and ensures the protection of confidential information. The mapping project will occur over a five year span and updates will be provided to NTIA regularly as required by the grant. The Planning activity will allow the Division to determine the most economical and efficient means of increasing the growth and adoption of broadband networks and adopt strategies for providing e-government services to the greatest number of citizens and businesses.

STATE OF LOUISIANA
Broadband Advisory Council
Infrastructure Subcommittee

GIS & MAPPING
Initial Report
on
Broadband Infrastructure

Prepared By:
David Gisclair
and the
Broadband Infrastructure Subcommittee

1 July 2005

GIS & Mapping Initial Report
Broadband Advisory Council

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GIS & Mapping Initial Report

Broadband Advisory Council

1. INTRODUCTION

As stated in the its initial report, the Infrastructure Subcommittee of the Broadband Advisory Council has been charged with the task of assessing the deployment of Broadband Internet access infrastructure and technologies in the State of Louisiana. As an initial step in this assessment, the Infrastructure Subcommittee is developing a catalog and map of existing Broadband access availability within the state. The catalog will identify, by category of technology and identified facilities-based providers, the geographic coverage of Broadband access. The results of this effort will produce a baseline status of Broadband access that may be used to identify underserved areas and to measure the progress of future deployment and the success of state policies or initiatives.

1.1. Background

Geographic data from both the public and private sector is required to properly assess broadband delivery capability throughout the state. Given this initial task of cataloging the geographic coverage of broadband availability statewide, the Broadband Advisory Council has acquired and assembled information provided to the council.

1.2. Purpose

First, the report categorizes the GIS data provided into broadband technology / vendor classes. Second, the report catalogs the broadband vendors that have provided geographic data on their broadband delivery capability to the citizens of Louisiana within each class. Third, the report describes what types of geographic data have been provided by the various broadband vendors. Fourth, the report provides a brief description of the form and limitations associated with what geographic data has been received. Next, the report sets forth a description of what is needed in terms of additional data and what forms of data are preferable in the future. Finally, a summary is provided.

2. GIS AND MAPPING INITIAL REPORT

This GIS and mapping report is being provided as an initial step in the construction of a living document, which describes the spatial extent of broadband availability in Louisiana. Over time this report will be updated to reflect the statewide geographic status of broadband delivery capability. As described in Section 1.2 this report will be presented in a tiered approach:

1. Broadband technology/vendor classes
2. GIS data provided by technology/vendor class
3. Forms of GIS data provided
4. Limitations of GIS data provided

Since this is an initial report, the form and organization of subsequent reports may be significantly modified based on comments received. In addition, this initial report is only focused on GIS data currently available from existing vendors currently providing broadband access to the public and private sectors.

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2.1. Broadband Technology / Vendor Classes

The existing Broadband Internet access infrastructure at this time can be described in three general technology/vendor classes as follows:

1. Telephone providers
2. Cable providers
3. Satellite providers

For the purpose of this report, newer technology/vendor classes, including wireless, broadband over power lines, etc., generally have been omitted in this report, since further investigation is required for GIS and mapping purposes. However, for wireless capability, information on what GIS and mapping data requirements necessary to depict broadband capability were included. Because various providers use different technologies to deliver broadband access, the methods used in geospatially describing delivery capability differ for each technology/vendor class. Further, within a specific technology/vendor class, multiple spatial methods may be employed to depict broadband delivery capability (see Section 2.2.1.2).

2.2. GIS Data Provided by Broadband Vendors

In organizing the spatial data provided, the data received were cataloged and organized by technology/vendor class as described in Section 2.1. The order in which the classes are listed is based upon the order of receipt.

2.2.1. Telephone Providers

In the initial Infrastructure Subcommittee report, approximately 12 telephone providers were identified as operating within the state of Louisiana as described in Section 4.1. BellSouth and member companies of the Louisiana Telecommunications Association (LTA) all provided data regarding their Broadband Internet capability. For BellSouth, the geographic extent of service was based on broadband capability within a particular wire center area and the delivery capability was generally based on the number of lines capable of delivering ADSL expressed as a percentage.

In the process of receiving and processing broadband delivery capability data provided by the telephone providers, mixed types of spatial data, as mentioned in Section 2.1, have been delivered making GIS processing in a spatial context more difficult for mapping and analytical purposes. An explanation of the various forms of spatial data provided is described in Section 2.3.

2.2.1.1. BellSouth

Of the various telephone providers operating in Louisiana, BellSouth provided completely "GIS ready" data. The GIS data contained mapped areas (polygons) and associated database records containing various attributes (columns). BellSouth has provided non-confidential wire center areas with associated ADSL broadband delivery capability in four percentage classes (<25%, <50%, <75% and >75%).

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2.2.1.2. Independent Phone Companies (ICOs)

The method for spatially depicting where ADSL broadband capability exists for the ICOs differed from that of BellSouth, and initially different from each other. This is an example of differing spatial representations being used within a vendor class as described in Section 2.1. In the preceding discussion the polygons represent percentage delivery capability by wire center areas. For the ICOs, the availability of ADSL broadband capability is represented by zip code. In the future, data provided by wire center area would be preferable over zip code areas since there are several problems associated with describing broadband capability by zip code (see Section 2.4.2). Zip code data with associated percentage delivery capability from eleven (11) ICOs were delivered for incorporation into the broadband availability map.

A listing of the GIS data received by telephone providers can be found in Section 4.4.

2.2.2. Cable Providers

In the initial Infrastructure Subcommittee report, approximately 38 cable providers were identified as operating within the state of Louisiana. Normally, each vendor would have to be contacted to ascertain each vendor's Broadband Internet capability. Fortunately, the Louisiana Cable & Telecommunications Association (LCTA) has provided spatial information on broadband capability for each cable provider (member and non-member providers) as discussed below.

2.2.2.1. Louisiana Cable & Telecommunications Association (LCTA)

The LCTA membership agreed to provide Broadband Internet delivery capability information in a spatial context by zip code. In the process of receiving and processing broadband availability data provided by cable providers, several revisions and reprocessing of the zip code information occurred during the construction of this GIS layer. Note there are several problems associated with describing Broadband capability by zip code (see Section 2.4.2).

A listing of the GIS data received by cable providers can be found in Section 4.5.

2.2.3. Satellite Providers

Further investigation is needed into this technology/vendor class. Satellite coverage is available at any point in the state where an unobstructed view of the southern horizon is accessible. No detailed data was solicited from this class of service providers.

2.2.4. Wireless Providers

In this technology/vendor class of broadband providers, further investigation is needed as well before any GIS mapping may be employed. Should wireless broadband providers submit spatial locations of towers and/or antennas (latitude/longitude coordinates) and associated broadband capability radius or diameter, then broadband delivery capability within this technology/vendor class could be incorporated into the GIS map.

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2.3. Types of GIS Data Provided

The Infrastructure Subcommittee is currently tasked with developing a catalog and map of existing Broadband access availability within the state by type of technology. By identifying areas where broadband service exists for each technology/vendor in a spatial context, a composite GIS map of these various technology/vendor classes can be constructed; thereby, allowing the identification of underserved areas statewide. Based on technology employed in the delivery of broadband, the various technology/vendor classes have different requirements in identifying the spatial distribution of these capabilities. Given these differences, the method used to spatially represent broadband capability by each class will be discussed.

2.3.1. Wire Center Service Areas

For telephone providers having ADSL broadband capability, two (2) providers have agreed that a spatial representation by wire center (WC) service area (polygon) and a percentage of ADSL delivery capability within that area would provide the necessary detail without infringing on information deemed confidential to each provider. The benefit of this method of representation is in the accuracy of the WC area (polygon). Each wire center area clearly represents the spatial extent of ADSL availability.

2.3.2. Zip Code Polygons

Both cable providers and ICOs have assembled broadband delivery capability information based on United States Postal Service (USPS) zip codes. To map these zip codes in a spatial context, a method was selected to convert USPS zip codes into polygons representing the spatial extent of the zip code. The US CENSUS zip code tabulation areas (ZCTAs) were selected as the public-domain spatial coverage to convert the zip code lists, supplied by the various broadband vendors, into a GIS and mapping context.

Note a one-to-one relationship does not exist between CENSUS zip code tabulation areas (polygons) and the USPS zip code list provided by both cable and phone providers. There are a few USPS zip codes that are not part of the ZCTAs. Because a one-to-one relationship does not exist, spatial misrepresentation is being introduced when mapping both cable broadband capability and some independent ADSL broadband capability. In many cases, the area represented on the map can be either larger or smaller than the actual service area depending on each zip code provided. See Section 2.4.2 for a detailed explanation.

In the future, having a one to one relationship between zip code area and cable or phone provider would be extremely helpful in mapping and analyzing the information in a spatial context. Unfortunately, a polygonal GIS map of zip codes with a one-to-one relationship (polygon to zip code) does not currently exist in the public domain.

2.3.3. Satellite Areas

In terms of broadband access provided by satellite vendors, essentially the entire state of Louisiana is spatially covered by this technology. Therefore, the mapping of this capability has been omitted from the GIS map.

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2.3.4. Wireless Areas

A tower and/or antenna that can transmit and receive digital data via electromagnetic means usually services wireless areas. The area that can support broadband transmissions is usually dependent on the radial distance from the tower and other obstructions blocking electromagnetic signals. Generally, broadband availability is usually a function of the radial distance from the tower depending on the technology being employed by the vendor.

In a mapping context, these wireless broadband service areas will normally be defined as a circle centered on a communications tower and/or antenna with the radius of coverage being dependent on the technology used to provide broadband service. The spatial distribution of the towers and associated broadband access area can describe the spatial extent of these broadband providers. Further investigation is needed into the wireless broadband vendors.

2.4. Forms and Limitations of GIS Data Provided

Thus far, the GIS mapping data provided is of varying types and quality. As discussed previously, there are basically four ways to map broadband capability thus far.

2.4.1. Forms

The four forms of mapping broadband capability consists of the following:

1. Wire Center Area
2. Zip Code Area
3. Satellite Area
4. Wireless Area

The GIS mapping using these types of area methods will be discussed.

2.4.1.1. Wire Center Area

GIS mapping by wire center area is likely the best method employed in graphically indicating where broadband exists in terms of ADSL broadband capability. The maps based on wire center areas represent actual service areas and capability as opposed to using some type of surrogate (zip code) mapping polygon to represent ADSL capability.

2.4.1.2. Zip Code Area

GIS mapping by CENSUS zip code tabulation areas (ZCTAs) is another method employed in graphically indicating where broadband exists in terms of both cable and phone broadband capability. The maps based on zip code areas represent an approximation of where broadband capability exists as opposed to capability being mapped by service locations. There are some significant limitations associated with using this method, which will be discussed in the Section 2.4.2.

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2.4.1.3. Satellite Area

Essentially, satellite broadband providers can service the entire state of Louisiana. Since the entire state is serviceable by satellite, this technology/vendor class was not mapped. Essentially there is 100% broadband capability based on this technology anywhere in the state.

2.4.1.4. Wireless Area

GIS mapping of wireless broadband providers will require the latitude / longitude coordinate location of each tower and/or antenna and respective diameter or radius from the antenna where broadband service can be supported. This method of mapping broadband capability would be equivalent to the wire center method of mapping in terms of properly representing in a spatial context broadband delivery capability. Further investigation is needed in this broadband technology/vendor class.

2.4.2. Limitations

In mapping broadband capability statewide thus far, the zip code method described above has significant spatial issues as discussed below.

