

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): <input type="text"/> * Other (Specify): <input type="text"/>
* 3. Date Received: 08/14/2009	4. Applicant Identifier: <input type="text"/>	
5a. Federal Entity Identifier: <input type="text"/>		* 5b. Federal Award Identifier: <input type="text"/>
State Use Only:		
6. Date Received by State: <input type="text"/>	7. State Application Identifier: <input type="text"/>	
8. APPLICANT INFORMATION:		
* a. Legal Name: Public Utility Commission of Oregon		
* b. Employer/Taxpayer Identification Number (EIN/TIN): 93-6001871	* c. Organizational DUNS: 933144107	
d. Address:		
* Street1:	550 Capitol Street NE	
Street2:	Suite 215	
* City:	Salem	
County:	Marion	
* State:	OR: Oregon	
Province:	<input type="text"/>	
* Country:	USA: UNITED STATES	
* Zip / Postal Code:	97308-2148	
e. Organizational Unit:		
Department Name: Utility Program	Division Name: Telecommunications Division	
f. Name and contact information of person to be contacted on matters involving this application:		
Prefix: Mr.	* First Name: Bryan	
Middle Name:	<input type="text"/>	
* Last Name: Conway		
Suffix:	<input type="text"/>	
Title: Administrator Telecommunications		
Organizational Affiliation: <input type="text"/>		
* Telephone Number: 503-378-6200	Fax Number: <input type="text"/>	
* Email: bryan.conway@state.or.us		

Application for Federal Assistance SF-424

Version 02

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.):

The State of Oregon including tribal lands.

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

Oregon Broadband Data, Mapping and Development 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

* b. Program/Project

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

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="4,003,844.00"/>
* b. Applicant	<input type="text" value="1,195,589.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="5,199,433.00"/>

* 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: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

Application for Federal Assistance SF-424

Version 02

*** 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.

**ARRA - State Broadband Data Program
NTIA Grant Application - Oregon**

PROJECT ABSTRACT

The Public Utility Commission of Oregon (OPUC), the state's authorized eligible entity, acting on behalf of the State of Oregon has formed a public/private partnership to collect and maintain specific data on broadband infrastructure and the availability of broadband services throughout Oregon, including tribal lands, with federal funding under the State Broadband Data Program (Program) offered under the American Recovery and Reinvestment Act.

Once collected this information will 1) be updated semi-annually; 2) identify unserved and underserved areas; 3) be displayed on a state website in the form of a broadband map readily accessible by the public; 4) be used as the basis for ongoing endeavors to increase broadband availability to all Oregonians; 5) provide Oregon with base-line price data for demand-side evaluation and 6) assist the Assistant Secretary of Commerce in its requirement to develop and maintain a nationwide inventory map by February 17, 2011.

The data will be collected from commercial and public providers of broadband service and/or infrastructure under non-disclosure agreements and in accordance with the Program's confidentiality requirements. This data will provide the areas in which broadband service is available, the technologies used, and the spectrum used for wireless broadband service. The data will be augmented with additional information such as the typical speeds at which broadband service is available and generally available price ranges. Broadband service availability at anchor institutions such as public schools, libraries, hospitals, and colleges, and all public buildings owned or leased by agencies or instrumentalities of the state or subdivisions of the state will also be collected.

In addition to ensuring provider gathered broadband data is compliant with the reporting format required by the Program, the data will be validated for thoroughness and accuracy through several assurance methods using multiple sources, including public information from service providers and third-parties and from consumer and community knowledge. The initial collection of substantially complete broadband data will be provided to the Program Agency by February 1, 2010 and complete data provided by March 1, 2010.

Competitive high-speed access to the Internet and broadband telecommunications networks is essential for Oregon's institutions, businesses and individual citizens. The OPUC also proposes a Planning component to support the development and implementation of initiatives that further the deployment, adoption and utilization of broadband state-wide. The Planning Project will profile and aggregate user demands, engage providers, seek to coordinate state, county and municipal broadband policies and provide actionable information to entrepreneurs. By combining the comprehensive supply-side view of broadband deployment and level-of-service availability gained through data collection with demand-side data Oregon will have the information necessary to identify and offer solutions to Oregon's digital divide for consumers, businesses, anchor institutions and tribal lands.

Broadband

Data

&

Development

Grant

Program

Narrative





TABLE

OF CONTENTS

Introduction 3

Executive Summary.....3

Grant Criteria¹5

 Data 5

 Data Gathering.....5

 Accuracy and Verification6

 Accessibility.....8

 Security and Confidentiality9

Project Feasibility.....11

 Applicant Capabilities.....11

 Budget Narrative - Data Gathering/Mapping11

 Budget Narrative - Planning.....13

 Applicant Capacity, Knowledge and Experience15

Expedient Data Delivery19

Process For Repeated Data Updating21

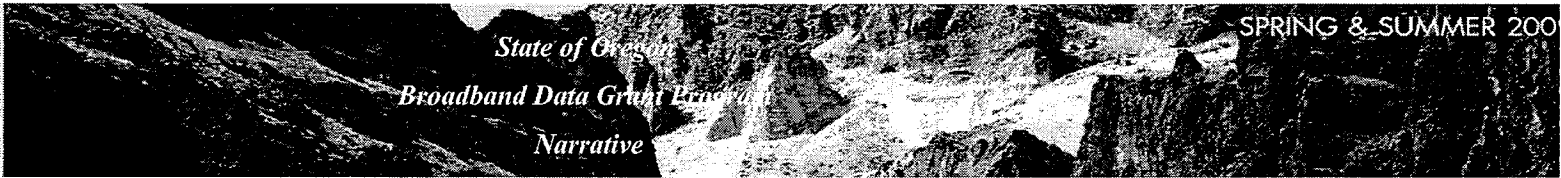
Planning And Collaboration23

 Collaboration23

 Broadband Planning Proposal.....24

Reporting28

¹ Detailed discussions regarding methods utilized for Grant fulfillment are provided in the Processes and Functions Supplement.



INTRODUCTION

The Public Utility Commission of Oregon (OPUC) is the single eligible entity designated by the state of Oregon to receive a grant under section 106(i)(2)(B) of the Broadband Data Improvement Act (BDIA). To best address the specific purposes of the State Broadband Data and Development Grant Program (Program), the OPUC has formed a public/private partnership (Team) with state agencies and private industry experts and organizations.

The Team is excited about the opportunity to meet the requirements of the Program and to provide Oregon with detailed information on the accessibility of broadband services and how this technology can greatly improve the lives of Oregonians including, their safety, education and economic viability. The resources provided through this grant will extend well into Oregon's future to the benefit of all Oregonians and the nation as a whole.

The Team is aware of the recent modifications to the Program requirements and it proposes within this application a *comprehensive* approach to data collection that will provide superior information to NTIA, however Oregon is willing to scale back its proposal to produce simply the Program's baseline requirements as modified. While both approaches incur the same underlying cost the comprehensive approach utilizes additional data sets with additional costs while providing extensive value.

EXECUTIVE SUMMARY

Comment [sej1]: this contains the purposes to accomplish per the NOFA

The Oregon Team's private partner will collect comprehensive, statewide broadband data, including tribal lands, on a detailed and disaggregated basis (address level), process and map the information into a GIS system, inventory the data, and provide the means to aggregate the result for a comprehensive state-wide broadband map that includes technology type and speed. The State's GIS resident experts will build, maintain and display the broadband map on a State website and enhanced interactive capabilities will be established to provide the public with meaningful access to broadband information. The National Telecommunications and Information Administration (NTIA) will be provided a link to Oregon's broadband map.

Oregon's work involves developing a sustainable method that keeps the information current, provides effective public access to the data, and allows for submissions of timely broadband information to the NTIA for its comprehensive nation-wide broadband mapping platform. Further, Oregon will provision resources and solutions to ensure the security of sensitive data by using data-guard solutions, and to provide for automated data access, maintenance, and update.

Detailed resource planning for Oregon's broadband mapping project includes: a work breakdown structure, the identification of technical resources, spatial data, required equipment, and an analysis of the optimal number of parallel tasks that can be undertaken simultaneously to



meet the deliverable timelines.
In order to ensure effective and
efficient delivery of the data required by NTIA within the Notice of Funding Availability (NOFA)
timelines, about 75% of the resources are allocated within the first year of the project (with about
78% of the total allocated within the first three quarters). The Oregon Team's full capabilities will
be utilized to meet the expedited timelines required by the grant.

Given this resource allocation, the Oregon Team will be able to provide an initial set of data on Nov. 1, 2009, followed by a "Substantially Complete Data Set" on or before Feb 1, 2010, and the "Complete Data Set" by Mar 1, 2010. Detailed schedules and budget requirements are provided in subsequent sections.