2.4.2.1. Zip Code (ZCTA) Limitations

An explanation of the limitations associated with using zip codes to spatially represent broadband coverage is more complex to explain as follows. Both cable providers and ICOs have assembled broadband delivery capability information based on United States Postal Service (USPS) zip codes.

Currently, a one-to-one relationship does not exist between zip code tabulation areas (polygons) and the zip code list provided by both the cable and phone providers. Because a one-to-one relationship does not exist between zip code polygons and all the zip codes that exist, spatial misrepresentation is being introduced when mapping both cable high-speed data (HSD) broadband access and some independent ADSL broadband providers. The misrepresentation occurs when a database join attaches the zip code list to the polygon coverage database list where a provider zip code has no associated polygon zip code. In this case, a zip code is “lost”; therefore, the area represented on the map is smaller than the actual service area described by the vendor provided zip code list. In some cases, a zip code matched with an associated ZCTA polygon covers a geographic areas far larger than the actual delivery capability extent.

To further complicate the situation across the nation, there are basically three types of zip codes. First there are “standard” zip codes that usually have a service area defined spatially as a polygon. This is a one-to-one relationship – one zip code has one polygon. Second, there are “unique” zip codes. Usually, a point defines the spatial location of the “unique” zip code. For example, every state university in Louisiana has a “unique” zip code, which is spatially located within a previously defined “standard” zip code polygon. Finally, there exists “PO Box Only” zip codes again defined

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spatially by a point that falls within an existing “standard” zip code polygon. These zip code types appear in the data provided by the various vendors.

Another limitation associated with zip code polygons is the polygons themselves. In the case of CENSUS ZCTAs, these polygons represent generalized USPS delivery areas and not actual USPS delivery areas, nor areas where broadband capability actually exists.

Zip codes are being added or revised continuously. Sometimes when there are shifts in population large zip code areas are divided into multiple smaller zip code areas which has been experienced in the data provided.

Finally, other types of misrepresentations either geographical or tabular may exist based on hardware, software, or data limitations and/or assumptions made in the processing of the data.

In organizing the spatial data provided, the data received were cataloged and organized by technology/vendor class. This section of the document will likely have the most revisions over time as the various broadband vendors provide new and updated information.

3. SUMMARY

In summary, data from cable and phone providers have been received and processed in an effort to identify where broadband delivery capability currently exists using GIS and mapping techniques. A large majority of the information provided is based on USPS zip code lists converted into polygonal areas using the CENSUS ZCTA polygons. Several limitations are associated with using zip code spatial data as previously described in Section 2.4.2.1. For telephone providers, wire center based data would be preferable over zip code based data due to the spatial limitations identified with using zip code based mapping. Several GIS maps depicting broadband delivery capability are attached to this report. The first depicts delivery capability of 75% and above (see Section 4.6). The second depicts any delivery capability (see Section 4.7). The third map depicts any delivery capability with CENSUS population data represented as a dot-density overlay (see Section 4.8). This GIS & Mapping Initial Report on Broadband Infrastructure is being submitted to the Broadband Advisory Council for review and comment.

**GIS & Mapping Initial Report
Broadband Advisory Council**

Appendicies

4. APPENDICIES: Tables and Maps

**4.1. Table 1
LA Telephone Broadband Providers**

Company	Address	City	State	Zipcode	Phone
Bellsouth Telecommunications, Inc.	365 Canal St., Rm 3000	New Orleans	LA	70130	(504)528-7478
Cameron Telephone Co., Inc.	P.O. Box 167	Sulphur	LA	70664	(337)583-2111
Elizabeth Telephone Co., Inc.	P.O. Box 167	Sulphur	LA	70664	(337)583-2111
Campiti-Pleasant Hill Telephone Co., Inc.	P.O. Box 777	Natchitoches	LA	71065	(318)352-0014
CenturyTel	P.O. Box 4065	Monroe	LA	71065	(318) 388-9500
Delcambre Telephone Co., Inc.	104 North Corner	Delcambre	LA	70528	(337)685-2311
East Ascension Telephone Co., Inc.	913 South Burnside Street	Gonzales	LA	70737	(225)621-4200
Kaplan Telephone Company	P.O. Box 369	Kaplan	LA	70548	(337) 643-7171
Lafourche Telephone Co., Inc.	P.O. Box 188	Larose	LA	70373	(985)693-4567
Northeast Louisiana Telephone Co., Inc.	P.O. Box Drawer 185	Collinston	LA	71229	(318)874-7011
Reserve Telephone Co., Inc.	P.O. Box Drawer "T"	Reserve	LA	70084	(985)536-1111
Star Telephone Co., Inc.	P.O. Box 9	Maringouin	LA	70757	(225)625-2333

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Appendicies

**4.2. Table 2
LA Cable Broadband Providers**

Cable	Contact	Address	City	State	Zip	Phone	email
Cox Communications	Robert Thibodeaux	1906 Veterans Memorial Drive	Abbeville	LA	70511	337-893-3376	bobby.thibodeaux@cox.com
Cox Communications	JeNea Jones	3250 Donahue Ferry Road	Pineville	LA	71360	318-640-2892	Jenea.Jones@cox.com
Cox Communications	Roland J. Miers	1611 Park Loop Drive	Bastrop	LA	71220	318-281-0094	roland.miers@cox.com
Cox Communications	Jacqui Vines	5428 Florida Boulevard	Baton Rouge	LA	70806	225-930-2219	jacqui.vines@cox.com
CMA Cablevision of Plaquemines Parish	John Helmers	P. O. Box 760	Belle Chasse	LA	70037	504-392-4060	johnh@cmaacce555.com
Cox Communications	Dennis Watts	725 Benton Road	Bossier City	LA	71171	318-747-1666	dennis.watts@cox.com
Charter Communications	Karl Adams	P. O. Box 610	Bourg	LA	70343	985-594-8270	kadams@chartercom.com
Cox Communications	Ray Mayo	2010 N. Parkerson	Crowley	LA	70527	337-783-6971	rav.mayo@cox.com
Cox Communications	Ray Smith	1501 N. Pine Street	DeRidder	LA	70634	337-463-7728	Ray.Smith@cox.com
Charter Communications	Greg Savant	330 Moosa Blvd.	Eunice	LA	70535	337-546-0087	gsavant@chartercom.com
Cox Communications	Roger St. Dizier	1111 Northwest Boulevard, Ste. A	Franklin	LA	70538	337-828-2302	roger.stdizier@cox.com
Charter Communications	Kelly LeBouef	701 Westin Oaks Drive	Hammond	LA	70403	985-318-1205	klebouef@chartercom.com
Time Warner	Jacqui Dugas	104 Lois Road	Houma	LA	70363	504-876-4280	jacqui.dugas@twcable.com
Trust Cable TV	Bobby Bennett	P. O. Box 39236	Jackson	MS	39216	601-981-0779	steven@trustcable.com
Cox Communications	Ron Watters	108 Hudson Avenue	Jonesboro	LA	71251	318-259-4447	ron.watters@cox.com
Cox Communications		714 Eraste Landry Road	Lafayette	LA	70506	337-232-6323	
Cox Communications	Ray Smith	1538 E. Prien Lake Road	Lake Charles	LA	70601	337-477-9674	Ray.Smith@cox.com
CMA Cablevision of Lake Providence	Dale Miller	P. O. Box 432	Lake Providence	LA	71254	318-559-1212	
Time Warner		136 Farm Road	LaPlace	LA	70069	985-652-6951	
Vision Communications	James Callihan	P. O. Box 550	Larose	LA	70373	985-693-4111	jamesc@mobiletel.com
Spillway Communications, Inc.	Mark Greene	P. O. Box 337	Maringouin	LA	70757	225-625-2311	
Charter Communications	James Laurent	403 North Main Street	Marksville	LA	71351	318-253-6504	jlaurent@chartercom.com
Cox Communications	Roland J. Miers	726 Broadway	Minden	LA	71005	318-377-1978	roland.miers@cox.com
Allen's TV Cable Service	Greg Price	P. O. Box 2643	Morgan City	LA	70381	985-384-8335	gaprice@atvci.net
Cox Communications	Ron Watters	321 Texas Street	Natchitoches	LA	71457	318-352-5883	ron.watters@cox.com
Cox Communications	Roger St. Dizier	1017 Progress Street	New Iberia	LA	70560	337-365-2434	roger.st.dizier@cox.com
Cox Communications	Greg Bicket	338 Edwards Avenue	Harahan	LA	70123	504-304-7345	greg.bicket@cox.com
Charter Communications	James Laurent, Jr.	P. O. Box 410	New Roads	LA	70760	225-638-7632	jlaurent@chartercom.com
Charter Communications	Joe Semmes	2330-B East 5th Avenue	Oakdale	LA	71463	318-335-2486	jsemmes@chartercom.com
Cox Communications	Diana Rogers-Deville	3250 Donahue Ferry Road	Pineville	LA	71360	318-640-2892	diana.deville@cox.com
Reserve Telecommunications	Bill Ironside	203 W. 4th Street	Reserve	LA	70054	985-536-1200	bironside@rtonline.com
Cox Communications	Roland J. Miers	1001 Cooktown Road	Ruston	LA	71270	318-255-6594	roland.miers@cox.com
Time Warner	Cheryl Rummel	6529 Quilen Road	Shreveport	LA	71108	318-213-4280	cheryl.rummel@twcable.com
Charter Communications	Kelly LeBouef	60097 Highway 11	Slidell	LA	70458	985-645-2610	klebouef@chartercom.com
Cox Communications	Anita McDonner	P. O. Box 2809	St. Martinville	LA	70582	318-845-5384	anita.mcdonner@cox.com
Charter Communications	Kip Kraemer	P. O. Box 5178	Thibodaux	LA	70302	985-446-4934	kadams@chartercom.com
Time Warner	Frances Smith	405 Kiroli Road	West Monroe	LA	71291	601-321-2006	frances_smith@twcable.com
Cox Communications	Ron Watters	701 W. Court Street	Winnfield	LA	71483	318-628-6449	ron.watters@cox.com

**GIS & Mapping Initial Report
Broadband Advisory Council**

Appendices

**4.3. Table 3
LA Satellite Broadband Providers**

Company	Address	City	State	Zipcode
Ground Control	720 Aerovista Place	San Luis Obispo	CA	93401
Hughes Network Systems Corporate Headquarters	11717 Exploration Lane	Germantown	MD	20876
Skycasters	3500 Virginia Beach Blvd., Floor 6	Virginia Beach	VA	23452
StarBand Corporate Headquarters	1750 Old Meadow Road - 7th Floor	McLean	VA	22102
WildBlue Communications, Inc.	5970 Greenwood Plaza Blvd., Suite 300	Greenwood Village	CO	80111

**GIS & Mapping Initial Report
Broadband Advisory Council**

Appendicies

**4.4. Table 4
LA Broadband Telephone GIS Data Received**

Status	% Received	GIS Type	Company
RD	91%	Wire	Bellsouth Telecommunications, Inc.
RD	100%	Zip	Cameron Telephone Co., Inc.
RD	100%	Zip	Elizabeth Telephone Co., Inc.
RD	100%	Zip	Campti-Pleasant Hill Telephone Co., Inc.
RD	100%	Zip	CenturyTel
RD	100%	Zip	Delcambre Telephone Co., Inc.
RD	100%	Zip	East Ascension Telephone Co., Inc.
RD	100%	Zip	Kaplan Telephone Company
RD	100%	Zip	Lafourche Telephone Co., Inc.
RD	100%	Zip	Northeast Louisiana Telephone Co., Inc.
RD	100%	Zip	Reserve Telephone Co., Inc.
RD	100%	Zip	Star Telephone Co., Inc.
Total	99%		
X = No Data		Wire = Wire Center (service areas)	
RD = Received Data		Zip = Zip code areas	