The State has incorporated Planning functions to identify gaps and constraints that prevent wider coverage, to determine tactical and short-term solutions to close the gaps, and to drive evidenced-based and data-driven strategic planning and investments in the state's infrastructure and/or policies aimed at promoting broadband coverage and related services. In addition to addressing broadband availability issues, methods will be deployed to facilitate the adoption and utilization of broadband services. These objectives align with the purposes described in the Broadband Data Improvement Act.

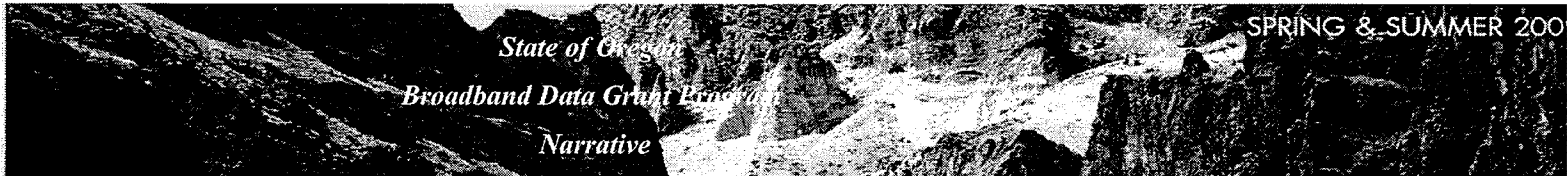
Specific information on Oregon's broadband data gathering, mapping and planning proposals can be found in the Grant Criteria sections below and in the Processes and Functions Supplement which provides an inside look at the components, processes and functions required to make it all happen.

Identifying Unserved and Underserved Areas

The State of Oregon currently does not have accurate information regarding unserved or underserved communities to provide to NTIA. Therefore, one of the main objectives that will receive immediate action is determining these areas using dasymetric (sub-census) population map. The Team expects to produce preliminary analysis for unserved/underserved once the proposed Master Address Repository has been established.

Prioritization for Allocation of Funds

Oregon has a general understanding of areas in the state that may not have access to broadband service from prior survey results and general information from providers, businesses and institutions on availability and adoption rates. Upon completing the analysis of unserved and underserved Oregon will have available a prioritization for the allocation of grant funds for broadband projects in or affecting Oregon. This information will be refreshed as infrastructure is deployed, speeds increase and service penetration deepens.



GRANT

CRITERIA

1. DATA

A. Data Gathering

The NTIA specified four major reporting areas in NOFA Technical Appendix, as outlined here:

1. Broadband Service Availability and technology used in Provider's Service Area, for each Provider
 - a. Service availability by *street address* or census block
 - b. GIS-based (for wireless service) meeting Shapefile requirementsTypical download and upload speeds which may be provide through non-provider sources.
2. Residential Broadband Service Weighted nominal speed in each service area or local franchise area, by Metropolitan or Rural Statistical Area, for each Provider
3. Broadband Service Infrastructure, for each Provider
 - a. Last mile connection points for verification of network service area availability data using first points of aggregation
 - b. Middle mile and backbone interconnection points
4. Community Anchor Institutions

The Team will rapidly begin gathering an inventory of wired/wireless broadband service providers within the state and communicate the purpose of the Program and its requirements to the major service providers to secure their collaboration during the implementation phase. Shortly after the Grant award, the Oregon Team will assemble a small group of Subject Matter Experts (SMEs) across the major technical domains: GIS & data mapping, broadband, data inventory, systems architecture, and data guards. The SME group will work with the service providers to:

- Customize surveys listed in Technical Appendix A of the Grant application according to the provider, and as necessary, ensure full compliance in data requests;
- Match or "map" the requested data elements to the data elements contained within the service provider's inventory;
- Assess the optimal process of obtaining the data, including any possible opportunities for automation of data mapping and inventory ingest processes;
- Review and assess exiting data inventories available to the Team, including baseline statewide data, their accuracy, and any licensing/ownership rights for continual update;



- Assess data sensitivity and access requirements for proper data guard solutions; and
- Revise and customize information assurance and quality control processes to ensure fully meeting Grant requirements for submittal of the data to NTIA.

During this initial phase, the SMEs in GIS and systems engineering will review the requirements for data automation, processing and management, including automated processing of the related metadata for each data set. System hardware and software licenses necessary to support the project will be acquired, installed, and configured at this time.

Data collection will also start in earnest. This will include collecting and automating data from the Broadband Service Providers, and preparing other GIS data to support both the processing of the broadband data as well as mapping the Community Anchor Intuitions.