**GIS & Mapping Initial Report
Broadband Advisory Council**

Appendicies

**4.5. Table 5
LA Broadband Cable GIS Data Received**

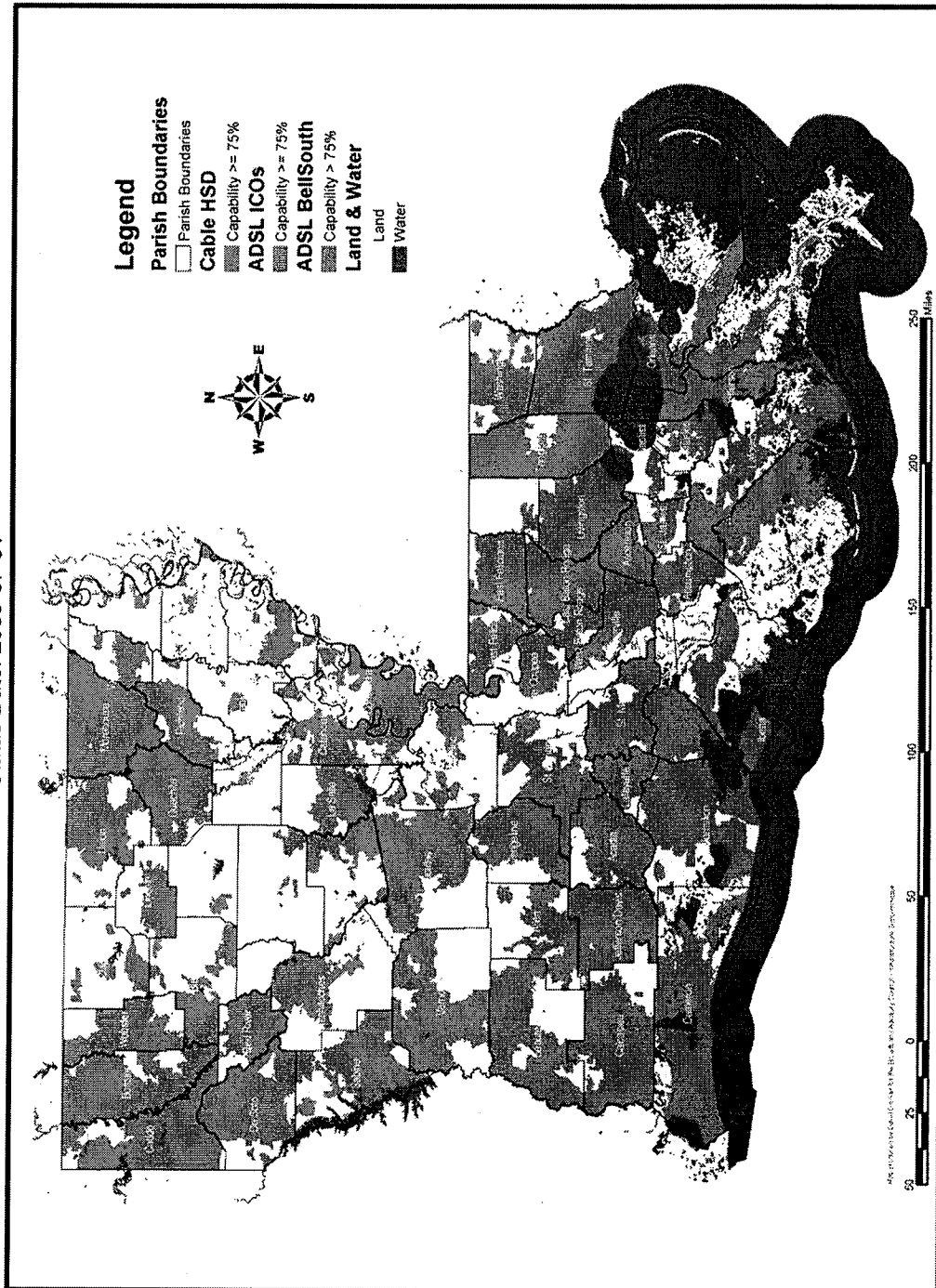
Status	% Received	GIS Type	Cable
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Elizabeth Telephone Co., Inc.
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	CMA Cablevision of Plaquemines Parish
RD	100%	Zip	Cox Communications
RD	100%	Zip	Charter Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Charter Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Charter Communications
RD	100%	Zip	Time Warner
RD	100%	Zip	Trust Cable TV
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	CMA Cablevision of Lake Providence
RD	100%	Zip	Time Warner
RD	100%	Zip	Vision Communications
RD	100%	Zip	Spillway Communications, Inc.
RD	100%	Zip	Charter Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Allen's TV Cable Service
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Charter Communications
RD	100%	Zip	Charter Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Reserve Telecommunications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Time Warner
RD	100%	Zip	Charter Communications
RD	100%	Zip	Cox Communications
RD	100%	Zip	Charter Communications
RD	100%	Zip	Time Warner
RD	100%	Zip	Cox Communications
Total	100%		
X = No Data		Zip = Zip code areas	
RD = Received Data			

GIS & Mapping Initial Report Broadband Advisory Council

Appendices

4.6. Map #1 GIS Map of Delivery Capability 75% and Above

Broadband Delivery Capability Provided by Technology / Vendor Classes
Status Date: 2005-07-01

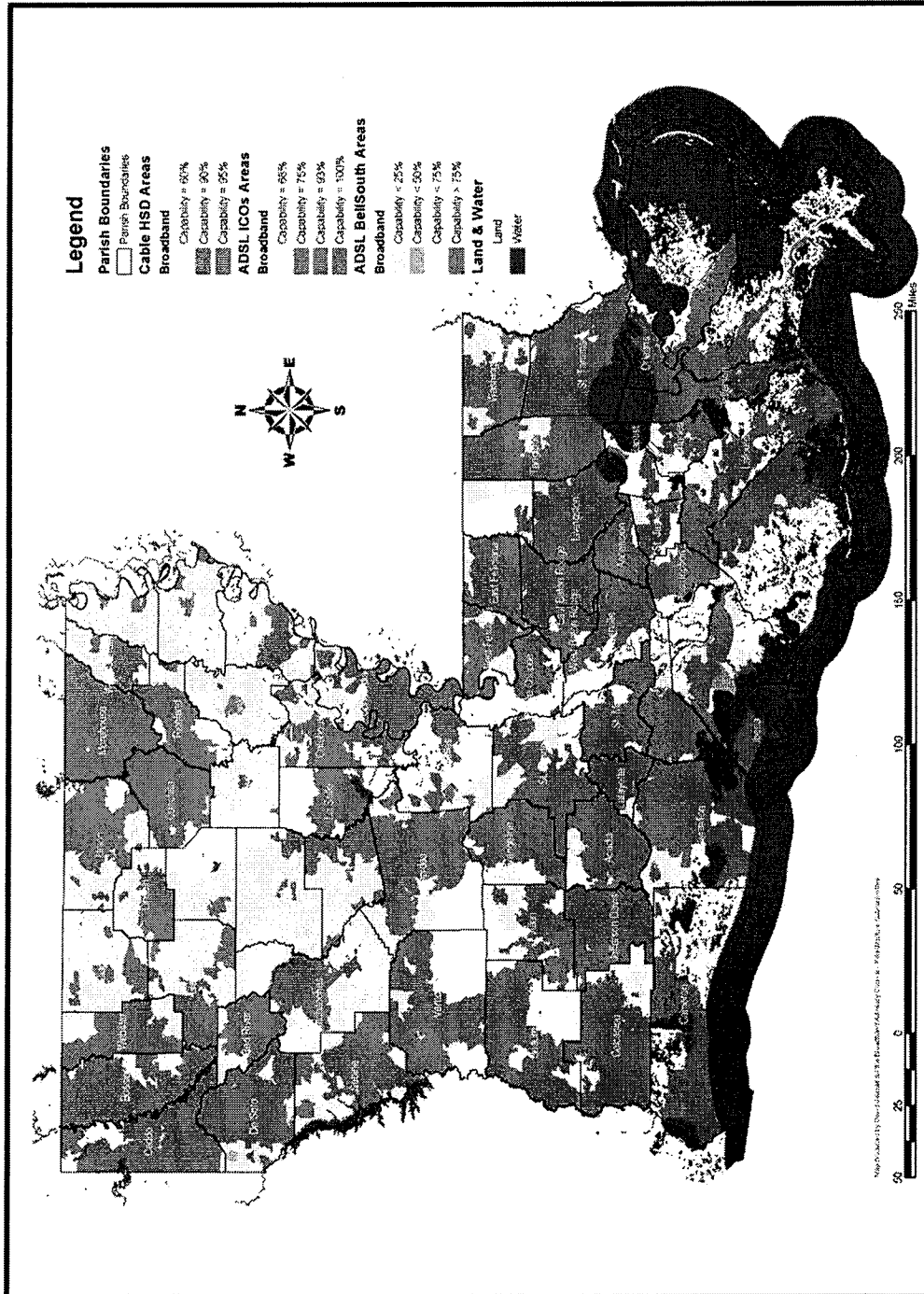


GIS & Mapping Initial Report Broadband Advisory Council

Appendices

4.7. Map #2 GIS Map with Delivery Capability Above 0%

Broadband Delivery Capability Provided by Technology / Vendor Classes
Status Date: 2005-07-01