There will be some cases where carriers do not have the core expertise or infrastructure to build automated interfaces. In those cases, the Team will determine whether integration of open APIs is feasible, and if not, will provide additional options based upon their situation. These options include:

- Secured FTP site – Allows carriers to send their data to us in a standardized format
- Email Interface – For carriers that are less sophisticated, the Team has a conflation tool that converts various file formats and integrates the data into our pre-production engine;
- Fax Interface – To serve the lowest common denominator.

A “Substantially Complete” data set will be prepared by utilizing a combination of manual and automated processing of the collected data and the related metadata. As broadband data inventory is processed, analysis regarding unserved/underserved areas will be performed.

Receipt of provider information will be monitored to ensure all providers are submitting data. Assistance will be offered and available to those providers that lack the ability to gather and submit their data. The OPUC will engage providers that fail to submit data and supply a list of offenders to the Governor. Other means will be used to gather available information to utilize in lieu of data not supplied by a provider after repeated attempts.

A more thorough discussion of the entire set of processes required and utilized for data gathering can be found in the Technical Appendix.

B. Accuracy and Verification

To ensure information accuracy the Oregon’s Team will review “sample representative” data from each provider, and then will continually review broadband service area data as they are to assure compliance and completeness. Wherever applicable, Oregon’s Team will also employ



broadband algorithms to uncover possible technology-specific discrepancies, such as comparing aggregated data with the inter-connect network capacities. Finally, where possible, spot-checks will be performed manually. Oregon's Team will utilize multiple methods to determine data accuracy and validation. These methods include the following components.

Data Comparison –

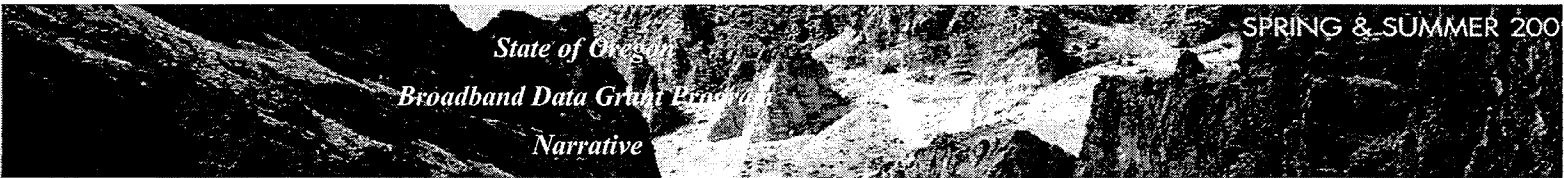
Oregon's Team will develop a dynamic and updateable map database that relies on based on multiple technologies that allow for conflation of data from multiple sources will be developed. With over 20 layers of data, the mapping solution is capable of being both a data accuracy tool as well as a data verification tool. The data platform evaluates all the data that is contained in the database and produces exception reports based upon the anomalies from the data. Our digital mapping technicians evaluate all the exceptions produce by the platform and make determinations based upon data that is available to them. If the digital map technician cannot make a thorough determination, they will refer the exception to the Quality Control team who will do one of the following:

- Call Service Provider(s) in specified area for verification
- Enlist the Digital Connector team to visit the area and survey users
- Contact state resource partners for further verification of data
- Contact data partners to ask for verification.
- Employ our conference center partner to call businesses and consumers in the surrounding area to inquire about their Broadband service options.

Surveying –

In order to validate broadband service provider information on their service area coverage and to create a baseline for assessing broadband access demand, Oregon's Team, via One Economy will initiate and manage several survey/sampling efforts in the State. First, One Economy will initiate a Preliminary Survey/Sampling effort will be initiated assess demand for and access to broadband connectivity – both statewide (as baseline) and in unserved or underserved areas – broadband connectivity. This process is as follows:

- Create Oregon-specific poll to ask current broadband consumers to identify their current broadband status:
 - connectivity offerings (if known)
 - pricing options (if known)
 - interest in broadband service
 - willingness to pay for broadband service
 - opinion whether is broadband access is a luxury, nice-to-have, or a needed service
 - where does the consumer accesses the Internet



○ are

- consumers properly trained and comfortable with using the Internet
- is broadband content relevant to consumers

- Poll 300-1000 (statistically significant sample) in areas where anomalies exist statewide to establish baseline of consumer knowledge and statewide broadband availability.
- Poll 300-1000 rural citizens to quantify consumer knowledge and rural broadband availability as a baseline.

Verification by Provider –

The web-based data access tool provides the capability to service and providers to evaluate and sample their serviceability data and to ensure accuracy.