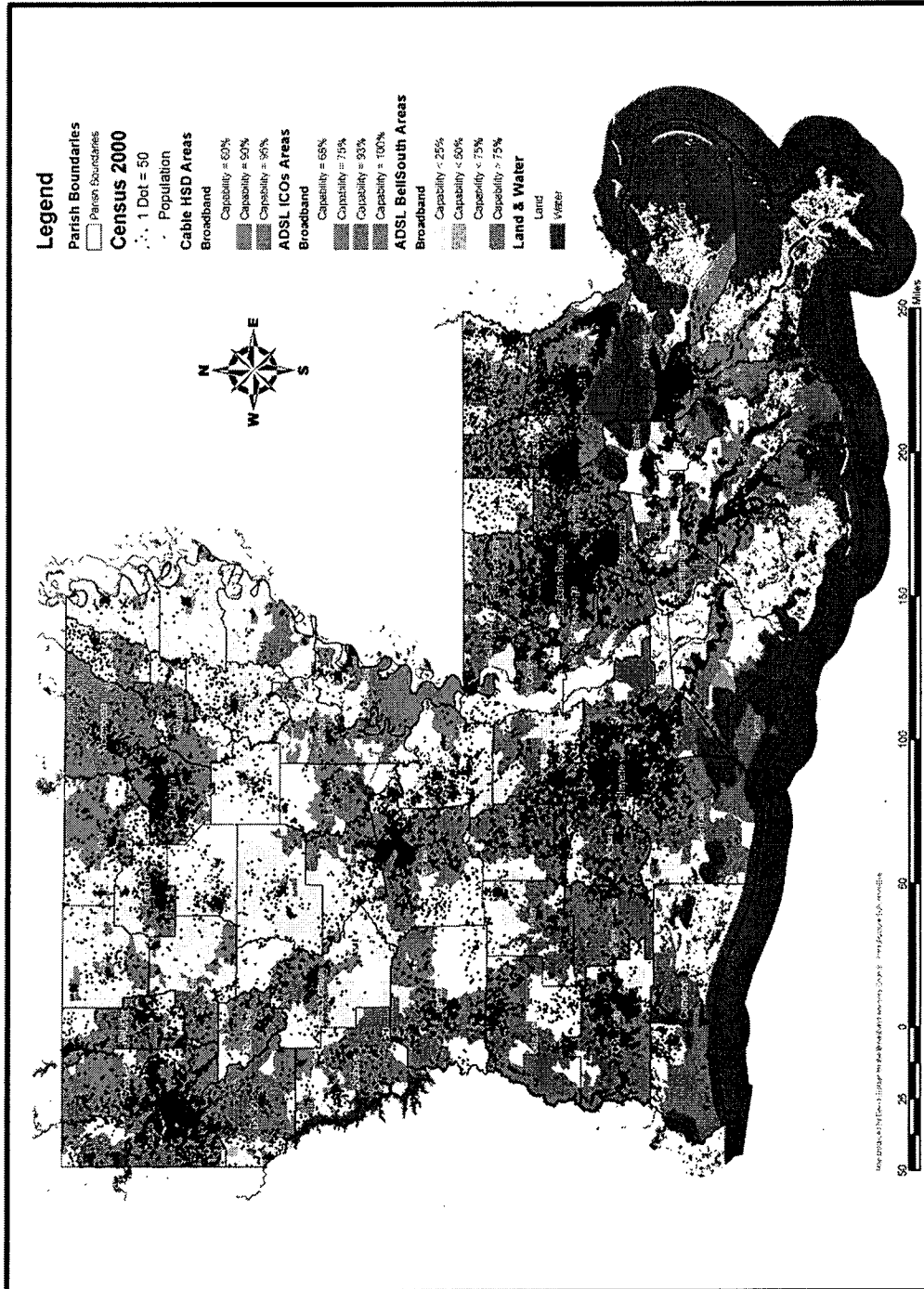


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Appendicies

**4.8. Map #3
Population dot-density overlaid on Map #2**

Broadband Delivery Capability Provided by Technology / Vendor Classes
Status Date: 2005-07-01



Louisiana Broadband Mapping Program

Alaa Shams

GIS Training Coordinator

General Qualifications

Mr. Shams has served as a GIS Training Coordinator at Louisiana Geographic Information Center (LAGIC) since 2008. Mr. Shams provide training program development, curriculum development and Workshop management in geospatial technologies for the Louisiana Geographic Information Center to state and local government. Mr. Shams duties includes web-based surveys of training needs, workshop design, interactive exercise, workshop presentations, registrations, flyer design, evaluation and preparing detailed administrative reports and training documentations. Also he is responsible for workshop and classroom setup, hardware and software trouble shooting, software installation, as well as the use of other geospatial tools such as Global Positioning System (GPS).

Prior to joining LAGIC, Mr. Shams served as a GIS Analyst/Trainer at the Center for Coastal Zone Assessment and Remote Sensing (CCZARS) and as a GIS Lab Administrator at the Center for Energy and Environmental Studies (CEES) at Southern University and A & M College of Baton Rouge, LA. He also taught Surveying and AutoCAD in the Department of Civil Engineering.

Years with LAGIC: 1
Years with other GIS Agencies: 5

Education

M.S. Civil Engineering, Louisiana State University, Baton Rouge, LA

M.S., 2004, Computer Science, Southern University, Baton Rouge, LA

B.S., 1998, Civil Engineering, Damascus University

GIS Affiliations

- ESRI Authorized Instructor since 2005
- Geodatabase Manager
- Expert in using GPS/ GIS/ Remote Sensing software and hardware

Experience

GIS Analyst/Trainer, Center for Coastal Zone Assessment and Remote Sensing, LA 2006 - 2008

As an ESRI Authorized instructor, Mr. Shams conducted GIS, Remote sensing and GPS training. Also he supervised 2D and 3D campus map project. He developed web-based application and administrate geodatabase. He also wrote, published and presented technical papers in international and regional conferences. He supervised a staff of 1 full time employee and three graduate students.

GIS Analyst, Center for Energy and Environmental Studies, LA 2003-2005

Mr. Shams was hired to study and collect geospatial data for the water management units from the Atchafalaya River Basin, a contract for US Army Corps of Engineers and Shaw Environmental. Also administrating the GIS computer lab, Hardware, Software's, Systems, Networking, Maintenance, and Trouble shooting.

Louisiana Broadband Mapping Program

Neal Underwood

Project Executive

General Qualifications

Mr. Underwood has served as an Assistant Director of Statewide Technology in the Louisiana Division of Administration Office of Information Technology (OIT) since 2004. OIT functions as the support organization for the State Chief Information Officer. In this position Mr. Underwood has served as the Director of the Office of Electronic Services where he was responsible for statewide GIS coordination and directing the activities of the Louisiana Geographic Information Center. Currently Mr. Underwood is charged with deploying a statewide Program Management Office to provide oversight and support to enterprise and department level strategic IT projects.

Prior to joining OIT, Mr. Underwood served as an IT Project Manager for the Louisiana Division of Administration Office of Information Services. He also served as a principal with American Management Systems responsible for managing implementation of state government ERP solutions.

Experience / Roles

Director Louisiana Statewide Program Management Office

As director of this strategic initiative Mr. Underwood is responsible for instituting a best practices framework of enterprise project management for all executive branch departments in the Louisiana state government. The Program Management Office will institute policies and standards to address staff development, project planning, project delivery, and quality assurance. PMO staff will be responsible for providing resources and support for the full project life-cycle of strategic project initiatives in the executive branch of Louisiana state government. In this role he also directly led the project to transition IT support for a \$14 billion disaster recovery program to an outsourced IT service provider.

Director Louisiana Office of Electronic Services

As Executive Director of the Office of Electronic services Mr. Underwood was responsible for statewide coordination of eGovernment initiatives, directing the activities of the State Census Data Center, and directing the activities of the Louisiana Geographic Information Center. He also served as the project director for the procurement of a new statewide ERP system.

Principal American Management Systems

As a principal with American Management Systems Mr. Underwood served in various project management roles for implementation of ERP systems in the State of Louisiana and the Commonwealth of Kentucky.

Years with OIT:	9
Years in IT Industry:	15
Education	
B.S., 1988, Psychology, Louisiana State University	
GIS Affiliations	
• Executive Sponsor of Louisiana Geographic Information Center	
• Designee to the Louisiana Geographic Information Systems Council	

Louisiana Broadband Mapping Program

Craig A. Johnson

Project Manager

General Qualifications

Mr. Johnson has served as the Director of the Louisiana Geographic Information Center (LAGIC) since 2000. LAGIC, which is housed at Louisiana State University in Baton Rouge, LA., is the administrative arm of the Louisiana GIS Council and provides logistical support for both the GIS Council and LAGIC websites. Mr. Johnson organizes training and outreach activities and provides GIS technical assistance to state and local government. LAGIC conducts geospatial activities throughout Louisiana and has been awarded numerous federal and state grants for geospatial training programs. LAGIC contributed to the I-Team Initiative, the Louisiana Geospatial Strategic Plan and is currently working with the GIS Council on the Louisiana Spatial Data Management Plan.

Prior to joining LAGIC, Mr. Johnson served as IT/GIS Manager for Ascension Parish Government during the creation of their GIS department. He developed the parish master address file and the street centerline project. He also managed the conversion of the parish assessor's CAD files into the parish GIS base map.

Experience

IT/GIS Manager, Ascension Parish, Gonzales, Louisiana 1996 - 2000

As Parish IT/GIS Manager, Mr. Johnson was hired to build a GIS department for Ascension Parish. He managed; the conversion of the Parish Assessors CAD files to a GIS base map, the development of a street address and street centerline layers, and hired contractors to collect aerial imagery and build web applications. He supervised a staff of four full time employees and six graduate students.

GIS Project Manager, Louisiana Office of Public Health, New Orleans, Louisiana 1993 - 1996

Mr. Johnson was hired to build a GIS department for the Environmental Epidemiology Section. He purchased GIS workstations, hired staff, managed a half dozen subcontractors and built environmental data sets that were used in a multi-year, 3 million dollar study of cancer rates in the Lower Mississippi River corridor

GIS Project Manager, National Wetlands Research Center, Lafayette, Louisiana 1990 - 1993

As GIS Project Manager for the Spatial Analysis Branch of the Wetlands Center, Mr. Johnson supervised a staff of three collecting remote sensing, aerial imagery and GIS data of the Yazoo Basin in Mississippi to identify potential wetland areas for migratory waterfowl habitat. He presented papers on the project at conferences and workshops.

Years with LAGIC: 9

Years with other GIS Agencies: 10

Education

PhD. Candidate in Urban & Regional Planning, ABD

University of New Orleans

M.S., 1994, Urban Planning,

University of New Orleans

B.S., 1989, Business Certificate in Cartography & Remote Sensing,

University of New Orleans

GIS Affiliations

- President Louisiana Chapter URISA 1994 – 1997
- American Institute Certified Planners
- Member of the National States GIS Council

Louisiana Broadband Mapping Program

David Gisclair

Director, LOSCO Technical Assistance Program

General Qualifications

As Director of the Louisiana Oil Spill Coordinators Office, Technical Assistance Program, Mr. Gisclair administered the following statewide geospatial programs:

- 1998 Statewide Aerial Photography Collection, 1 meter, CIR imagery in quarter quad tiles.
- 2001 Statewide LIDAR Collection
- 2002 Louisiana CD of statewide geospatial data layers
- 2003 CD Supplemental Data for Louisiana
- 2005 DVD Supplemental Data for Louisiana
- 2009 Louisiana DVD of statewide geospatial data layers

Years with LOSCO Technical Assistance Program	14
Years with other State Agencies:	3
Education	
M.B.A., 1993 California.	
B.S., 1985, Computer Science, Nichols State University, Thibodaux, LA.	
B.S., 1979, Petroleum Engineering at LSU Baton Rouge, La.	
Professional Recognition:	
Chair Louisiana GIS Council 2007 - 2009	

1995 – Present

Director, Louisiana Technical Assistance Program, Louisiana Oil Spill Coordinators Office Baton Rouge, LA.

In his position as Director of the Technical Assistance Program (TAP), he has led the state in acquiring GIS data which not only addresses the TAP mission, but simultaneously addresses the needs of many local, state, and federal government entities as well as the private sector.

1992 – 1995

Systems Analyst/Programmer, Louisiana Department of Insurance. Baton Rouge, La.

1985 - 1992

Engineering Designer/ Geographical Information System (GIS) Manager, Engineering Technology, Inc. Los Angeles, California

Louisiana Broadband Mapping Program

James Edward Mitchell,
Ph.D.

GIS Manager I.T. Section LDOTD

Qualifications

2001 to Present LaDOTD GIS Manager IT Section

- Responsible for developing, managing, and operations of the LA DOTD departmental geographic information system.
- Provide technical support, training, data base and applications development to support DOTD's missions in transportation and regional development.
- Prepare budget and oversee project management.
- Integrate GIS across agency infrastructure to create and support its use for spatial data analysis.
- Evaluate, purchase, and deploy software and hardware to provide all agency personnel with access to GIS technology.

1995 to Present LSU School for Coast and Environment Asst. Prof. of Environmental Planning and Mgmt./Director Spatial and Temporal Analysis and Resource Systems

Dept. of Forestry Wildlife and Fisheries Adjunct Asst. Prof.