C. Accessibility

The collection of broadband service provider data will be reflected in the aggregate as a comprehensive state-wide broadband map that includes technology type and speed. The State's GIS resident experts will build, maintain and display the broadband map on a publically available State website. The Oregon Broadband Map will be interactive through a portal designed specifically under this project. Data identified through contractual agreements to be confidential will be excluded unless already publically available.

The User Interface will allow easy navigation by the user. Utilizing mapping display technology, the consumer, business or lawmaker will find their experience to be fast and complete. The tool will have advanced functionality built-in that supports options including but not limited to:

- Address Look-up Tool to identify location and options for service
- Full zoom and pan
- Up to date digital mapping of the State of Oregon
- Full incorporation of Anchor Institution and Points of Interest Data
- Satellite and Aerial Imagery
- Elevation and Topographical Mapping

The Broadband Mapping Portal will contain key content for the State such as:

- A Message From The Oregon Broadband Task Force
- Key Web Links
- Related News Item Links
- A Broadband Blog



- Maps and Reports
 - Contact Us
- Feature including an online form, 800 Number and contact email

The Oregon Broadband Portal's functionality could also be used to inform the State of Oregon regarding BTOP and BIP initiatives. This section of the Oregon Broadband Portal includes functionality that creates a means to solicit, receive and evaluate proposals focused on the following areas:

- Build-out of the Broadband Infrastructure in Unserved and Underserved Areas.
- Development of Programs To Increase Adoption of Broadband Services
- Development of Applications and Programs Aimed At Key Areas of Interest (Community Centers, Law Enforcement Agencies etc)

The Broadband Project Portal section within the Broadband Stimulus Mapping Portal will require registration. This will allow the State of Oregon and One Economy to monitor and approve entries, but it could also contain a database of potential partners who have interest in soliciting NTIA Broadband Grants. This tool could be incredibly beneficial in helping the State of Oregon accumulate, vet and process broadband providers.

D. Security and Confidentiality

To address data Security and Confidentiality, Oregon's Team will employ all of the security, access-control, authentication, and authorization services built into the software applications described above. Further, public access will be provided via mapping and data servers hosted outside of the One Economy firewall. The data accessed by the public, either from the Atlas or one of the public web services (i.e., WMS or WFS), will be stored within a Public Access database.

This database will be populated via an automated process, including appropriate filters, to prevent any company proprietary data or data covered by a non-disclosure agreement from being transferred from the Production data base to the Public Access database. Thus, even if security were breached on the public access server, it would not be able to disclose any proprietary data. In order to support flexible and secured information exchange to and from the non-public data repositories that will constitute the backbone of the system, the Oregon Team will deploy security appliances ("data guards") comparable to what currently is in use by various US Government agencies to protect classified information.

These guards will provide data obfuscation, conditioning, and pedigree labeling mechanisms to ensure compliance with data control policies between and among data domains. The guards will include a graphical user interface that enables the responsible implementation of business rules concerning data control policies directly onto the data streams, thus providing a way

State of Oregon
Broadband Data Grant
Narrative

for non-technical users to easily
configure the data-level
modifications required to ensure security, confidentiality, and information pedigree.

During this phase, and before any data services are released, requirements for data security and confidentiality (as stated by the broadband service providers and codified within any established NDAs) will undergo a detailed review in order to develop a robust security architecture and to deploy the necessary data guards. All data found within Oregon's proposed processing environment falls into one of the following categories:

Public Company Data –

Public company data is defined as data that any entity, either internal or external to the Oregon Team, can access. The disclosure, use or destruction of Public company data will have limited or no adverse effects on the Oregon Team nor carry any significant liability.

Proprietary Company Data –

Proprietary company data is any information that derives its economic value from not being publicly disclosed. It includes information that the Oregon Team is under legal or contractual obligation to protect. The value of proprietary company information to the Oregon Team would be destroyed or diminished if such information were disclosed to others. Proprietary company information may be copied and distributed within the Oregon Team only to authorized users. Proprietary company information disclosed to authorized external users must be done so under a non-disclosure agreement.

Confidential Company Data –

Confidential Company Data is information that is not to be publicly disclosed, regardless of its economic value. The disclosure, use, or destruction of Confidential Company Data can have adverse effects on our company and possibly carry significant civil, fiscal, or criminal liability. This designation is used much less frequently. It is used for highly sensitive information whose access is restricted to selected, authorized employees. The recipients of confidential information have an obligation not to reveal the contents to another individual unless that person has a valid need to know for the information. Company confidential information must not be copied without authorization from the identified owner.