- Served as Principal Investigator for GIS application on a NOAA Sea Grant project in cooperation with Louisiana's Department of Wildlife & Fisheries and Department of Health and Hospitals
- Research and teaching methods of natural resources data analysis and management.
- Produce spatial databases and models to support research and teaching missions of the Institute.

1997 to Present Advanced Geospatial & Environmental Services, Inc. President

- Founded consulting firm to perform environmental data analysis, GIS data development, and natural resource/environmental information systems support.

6/1994 to 12/1994 La DNR GIS Lab Information System Management Consultant

- Developed GIS solutions for oil and gas data management and coastal restoration and management.

8/1990 to 7/1994 Kansas Geological Survey Hydrologic Data Manager

- Site consultant for SAS and ARC/INFO systems. Provided application development support, data base development, and data analysis. Responsible for training staff, scoping projects, and site license management.

Education

PhD. Hydrology and Water Resources, 1991, Duke University

M.S. Biology, 1981 U. of Michigan at Ann Arbor

B.S. Biological Sciences, 1978 U.C. Irvine

GIS/Cartographic Software (since 1988) ESRI Software - ArcGIS, ArcInfo Workstation, ARC Macro Language (AML), ArcView, ArcSDE, ArcIMS, ERDAS - IMAGINE, GEOBASE, MapCalc, pMAP.

Programming Languages (since 1979) VisualBasic, ARC Macro Language (AML), ArcObjects (ArcGIS VisualBasic for Applications), C, csh, DOS Batch, FORTRAN, HTML, JCL, REXX, CLIST, SAS (including SAS Macro Language), SQL

Hardware: Microcomputers - Intel-based PC, Minicomputers - Prime (REIMOS), Data General, Mainframe computers - IBM, Supercomputers/Vector and Parallel Processors - FPS-164/264, CRAY, IBM UNDX workstations - SUN SPARC Station and SPARC Center, Data General AVION, Silicon Graphics, IBM RS/6000

Operating Systems: CP/M, DOS, WINDOWS 3.11/95/98/NT/2000/2000/XP Server/2000 Advanced Server, AOSYS, MVS, VM/CMS, DEC-VAX (VMS), UNIX - SunOS and SOLARIS, DGUX, IRIX, AIX

Networking: DOS, WINDOWS (various PC-based products), X-WINDOWS server software on the PC via TCP/IP with UNIX, WINDOWS NT, SOLARIS and DGUX, NFS, NIS

Have performed network administration in SOLARIS, DGUX, and WINDOWS NT/2000.

Data Analysis Software: SAS, BATS

Complete résumé available at members.cox.net/jem562/resume.htm

Louisiana Broadband Mapping Program

Jinwoong Yoo

GIS Support Analyst

General Qualifications

Mr. Yoo has served as the GIS support analyst of the Louisiana Geographic Information Center (LAGIC) since 2007. LAGIC, which is housed at Louisiana State University in Baton Rouge, LA., is the administrative arm of the Louisiana GIS Council and provides logistical support for both the GIS Council and LAGIC websites.

Mr. Yoo develops metadata for various GIS data layers and supports LAGIC as a GIS analyst with the use of computer languages, such as Python. Mr. Yoo's time is split between his work as a research assistant for LAGIC at Louisiana State University and his work for the Louisiana Oil Spill Coordinator's Office (LOSCO). Mr. Yoo assists that project with his experience in remote sensing and aerial photography interpretation. Mr. Yoo has created parish mosaics and LIDAR mosaic for the state of Louisiana.

Prior to joining LAGIC, Mr. Yoo participated in the production of Louisiana GIS Digital Map (2007) led by LOSCO.

Years with LAGIC: 2

Years with other GIS Agencies: 3

Education

PhD. Candidate in Geography
(Climatology)
Louisiana State University

M.A. 2003, Geography (Remote
Sensing & Climatology), Seoul
National University, Korea

B.A. 1999, Geography, Seoul
National University, Korea

Louisiana Broadband Mapping Program

Joseph A. Livingston
Telecommunications Analyst

General Qualifications

Twenty-one years (1988-2009) employment in telecommunications industry with the State of Louisiana Office of Telecommunications Management. Responsibilities included working on conceptual design, planning, acquisition, and implementation of statewide Synchronous Optical Network (SONET) fiber optic transmission facilities, acquisition of broadband digital facilities for use in statewide Asynchronous Transfer Mode (ATM) network, and acquisition of statewide Ethernet services for use by the State of Louisiana. Performed extensive research on wireless technologies including 802.11 (WiFi), 802.16 (WiMAX), and satellite services to develop possible uses for those technologies in state network architectures.

1969-1988

Nineteen years employment in information processing industry with private sector and Louisiana state government. Positions held included systems analyst, financial applications systems manager, computer center manager, and information systems management consultant.

Years with (DOA) Office of Telecommunications: 21
Years with other Agencies: 19

Education

M.S., 1994 Telecommunications,
University of Louisiana at Lafayette

B.S., 1976, Computer Science, LSU
Baton Rouge, La.

Professional Recognition:

- Member of Institute of Electrical and Electronics Engineers
- Winner of the Telecommunications Association nationwide Call for Papers – 1993 & 1994
- Published in International Engineering Consortium's *Annual Review of Communications* 1994 & 1996

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Governor's Office of Rural Development

Louisiana Broadband Advisory Council

Report to the Louisiana Legislature

2005

Louisiana Broadband Mapping Program

Chris Pennington

Technical Support /GIS Developer

General Qualifications

Chris Pennington has been with LAGIC for one year as a Computer Analyst II providing Technical Support and GIS Development. Primary duties at LAGIC include, but are not limited to: Network and system installation and Maintenance, GIS Development on the ESRI ArcGIS / ArcGIS Server Platform, Web Development, Digital Image Processing, and Database design and maintenance. Prior to joining LAGIC, Mr. Pennington served as an IT Geographic Support Analyst for the La. Department of Natural Resources Office of Mineral Resources. While earning a Master's of Science in Geography with a concentration in Mapping Sciences, he was a Research Assistant to DeWitt Braud on the MultiStressors Project, an interdisciplinary study in coastal land loss. Thesis: *Burn Scar Mapping in the Sabine NWR Using LANDSAT Imagery and GIS Experience*

10/2006-7/2008 La. Department of Natural Resources Office of Mineral Resources

IT Geographic Support Analyst

Duties include vector based GIS data creation and analysis for the Louisiana oil and gas industry. OMR is one of the state's leading revenue producers bringing close to one billion dollars a year to the state. Duties included creating and manipulating shapefiles for various lease related SDE layers, production of high quality cartographic products for senior level administrators. ArcGIS 9.x was the primary software utilized with ArcView 3.x used as a secondary tool. ProCogo coordinate geometry software and AutoCAD were also used on a daily basis to analyze current, former, and potential state mineral leases.

5/2005- 8/2006 LSU Coastal Studies Institute.

Research Assistant

Duties included digital image processing and analysis, complex GIS modeling of potential coastal land loss, production of cartographic materials, data mining, data management, and spatial analysis. This position was in conjunction with the NOAA sponsored "Multistressors" project, a multi disciplinary study in coastal land loss.

Volunteer Work Emergency response mapping for The State of Louisiana Emergency Operation Center during Katrina, and the East Baton Rouge Parish Emergency Operation Center during Gustav.

Years with LAGIC: 1
Years with other GIS Agencies: 3.5

Education

M.S., 2006 Geography, LSU Baton Rouge, La

B.A., 1996 Anthropology, LSU Baton Rouge, La

Technical Proficiencies

- ESRI ArcGIS, ArcGIS Server (.net), Image Server, FLEX API, JavaScript API, SDE, Explorer 900
- ERDAS Imagine, Adobe CS4, MS Office, CrimeStat, FragStat, ProCogo
- HTML, CSS, ASP, JavaScript

Louisiana Broadband Mapping Program

David Moore

IT Project Officer

General Qualifications

Mr. Moore has served in the Information Technology industry since 1991 and as a State of Louisiana Division of Administration Information Technology resource for 16 years. Mr. Moore has served in a project manager role on a number of complex I.T. projects, including the statewide implementation of the SAP Human Resources application for the Division of Administration, the automation of the Louisiana Road Home Small Rental Program application process for the Division of Administration, and the modernization of the Business Continuity / Disaster Recovery Plan for the Department of Social Services. Mr. Moore currently serves the Division of Administration Office of Information Technology as an IT Project Officer, focusing on the successful implementation and launch of complex I.T. projects across all of the state agencies.

Years in I.T. Project Management: 10

Years in Information Technology: 18

Education

B.A., 1986, Political Science,
Louisiana State University

In addition to his I.T. project management experiences, Mr. Moore has served in a variety of I.T. Applications Support and Technical Support roles, focusing on applications development, automated reporting, mainframe disk maintenance and backup / recovery of mainframe, email and server files and appliances. Additionally, Mr. Moore has supported both the Division of Administration and the Department of Social Services in the evaluation and procurement of I.T. products and services.

Beyond I.T., Mr. Moore has also served on the Louisiana Road Home Homeowner's Appeal Board, developed the Emergency Support Function 6 (ESF-6) Transportation Coordination procedures in support of emergency evacuation of Louisiana coastal parishes, and coordinated the update and enhancement of the Department of Social Services Continuity of Operations / Continuity of Government (COOP/COG) Plan.

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 4040-0006

Expiration Date 07/30/2010

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. State Broadband Data & Development Program Data Collection & Mapping Activity	11.558	\$ <input type="text"/>	\$ <input type="text"/>	\$ 3,100,000.00	\$ 775,000.00	\$ 3,875,000.00
2. State Broadband Data & Development Program Planning Activity	11.558	<input type="text"/>	<input type="text"/>	500,000.00	125,000.00	625,000.00
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5. Totals		\$ <input type="text"/>	\$ <input type="text"/>	\$ 3,600,000.00	\$ 900,000.00	\$ 4,500,000.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) State Broadband Data & Development Program Data Collection & Mapping Activity	(2) State Broadband Data & Development Program Planning Activity	(3)	(4)	
a. Personnel	\$ 90,000.00	\$ 0.00	\$	\$	\$ 90,000.00
b. Fringe Benefits	0.00	0.00			
c. Travel	10,000.00	0.00			10,000.00
d. Equipment	0.00	0.00			
e. Supplies	10,000.00	0.00			10,000.00
f. Contractual	3,765,000.00	625,000.00			4,390,000.00
g. Construction	0.00	0.00			
h. Other	0.00	0.00			
i. Total Direct Charges (sum of 6a-6h)	3,875,000.00	625,000.00			\$ 4,500,000.00
j. Indirect Charges	0.00	0.00			\$
k. TOTALS (sum of 6i and 6j)	\$ 3,875,000.00	\$ 625,000.00	\$	\$	\$ 4,500,000.00
7. Program Income	\$ 0.00	\$ 0.00	\$	\$	\$

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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. State Broadband Data & Development Program Data Collection & Mapping Activity	\$ 0.00	\$ 775,000.00	\$ 0.00	\$ 775,000.00	
9. State Broadband Data & Development Program Planning Activity	0.00	125,000.00	0.00	125,000.00	
10.					
11.					
12. TOTAL (sum of lines 8-11)	\$	\$ 900,000.00	\$	\$ 900,000.00	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 1,540,000.00	\$ 385,000.00	\$ 616,000.00	\$ 308,000.00	\$ 231,000.00
14. Non-Federal	\$ 385,000.00	96,250.00	154,000.00	77,000.00	57,750.00
15. TOTAL (sum of lines 13 and 14)	\$ 1,925,000.00	\$ 481,250.00	\$ 770,000.00	\$ 385,000.00	\$ 288,750.00
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (YEARS)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16. State Broadband Data & Development Program Data Collection & Mapping Activity	\$ 700,000.00	\$ 500,000.00	\$ 300,000.00	\$ 200,000.00	
17. State Broadband Data & Development Program Planning Activity	160,000.00	100,000.00	60,000.00	40,000.00	
18.					
19.					
20. TOTAL (sum of lines 16 - 19)	\$ 860,000.00	\$ 600,000.00	\$ 360,000.00	\$ 240,000.00	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: <input style="width: 300px;" type="text"/>		22. Indirect Charges: <input style="width: 300px;" type="text"/>			
23. Remarks: The State of Louisiana Division of Administration does not currently have an approved rate for indirect charges with the Dept. of Commerce. Contingent upon grant award the DOA would seek approval to apply indirect charges as appropriate.					

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DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
State Broadband Data and Development Grant Program

Grant Application

Submitted: September 1, 2009

By: Louisiana Division of Administration, Office of Information Technology

Budget Narrative

The Division of Administration Office of Information Technology has reviewed the requirements of the State Broadband Data and Development (SBDD) grant program as published in the Notice of Funds Availability and subsequent clarification. Based upon the information available in these NTIA publications and the project team's prior experience in supporting Broadband Availability Mapping projects, the Office of Information Technology is projecting total program costs over 5 years of **\$4,500,000**. This total is inclusive of \$3,875,000 to support Broadband Availability data collection, validation, semi-annual data updates, interactive public online mapping application development, and data analysis. Also included in this total is \$625,000 in costs to support planning activities. Of the total project costs, the Division of Administration Office of Information Technology affirms its commitment of the required 20% of total program costs in state matching funds, donations, and in-kind contributions.

Data Collection & Mapping Activity

In preparation to support the SBDD program the Office of Information Technology (OIT) has initiated an expedited procurement process to secure the services of a qualified consulting services organization. While an award of this contract will not be completed at the time of submission of this SBDD grant application, OIT is currently evaluating proposals from a field of 8 well qualified consulting organizations. Several members of the OIT project team also provided direct support to the Louisiana Broadband Advisory Council's 2005 project to map Broadband Availability in Louisiana. Information on the results of this previous project is provided with this grant application to demonstrate the project team's understanding of the requirements and challenges associated with this program. OIT has leveraged both this experience and information collected to date in the current procurement process to develop a sound project budget.

The bulk of the services in supporting the SBDD grant program will be delivered by the consultant who is awarded a contract from the current procurement process. This is reflected in the budget with the majority of the costs seen in the Contractual services line item. The State project team will be responsible for overall management of the grant program as well as providing quality assurance on the deliverables of the contractor. This project team will be composed of project management staff from OIT, technical advisors from various members of the Louisiana GIS Council, and project support staff

from the Louisiana GIS Information Center (LaGIC). With the exception of LaGIC support staff, the activities of the State project team are reflected in the Salaries, Travel, and Supplies line items. LaGIC is operated by the Division of Administration in conjunction with Louisiana State University and therefore the activities of these support staff will also be reflected in the Contractual services line item. Based on the timelines and requirements of the SBDD program it is anticipated that approximately 45% of the overall project costs will be realized in the first year of the program. Additionally, it is the State's desire to resolve service delivery addresses in rural Louisiana to spatially accurate point locations. According to the U.S. Census Bureau American Communities Survey (2007/2008), rural Louisiana accounts for approximately 500,000 housing units. With an average market rate of \$1.85 per address point, the projected cost of building a spatially accurate address point dataset for rural Louisiana will be \$925,000. This cost will be partially offset by utilizing existing address point datasets from local governments and 911 organizations.

In summary the federal commitment to the data collection and mapping activity of this program will be \$3,100,000 and the State commitment will total \$775,000. The following table breaks these costs down by budget category and program year:

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Salaries	\$40,000	\$20,000	\$10,000	\$10,000	\$10,000	\$90,000
Travel	\$5,000	\$5,000	\$0	\$0	\$0	\$10,000
Supplies	\$5,000	\$5,000	\$0	\$0	\$0	\$10,000
Contractual						
LaGIC	\$100,000	\$70,000	\$50,000	\$25,000	\$15,000	\$260,000
Mapping Vendor	\$1,600,000	\$775,000	\$565,000	\$340,000	\$225,000	\$3,505,000
Project Total	\$1,750,000	\$875,000	\$625,000	\$375,000	\$250,000	\$3,875,000

The Division of Administration is prepared to commit up to \$300,000 in State General Fund appropriation for the current state fiscal year with the balance of the state match requirement composed of in-kind contribution of salaries, travel, and supplies. The Office of Information Technology is confident in its ability to secure appropriation of state funds and in-kind contributions in future fiscal years to support completion of the grant program.

OIT would also like to note that several of the proposers in the current procurement process included substantial commitment of in-kind contributions and donations in their respective proposals. As a contract award will not be completed at the time of this grant submission, the state is unable to include a contractor in-kind or donation commitment in the grant budget submission. OIT would like to request an opportunity to revise the submitted grant budget within the constraints of federal regulations. Any requested budget revision would maintain the original level of state financial commitment to the program but would seek to substitute funding sources in order to maximize the

committable level of approved in-kind contributions and donations in place of State General Fund dollars.

Planning Activity

The Planning component of this grant program will be supported by the Division of Administration in coordination with the Louisiana Broadband Advisory Council. The budget for this activity will be completely allocated to Contractual services. These services will be focused on state level coordination of planning efforts with regional and local government and non-profit organizations to address the stated Broadband Technology Improvement Act (BTIA) objectives. As with the Data Collection and Mapping activity, it is anticipated that much of these program costs will be realized in the early phases of the program with 60% of the costs realized in the first two years of the program. The Division of Administration is prepared to commit State General Fund appropriation in the current state fiscal year to support this program activity and is confident in its ability to secure sufficient appropriate of funds on future years to continue support of the program. The following table represents a breakdown of the Planning activity costs by BDIA category:

BDIA Category	Federal	State	Total
2 - Tracking; 3 - Barriers to Adoption	\$130,000	\$32,500	\$162,500
5 - Local Planning Teams	\$90,000	\$22,500	\$112,500
8 - Market Data Analysis	\$140,000	\$35,000	\$175,000
6 - Collaboration; 9 - Information Exchange	\$140,000	\$35,000	\$175,000
Total	\$500,000	\$125,000	\$625,000

DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
State Broadband Data and Development Grant Program

Grant Application

Submitted: September 1, 2009

By: Louisiana Division of Administration, Office of Information Technology

Program Narrative

The Division of Administration Office of Information Technology will serve as the designated entity to administer and manage the State Broadband Data and Development (SBDD) grant program on behalf of the State of Louisiana. The Office of Information Technology (OIT) is uniquely positioned to manage this program due to its statewide perspective under the State Chief Information Officer, management responsibilities over the Louisiana GIS Council (LGISC) and Louisiana Geographic Information Center (LaGIC), and existing relationship with the Louisiana Broadband Advisory Council. OIT has reviewed the requirements of the SBDD program as published in the Notice of Funds Availability and subsequent clarifications and is prepared to initiate a project to fulfill all program requirements upon award of this grant.

The Office of Information Technology has assembled a knowledgeable project team in preparation to support the SBDD grant program inclusive of a management team, technical advisors, and support staff. This team has broad expertise in the areas of project management, telecommunications management, grant management, and GIS support services. Many members of the project team also provided support to the Louisiana Broadband Advisory Council in 2005 for that organization's initial efforts to identify barriers to broadband adoption and mapping of broadband availability. Through their participation in this project team members have a clear understanding of the principles and challenges of broadband data collection, collaboration with broadband service providers, and the barriers to broadband availability and adoption in rural Louisiana.

The Office of Information Technology intends to secure the services of a highly qualified vendor to provide a significant percentage of the resources necessary to fulfill the requirements and timelines of the SBDD grant program. An expedited procurement process has been initiated to select this vendor and OIT is currently evaluating a field of 8 qualified proposals. While a contract award will not be completed at the time of this grant application submission, OIT is confident in its ability to have a successful proposer under contract within the timeframe necessary to initiate this project and meet the SBDD program timelines. The successful vendor will have met OIT's requirements for experience in the field of GIS with emphasis on prior project experience in the area of Broadband Mapping and collaboration with broadband service providers.

In order to fulfill the requirements of the SBDD grant program the Office of Information Technology envisions leveraging the previous work products of the Louisiana Broadband Advisory Council and collaborative partnerships with state government agencies, higher education institutions, local and regional government organizations, non-profit organizations, and commercial broadband service providers. OIT recognizes that it is critical to foster positive working relationships with the commercial providers of

broadband service and understand that we will be facing a wide disparity of technical capability and data quality between the smallest local cable franchise and national telecommunication corporations. It is envisioned that the former will require direct technical assistance in assimilating and mapping their service delivery points and network infrastructure. Once the inventory of service delivery points have been assembled the next key task is the validation and quality assurance of acquired data. It is OIT's intent to resolve service delivery locations to point address locations to the greatest extent possible and avoid the use of geocode processing based on road networks and address ranges. The use of geocoding in rural areas of the state exposes the project to the potential of a high margin of error derived from inaccurate line work, invalid address ranges, and default value utilization such as geographic centroid. In order to avoid this pitfall location validation will utilize available resources such as 911 address datasets, high resolution aerial imagery, and local government address point data to validate service delivery locations. It is envisioned that observed field signal-strength survey techniques will be employed to validate information provided by wireless broadband service providers. Crowd-sourcing will also be leveraged as a validation technique to collect information directly from the consumer population via mail, telephone, and online surveys and online 'speed-test' applications. The GIS data management team under LaGIC will perform the final technical quality assurance review of all data deliverables prior to submission to NTIA. All publically accessible data will be published to an interactive online broadband available mapping application hosted on the LouisianaMap application supported on an ESRI ArcGIS Service technical platform. The final key point of data collection, validation, and mapping activities is the process for repeated semi-annual updates. OIT envisions entering into agreements with commercial service providers to capture information on expansion of service delivery focused in the areas identified as under-served and un-served in the original mapping phase via an automated data interface. The consumer level validation processes for updates will proceed in either a cyclical or continuous mode. LaGIC will provide the same level of technical validation and quality assurance for all future update cycles.

The results of the 2005 Broadband Availability study by the Louisiana Broadband Advisory Council indicated that rural Louisiana represented the primary un-served and under-served areas with the heaviest concentrations in the rural Florida parishes, central Louisiana, and northeast Louisiana. These rural areas of Louisiana represent over 500,000 housing units and a population of 1.2 million citizens. This population accounts for a school enrollment of approximately 325,000 students with a 25% dropout rate prior to attaining a high school diploma. Of the 350,000 families in rural Louisiana, 12.7% live below the poverty line. The rural population also faces comparable challenges with respect to employment, economic development, health care, and public safety.

Project Review Criteria

1. Data

The Division of Administration, Office of Information Technology published a Request for Proposals (RFP) for the Louisiana Broadband Mapping Program (RFP#: 107-00090819) on August 19, 2009 for the purpose of soliciting proposals from organizations capable of meeting the requirements of the NTIA State Broadband Data and Development Grant Program. The state seeks proposers to offer comprehensive solutions that 1) are based on understanding the requirements of the NTIA grant program, 2) are

based on fundamentally sound methodology and technology in fulfillment of the requirements of this program, and 3) will foster collaboration with Broadband service providers as well as federal, state, regional and local governments and non-profit organizations.