Confidential Customer Data –

Confidential customer data is defined as data that only authorized internal entities or specific authorized external entities can access. The disclosure, use, or destruction of confidential customer data can have adverse effects on the Oregon Team and their relationship with their customers, and possibly carry significant liability for both. Confidential customer data is entrusted



to and may
the Oregon
which they have custodial responsibility but do not have ownership.

transit or is stored by
Team (and others) over



2.
FEASIBILITY

PROJECT

A. Applicant Capabilities

Budget Narrative – Data Gathering/Mapping

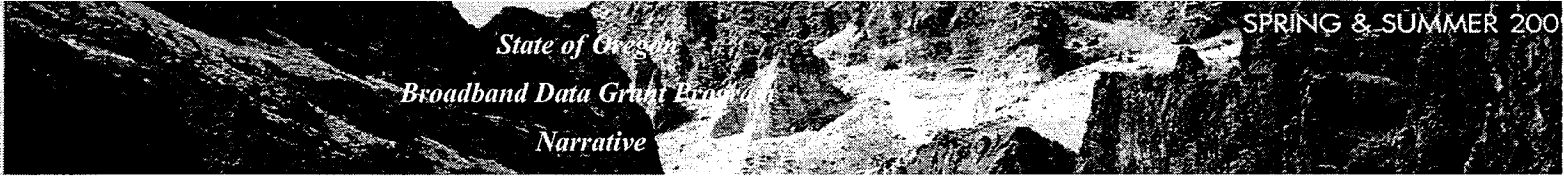
Detailed resource planning was done that considered work breakdown structure, the technical resources and equipment required to complete all tasks, and an analysis of the optimal number of parallel tasks that can be employed to meet the Program’s deliverable timelines. In order to ensure timely, effective and efficient data delivery to NTIA, about 75% of the resources were allocated within the first year of the project (with about 78% allocated within the first 3 quarters). Therefore the Team’s full capabilities are utilized to meet the expedited timelines required by the grant. Resource allocation is then balanced throughout the project to address incremental service offerings, public application access and web-based interfaces, and data updatability issues. Lastly, a slight increase of resources is provisioned toward the last 3 quarters in order to account for sustained transition of the processes and the platform to the State.

Human Resources Cost: First, technical requirements to accomplish each task were examined by the team experts. Each expert then provided a complete breakdown on positions and hours required to perform the tasks discussed within this narrative. Next, the information from all experts were compiled into a comprehensive plan, and cross referenced again for inter-dependencies. As a result, a detailed comprehensive cost structure was developed. The comprehensive cost structure was then checked against the timeline constraints imposed on the deliverables to identify optimal number of parallel resources required to meet the deadlines. As a result, an overall Project Plan was developed to identify the project’s Critical Path and derive concurrent human resources needed to meet the project milestones.

These resources were then mapped to the level of skills required for each task and to the cost for each skill set (including sub-contract personnel cost) to devise the budget for the human resources. Fringe Benefit rate of 30% was used, where applicable, to include healthcare, social security, workers compensation, vacation, and retirement.

Data Collection/Mapping Budget Spreadsheet

Category	Total Federal
Personnel	\$ 0
Fringe	0
Contractual	3,296,804
Travel	30,250
Equipment	178,330
Other	0



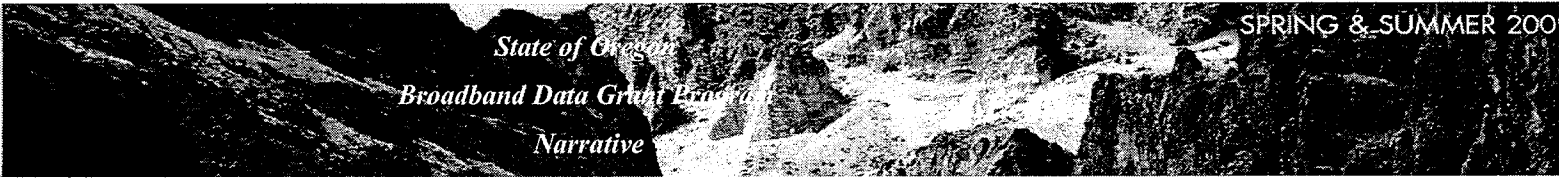
Sub-total Direct	\$3,505,384
Indirect	0
Mapping Budget	\$ 3,505,384

Hardware and Software Cost: Estimating computer hardware and software cost was performed using skilled and experienced GIS experts, and Network and Security Engineers. The team examined the data requirements (expected volume, update frequency, etc.), public access and reporting requirements, and the security and access control mechanisms, and estimated a platform that can accommodate tactical needs but that can also scale up in the future. Similarly, the team used existing GIS architecture deployed by the team to identify the server and client software components. Based on these, the team proceeded to estimate the hardware and software cost for the platform using the manufacturers’ published costs.