(a) Data Gathering

The contractor will collect, validate, inventory and map the availability and characteristics of broadband service availability and broadband infrastructure in Louisiana as required in Attachment A: Scope of Services and the Technical Appendix of the State Broadband Data and Development NOFA. The Scope of Services required in response to the RFP includes; collection of data for broadband service at the address level from cable, digital subscriber line, wireless and other broadband providers. The Division desires to utilize point data for service subscription location to the greatest extent possible and to validate the data utilizing available GIS data such as 911 point address datasets or aerial imagery with regards to rural areas of Louisiana. In addition the contractor will provide other broadband service characteristics and pricing including “last mile” and “middle mile” infrastructure data, geospatial mapping of collected data, validation of collected data, semi annual updates to the inventory of collected information and development of an online mapping application to be hosted by the state. Information on community anchor institutions and broadband availability information feedback from the LouisianaMAP website will be collected by the Louisiana Geographic Information Center (LaGIC).

At a minimum our contractor will collect from the providers the specifications and attributes defined by the schema in the Technical Appendix when they collect information about wired broadband (DSL, cable and fiber) providers, including but not limited to:

- Address data for customers
- The broadband technology used
- Speeds both upstream and downstream
- Middle mile and backbone inter connection points by provider
- Last mile connection by provider

At a minimum the contractor will collect from the providers the specifications and attributes defined by the schema in the Technical Appendix when they collect information on “fixed wireless” broadband (Wi-Fi, WiMAX, etc.) providers, including but not limited to:

- Geographic area of coverage
- Speeds both upstream and downstream
- The spectrum used
- Tower location and broadband provider
- Terrain corrected, where possible, so that areas blocked from service by hills or buildings will be shown as not receiving service
- Power company supplying electric service to the facility

Providers will be encouraged to submit the most granular data that is within their technical capabilities. The preferred option is for the providers to submit address-specific records to the contractor showing each point of service the characteristics of the service

received at the location. Address data shall comply with US Postal Service Addressing Standards for street delivery mail as specified in U.S. Publication 28 "Postal Addressing Standards". However, providers will have the option of providing data on speed tier and broadband service type aggregated to census block polygons of less than 2 square miles if broadband is available to 95% of potential end user locations within the block.

The Division proposes to build a statewide *situs* address dataset to support the broadband effort. This effort will build on existing 911, parish and municipal address databases. LaGIC will survey local government organizations to determine the state of *situs* addressing and organize a working group of local government stakeholders to recommend data standards and methods of updating and maintaining these data sets. *Situs* addresses will be critical in the assessment and verification stages of the project.

Furthermore, *situs* addresses are essential for our interactive ArcGIS Server web mapping application; LouisianaMAP. LouisianaMAP will utilize *situs* addresses to develop scalable applications for the public, such as the broadband "speed test" that collects both broadband capability information and street addresses. The results of these "crowd sourced" data collection efforts will be displayed on the broadband section of the state website: <http://map.la.gov/>

The contractor will collect data on community anchor institutions. LaGIC will assist by coordinating with members of the Louisiana Geographic Information Systems Council to ensure complete coverage of all the community anchor institutions listed in the NOFA. The required data collection for anchor institutions includes broadband service availability, transmission technology and up/down stream speeds.

The Division recognizes that broadband provider cooperation will be critical to effectively map each piece of infrastructure and collect the associated data required to determine the extent of broadband availability. Estimated cost calculations and timelines assume provider cooperation predicated on non-disclosure agreements. In addition to the technical data collection, the contractor will provide average revenue per user, or by service franchise area as noted in the NOFA clarification.

(b) Accuracy and Verification

Verifying provider data will be nearly impossible without an accurate geospatial reference for addressed locations; whether these are individual households, businesses or anchor institutions. The contractor will be responsible for collecting and verifying provider data; however, the state will also need to have the capability of cross checking data sets for accuracy. The combination of a statewide *situ* address database along with a state website for the collection of address information and broadband capability will augment the contractor provided data sets and provide another method for verification. In addition, a comprehensive statewide address layer will allow the Division to use GIS to analyze service areas and determine areas that are underserved or un-served. Providing universal broadband access in Louisiana would be aided by a statewide address data layer to determine the location of households, businesses and anchor institutions that are not currently being served.

Another method of determining the accuracy of a digital data collection is to perform a validation of the quality of the data received from the providers, which includes , but is not limited to, verifying all data fields are populated with valid values and executing automated procedures that check for maximum and minimum values, percentage of null

fields etc. It is essential to develop a set of tools that can be used to validate the first batch of data and subsequent data collections. Collected data will need to be mapped to a base map and checked for geographical accuracy as well as attribute verification. We will require our mapping contractor to hold a series of workshops throughout the state to review the findings and identify issues that might not be obvious without a site visit. These facilitated sessions will help identify errors or missing data sets that might not otherwise be revealed.

In addition to public workshops and automated data checks; telephone, online and in person surveys of citizens, businesses and anchor institutions will fill in potential data gaps. An online consumer 'speed-test' application will be utilized to develop a database to validate service characteristics. With regards to wireless service the contractor will be required to perform field level signal-strength surveys to validate wireless availability and service characteristics. Using GIS, we will be able to perform spatial analysis of the locations of underserved or un-served populations which will also be verified with survey data. Information collected from providers on tower locations and wire-line distribution points will also be utilized to perform spatial analysis to validate service availability boundaries.

The contractor will be required to label the location of public lands (National Forests, Wildlife Management areas, water bodies, coastal wetlands, large agricultural tracts, etc.) where wired broadband would not be expected. LaGIC, the Office of State Lands, and the Louisiana Department of Agriculture maintain geo-referenced boundary files of these areas.

(c) Accessibility

LaGIC will be responsible for deploying web applications within LouisianaMAP to be used in the Broadband Mapping grant program. LouisianaMap is an online interactive geospatial portal framework based upon ESRI ArcGIS Server architecture. Among the applications that are to be deployed:

- LouisianaMAP will utilize *situs* addresses to develop scalable applications for the public, such as the broadband "speed test" that collects both broadband capability information and street addresses. The results of these "crowd sourced" data collection efforts will be displayed on the broadband section of our state website: <http://map.la.gov/>
- LouisianaMAP will host an interactive mapping application for the public to view the status of broadband mapping in their state, parish or neighborhood. Citizens can type in their address and get a list of broadband providers in their area with both advertised speed and "most likely" broadband speeds. In addition, citizens will be able to complete a short survey regarding their satisfaction with existing broadband service.
- The Louisiana Broadband Advisory Committee, state decision makers, and university researchers who abide by the confidentiality agreements will be able to look at a more detailed map of broadband service areas for planning purposes.

LaGIC will regularly e-mail broadband availability surveys to local governments and anchor institutions to monitor broadband availability.

All aggregate level data will be available on LouisianaMAP for the public.

(d) Security and Confidentiality

The Division of Administration has experience in the management of confidential information as part of its overall responsibility for monitoring legal and financial agreements for the state. The Division will develop a set of policy and procedures for handling confidential data that will provide a guide for the Broadband Mapping Project. These policies and procedures will be made available to the contractor for the development of the Non-Disclosure Agreements and data handling procedures. Standard procedures for handling the confidential information, generated specifically by this project, will be developed by the contractor in consultation with the Division of Administration.

The contractor will draft Non-Disclosure Agreements (NDA) that meet the requirements described in the NOFA and comply with Louisiana Law, specifically Louisiana Revised Statute Title 44 Public Records and Recorders. These agreements govern the distribution of data between the providers and the contractor, but also between the contractor and any sub-contractors, consultants or agents. The contractor will execute the NDA's within the constraints of state public records law. These Non-disclosure Agreements will be reviewed by the Division of Administration and other state agencies before distribution. It is the goal of the Division to ensure the cooperation of the broadband providers while meeting all federal requirements.

The contractor is responsible for ensuring the security of (but not limited to) the following equipment and processes:

- all hardware, peripherals and other equipment
- control of access to information and systems
- the processing of information and documents
- purchasing and maintenance systems
- detecting cyber crime and other IS incidents
- business continuity planning
- premise security and personnel issues affecting security
- staff training and awareness
- data and information classification

All aggregate level data will be made available for distribution on LouisianaMAP, consistent with NTIA requirements, after meeting quality assurance and quality control checks. The availability and accessibility of non-confidential data and access to quarterly reports on a Louisiana Broadband Council website will ensure the transparency of the process.

2. Project Feasibility

(a) Budget

The Louisiana Division of Administration Office of Information Technology projects a total project cost of \$4.5 million inclusive of both Planning activities and Mapping activities. This program budget is comprised of \$625,000 to support Planning activities and \$3.875 million to support Mapping activities. OIT is currently evaluating a field of

eight (8) proposals for consulting services to support this program. OIT has developed this project budget based on the content of these proposals and the prior experience of the OIT management team in supporting the Louisiana Broadband Advisory Council Broadband Availability mapping project. Based on the timelines and requirements of the SBDD program it is anticipated that 45% of the project costs associated with the Mapping activity will be realized in the first year of the program. This represents expenditures of \$1.7 million to support initial data collection, point address verification, field verification, consumer source verification, data management and quality assurance, and publication of an interactive online Broadband Availability mapping application within the existing LouisianaMap platform. The balance of the project costs will be spread over the remaining 4 years of the program to support data collection, validation, and quality assurance associated with the semi-annual update process. This budget assumes that the successful proposer will be employed to complete the majority of the tasks outlined in the Notice of Funds Availability.

The Division of Administration is prepared to commit up to \$300,000 in State General Fund appropriation for the current state fiscal year with the balance of the state match requirement composed of in-kind contribution of salaries, travel, and supplies. The Office of Information Technology is confident in its ability to secure appropriation of state funds and in-kind contributions in future fiscal years to support completion of the grant program.

OIT would also like to note that several of the proposers in the current procurement process included substantial commitment of in-kind contributions and donations in their respective proposals. As a contract award will not be completed at the time of this grant submission, the state is unable to include a contractor in-kind or donation commitment in the grant budget submission. OIT would like to request an opportunity to revise the submitted grant budget within the constraints of federal regulations. Any requested budget revision would maintain the original level of state financial commitment to the program but would seek to substitute funding sources in order to maximize the committable level of approved in-kind contributions and donations in place of State General Fund dollars. Further detailed information on the program budget and a breakdown of cost projections may be found in the Budget Narrative document and form 424A (Rev. 7-97) Budget Information – Non-Construction Programs submitted with this grant application.

(b) Applicant Capacity, Knowledge and Experience

OIT has assembled a knowledgeable project team in preparation to support the SBDD grant program inclusive of a management team, technical advisors, and support staff. This team has broad expertise in the areas of project management, telecommunications management, grant management, and GIS support services. Many members of the project team also provided support to the Louisiana Broadband Advisory Council (LBAC) in 2005 for that organization's initial efforts to identify barriers to broadband adoption and mapping of broadband availability. Through their participation in this project team members have a clear understanding of the principles and challenges of broadband data collection, collaboration with broadband service providers, and the barriers to broadband availability and adoption in rural Louisiana. Two work products produced during the LBAC project are provided as attachments to this application to demonstrate the team's knowledge and experience in this area. Members of the team have been drawn from a coalition of organizations including the Office of Information Technology, Louisiana GIS Council, and Louisiana Geographic Information Center.

Staff biographies are provided as separate attachments to this application. Key team members include:

DOA Management Team:

Neal Underwood (Project Executive)
David Moore (Project Management Office)

LaGIC Project Team:

Craig Johnson (Project Manager)
Chris Pennington (Database Manager)
Alaa Shams (Training and Outreach Coordinator)
Jinwoong Yoo (GIS Analyst)

Technical Advisors:

David Gisclair (Chairman Louisiana GIS Council)
Dr. James Mitchell (Transportation & Development – GIS Council)
Joe Livingston (Office of Telecommunications Management)

3. Expedient Data Delivery

The Division shares the goals of the NTIA in providing broadband access to the greatest number of Louisiana’s citizens. However, the Division is aware that meeting these deliverables and data delivery dates will require excellent coordination and communication between the entire management team. The state submits the following timeline for project completion:

**Data Delivery Schedule
Louisiana Broadband Mapping Project**

Primary Tasks	Based on 9/15/09 Start Date
NTIA SBDD Grant Application Submitted	September 1, 2009
NTIA Notice of Grant Award	September 15th
Contract negotiations complete with vendor	September 21st
Contract Begins	September 25st
Kick-off Meeting/Project Management Plan	September 28th or 29th
Provider NDAs Established & Distributed	September 30th-October 3rd
Bi-Weekly Status Report	October 12th
Begin Receipt of Provider Data	October 12th
Data Aggregation Begins	October 13th
Web Design Begins	October 19th
Data Validation Begins	October 22nd
Web Design Complete	October 26th
Bi-Weekly Status Update	October 26th
Website Complete and ready for deployment	October 29th
Substantially Complete Data Set, QA/QC completed	October 30th
1st Delivery to NTIA	November 1st
Data Validation Continues	November 2nd
Bi-Weekly Status Update *	November 16th

Data Validation Complete	January 15th 2010
Substantially Complete Data Set ,QA/QC completed	January 29th 2010
2nd Delivery to NTIA (Includes 70% of providers, 80% of Households, and 95% of Community Anchor Institutions)	February 1st 2010
Final data and mapping review	February 15th 2010
Final Delivery to NTIA	March 1st 2010
Data Update Process begins with semi-annual posting	September 1st 2010
Semi Annual Posting	March 1 st 2011
Semi Annual Posting	September 1 st 2011
Semi Annual Posting	March 1 st 2012
Semi Annual Posting	September 1 st 2012
Semi Annual Posting	March 1 st 2013
Semi Annual Posting	September 1 st 2013
Semi Annual Posting	March 1 st 2014
Semi Annual Posting	September 1 st 2014
Final Recovery Act Report Due	October 10, 2014

4. Process for Repeated Data Updating

The information developed during the initial phase of this program will quickly lose its value if it is allowed to age. Periodic updates are an essential factor in maintaining data accuracy and validity. OIT envisions entering into agreements with commercial service providers to capture information on expansion of service delivery for the 5 year duration of the SBDD program. These updates will be focused in the areas identified as under-served and un-served in the original mapping phase via an automated data interface. This automated system will be designed to compliment the technical capabilities of a broad spectrum of service providers and will potentially support submission formats ranging from direct imports of geospatial data to online forms submittal. The consumer level validation processes for updates will proceed in either a cyclical or continuous mode. LaGIC will provide the same level of technical validation and quality assurance for all future update cycles.

5. Planning and Collaboration

The Louisiana Broadband Advisory Council (LRS 51:955.1 et seq) is composed of members of various broadband providers, telecommunication organizations, state agencies, academia and non-profits. The LBAC will set broadband policy for the state as well as provide a forum for opposing viewpoints. The LBAC will also serve as one of the central coordinating entities for this program between commercial, non-profit, Native American tribes, state, regional, and local government organizations.

In addition to the Louisiana Broadband Advisory Council, the Louisiana Geographic Information Systems Council (LRS 49:1051 et seq) will provide a method for communicating with state and local government agencies about the project. The Louisiana Geographic Information Center (LaGIC) is the administrative arm of the Louisiana Geographic Information Systems Council and provides geospatial training and outreach activities throughout the state of Louisiana.

LaGIC will coordinate with the Louisiana Chapter of the National Emergency Numbering Association to develop a mechanism for sharing E-911 address data without compromising the confidentiality provisions of Louisiana state law.

LaGIC will be providing project monitoring and management activities for the Louisiana Broadband Mapping Program. It will support the Mapping Contractor to identify gaps in broadband service, analyze problems with providing service to Louisiana's under-served or un-served populations and make recommendations to the Louisiana Broadband Advisory Council on ways to resolve these issues. Furthermore, LaGIC will advise the LBAC on ways to improve data collection and service based on an analysis of the mapping data.

Broadband Planning Grant

The Broadband Planning Grant Proposal will build upon the work that is proposed in the Louisiana Broadband Mapping Program. The goal of the mapping program is to create a baseline assessment of broadband deployment throughout the state (BDIA Purpose #1), identify the available broadband speeds (BDIA Purpose #4) and create a geographic inventory of broadband service (BDIA Purpose #10).

The goal of the Planning Grant is to: identify and track areas with low levels of deployment by adoption rates (BDIA Purpose #2), identify the barriers to adoption of broadband and IT services (BDIA Purpose #3), assist and facilitate, by parish or region, local technology planning teams (BDIA Purpose #5), collaborate with broadband service providers and IT firms to encourage deployment and use of broadband (BDIA Purpose #6), collect and analyze detailed market data concerning use and demand for broadband service (BDIA Purpose #8) and facilitate information exchange regarding use and demand for broadband service (BDIA Purpose #9).

The Division will use the results of phone, internet and in person surveys to address the lack of verifiable data regarding Louisiana Broadband service needs and barriers to more rapid adoption (BDIA Purpose #2 & 3). Although some surveys have been conducted by the US Census Bureau (2000 Census) to identify obstacles to broadband use, including questions about computer ownership, cost barriers to broadband usage and number of family members who get their broadband at places other than the home (i.e.; school, office, community center, etc.), there is still a lack of verifiable data on broadband usage. The Division proposes to solve this problem by the partnering with broadband providers, universities, community colleges, tribal organizations and others to survey the population in underserved and un-served areas. Furthermore, businesses may be surveyed to determine their broadband needs and identify barriers to adoption. Business organizations such as Chambers of Commerce and Economic Development Agencies are another option for determining broadband needs and obstacles to adoption among the private sector. State agencies, are under mandates to provide electronic services to constituents. These services are not being utilized effectively if constituents cannot access broadband. Furthermore, public meetings will be held to raise awareness of the availability of broadband.

Some states have had success in increasing the broadband adoption rate by creating local or regional technology planning teams (BDIA Purpose #5). The problem is that many anchor institutions (schools, medical facilities, local government agencies, public safety institutions, etc.) are not using broadband services to their fullest capacity. The Division recognizes this issue and proposes to increase broadband usage among anchor institutions by working with non-profit and trade groups that promote broadband usage among the institutions that they work with. For example, health care providers are regularly surveyed by non-profits and private companies that would like to know if they are employing telemedicine technology. Medical equipment companies are another group motivated to survey these organizations so that they can more effectively target their promotional material and their sales staff. Planning teams should have similar success rates as they employ various surveys instruments to identify anchor institutions that are not using, or underutilizing broadband services. These planning teams could be assigned to survey particular anchor institutions in greater depth to determine the reasons for this underutilization and recommend plans that would increase usage. This level of scrutiny

of broadband usage by particular groups or market segments should result in a more proactive approach to broadband underutilization.

No one has more motivation to increase broadband usage than do the broadband providers and the IT service companies that depend on these services. Yet they often fail to do the basic market research necessary to accurately estimate the demand for current and future broadband services (BDIA Purpose #8). The Division recognizes the need to do a better job of quantifying demand for broadband services. One of the most surprising findings of a recent American Community Survey, by the US Census, is that the demand for broadband has gone up even in tough economic times. Many consumers will cut back on their cell phone options before they will reduce or eliminate broadband access. The challenge is to collect and analyze market data in order to profile demand for broadband services by residents, businesses and anchor institutions. The Division anticipates that parish specific data on broadband service demands coupled with geographic analysis of demand relative to existing infrastructure will allow the state to make recommendations regarding infrastructure investments or tailor tax incentive programs to ensure that infrastructure keeps pace with demand.

One effect of the lack of information and the lack of collaboration to expand broadband adoption is missed opportunities for improving social and economic opportunities in all regions of the state (BDIA Purpose #6 & 9). The Division recognizes the need to access and inventory key Louisiana businesses to determine how they could more effectively use broadband to expand their businesses and hire more people. The state could partner with regional economic development organizations, local universities and community colleges to encourage the development of technology centers. In areas of the state with less dynamic economies, it is critical to expand awareness of how broadband technology can be used to expand business. The anticipated outcome is seed money to create technology centers in existing community colleges.



UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
Washington, D.C. 20230

August 14, 2009

Mr. Neal Underwood
Assistant Director Statewide Technology
Office of Information Technology
Division of Administration
State of Louisiana
Post Office Box 94095
Baton Rouge, LA 70804

Anne W. Neville
State Broadband Data and Development Grant Program
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, NW, Room 4716
Washington, D.C. 20230

Dear Mr. Underwood,

This is to acknowledge receipt of your waiver request for the State Broadband Data and Development Program, received on August 11, 2009 by the National Telecommunications & Information Administration.

I am please to inform you that Lawrence E. Strickling, Assistant Secretary for Communications and Information, has approved your request for a waiver of the application due date. You may submit your completed grant application no later than September 1, 2009.

Best Regards,

Anne Neville

BOBBY JINDAL
GOVERNOR



ANGELE DAVIS
COMMISSIONER OF ADMINISTRATION

State of Louisiana
Division of Administration
Office of the Commissioner

August 7, 2009

Honorable Lawrence E. Strickling
Assistant Secretary
U.S. Department of Commerce
Communication and Information
National Telecommunications and Information Administration
Herbert C. Hoover Building (HCHB)
1401 Constitution Avenue, N.W.
Washington, DC 20230

Dear Mr. Strickling:

The Division of Administration of the State of Louisiana shall serve as Louisiana's designated eligible entity under the State Broadband Data and Development Grant Program pursuant to P.L. 110-385, the Broadband Data Improvement Act (Section 106, subsection (i)(2)(B)).

Sincerely,

A handwritten signature in cursive script, appearing to read "Angele Davis".

Angele Davis
Commissioner of Administration

AD/ED/vll

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, 'New Restrictions on Lobbying.' The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

LOBBYING

Statement for Loan Guarantees and Loan Insurance

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

The undersigned states, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

* NAME OF APPLICANT

State of Louisiana Division of Administration

* AWARD NUMBER

TBD

* PROJECT NAME

Louisiana Broadband Availability Mapping Project

Prefix: Mr. * First Name: Neal Middle Name:

* Last Name: Underwood Suffix:

* Title: Assistant Director Statewide Technology

* SIGNATURE: Clifford Underwood * DATE: 09/01/2009

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

<p>* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</p> <p>Clifford Underwood</p>	<p>* TITLE</p> <p>Assistant Director Statewide Technology</p>
<p>* APPLICANT ORGANIZATION</p> <p>State of Louisiana Division of Administration</p>	<p>* DATE SUBMITTED</p> <p>09/01/2009</p>

Standard Form 424B (Rev. 7-97) Back