	Server	Qty	Price	Total
Database Server	Sun T5220 CoolThreads Server	1	\$ 28,000.00	\$ 28,000.00
	8 Core / 64 Threads @1.4 GHz Sparc T2			
Accessories	SG-XPCIE1FC-EM4 FC-AL HBA	2	\$ 1,000.00	\$ 2,000.00
	SESX3G11Z 300GB SAS 10K Hard Drive	4	\$ 625.00	\$ 2,500.00
	9733A-Z Optical Cables	4	\$ 45.00	\$ 180.00
Storage	Sun Storedge 2540 Disk Array	1	\$ 16,850.00	\$ 16,850.00
	3.6 Terabytes 12 x 300GB 15K SAS	12	incl	
Map & App Server	Sun T5120 CoolThreads Server	2	\$ 15,000.00	\$ 30,000.00
	4 Core / 32 Threads @1.2Ghz Sparc T2			
Web Server	Sun Fire X2200 M2 Server (2x3.0Ghz)	1	\$3,200.00	\$ 3,200.00
	500 GB SATA Drive	2	\$300.00	\$ 600.00
Shipping for Above				\$ 450.00
	Hardware Subtotal			\$ 83,330.00
	Software	Qty	Price	Total
DRBMS	Oracle Licensing (multiplier .25 x cores)	2	\$40,000	\$ 80,000.00
Map Server	ArclMS	1	15000	\$ 15,000.00
	Software Subtotal			\$ 95,000.00
Hardware and Software Cost				\$ 178,330.00

Travel Cost: Similarly, number and frequency for travel estimated based on the Project Plan were used to derive the cost based on the federal government’s published rules and regulations.

Intra-State



Monthly partner meetings are planned during the 1st quarter after project initiation. Trips will be taken on a quarterly basis for the 2nd through 4th quarters and once every 2 quarters for the balance of the project. Estimated number of trips for partner meetings: 11 trips @ \$250 per trip = \$2,750

Domestic

Monthly partner meetings are planned during the 1st quarter after project initiation. Trips from Washington D.C. to Oregon will be taken on a quarterly basis for the 2nd through 4th quarters and once every 2 quarters for the balance of the project. Estimated number of trips for partner meetings: 11 trips @ \$2,500 per trip = \$27,500

Indirect Costs: None applied for.

Matching Contributions: Non-federal matching contributions are in-kind contributions including the Oregon GIS Agency’s donation of project-required tangible data set, imagery, and hardware and software to the Program. Data set values and other costs were estimated based on the current market value. Also including as in-kind is the provision of Oregon GEO personnel throughout the scope and timeline of the Program.

State Provided Data/Personnel		
Oregon GEO	Multiple layers of GIS data (see budget narrative mapping)	\$1,195,589
	Total Product In-kind	\$1,195,589

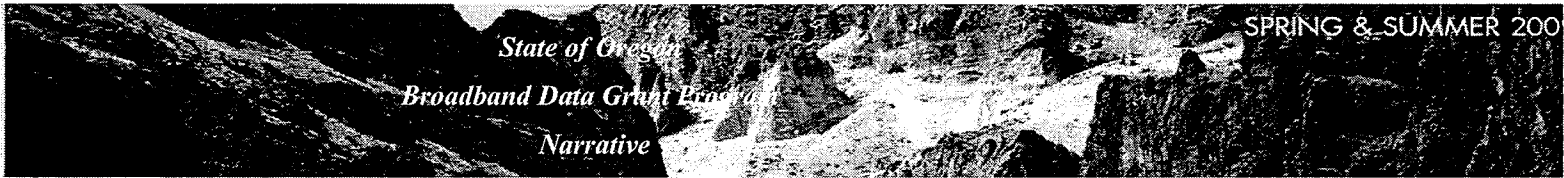
Budget Narrative - Planning

Project Management:

Management of the deployment of team members, data analysis, and report delivery. Managed by the Regional Director - \$75,000

Digital Connectors Training and Deployment Costs:

The Digital Connectors will be chosen, trained, and focused on gathering data. Equipped with laptops and a custom application they will have the most efficient means to aggregate and transmit data. Their training will involve the necessary knowledge and skills to conduct these surveys, but more important, it will prepare participants to provide leadership and inspire interest in the project. The costs associated include the costs for their training sessions, as well as for their “supplies” which are netbook/portable data aggregation devices, and a Digital Connector t-shirt. The Digital Connectors also receive a cash stipend in addition to their free hardware that they use



during the program. The program is specified for 200 Digital Connectors, but can be scaled down a smaller number with each Connector receiving a greater stipend, but this can be reassessed at the identification of the initial map highlighting need areas. - \$200,000

Regional Staff for Community Outreach and Hardware Acquisition: Staff member will be deployed to work with the Broadband Opportunities Coalition and community organizations to setup town hall meetings, meet with community stakeholders and aggregate data. In addition, this staff member will coordinate the affordable hardware acquisition program. - \$56,374

Digital Connector On the Ground Support and Supplemental Training:

Mid-level staff members will be working with Digital Connectors in the field to ensure that the program is being run effectively and properly. - \$25,000

Report Development and Creation:

This effort focus intensely on ensuring that the data collected is efficiently ingested into the core Broadband Mapping dataset and that specific outputs are generated to provide data analysis, to create strategies and develop recommendations, and to track success. In addition to the writers, this includes Senior One Economy Staff time. - \$40,000

Operating Expenses and Travel Costs:

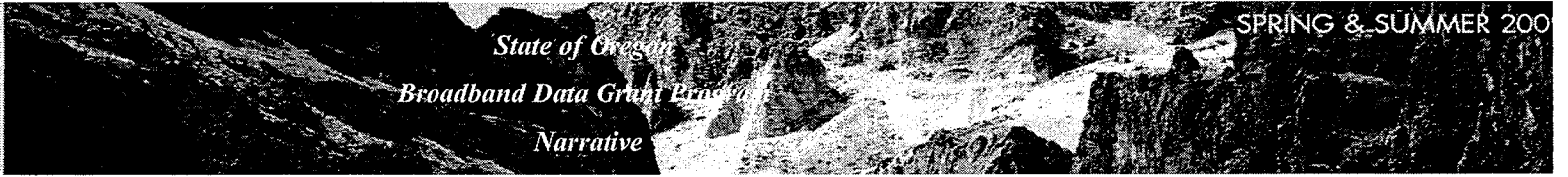
These costs are to facilitate the general operating expenses for the One Economy regional full and part-time staff members such as travel and data exchange from the portable devices to the BroadMap/One Economy server. – \$21,500

Indirect Rate:

One Economy has a federally negotiated and agreed rate of 19% of activities, calculates the costs of services above (418,874) and multiplies by .19 to achieve an indirect cost of \$80,586.

Planning Budget Spreadsheet

Category	Total
Personnel	\$ 152,874
Fringe	31,000
Contractual	40,400
Travel	8,000
Equipment	0
Other	125,000



Sub-total Direct	\$ 420,000
Indirect	80,586
Planning Budget	\$ 498,460

20% Non-federal Match

The State of Oregon’s broadband mapping services represents an in-kind match contribution of \$1,195,589 (23% of total mapping and planning project cost). Should NTIA find that the in-kind match sources are insufficient to meet the prescribed 20% match requirement, Oregon stands ready to supplement any deficiencies with in-kind and/or with a cash match.

B. Applicant Capacity, Knowledge and Experience

The implementation team represents a balanced public-private partnership composed of distinguished individuals, State Resources, and private industry experts and organizations with vast capabilities in broadband and telecommunications technologies, Geographic Information Systems (GIS) and data mapping, information systems engineering and implementation, and web-based software and enterprise data management applications.

The Team includes a wide range of collaborating State agencies that hold a considerable inventory of detailed state-wide data necessary to accomplish the tasks. The OPUC will provide the oversight and will serve as the main interface to the broadband service providers in the state for collecting the data and negotiating the terms of access, as necessary. The implementation Team is led by Bryan Conway of the OPUC.

On behalf of the State of Oregon, the Department of Administrative Services (DAS) Geospatial Enterprise Office (GEO) will house the data, host the solution, and sustain the program beyond the scope of the Grant. GEO is responsible for coordination of geographic information systems (GIS) activities of the state government enterprise and federal agencies, local governments, non-profits, and businesses in Oregon.

GEO provides public and government agency access to a large quantity of shared geospatial data through its administration of the Oregon Geospatial Data Clearinghouse, taking advantage of the hosting and network services of the State Data Center. GEO’s navigatOR program is a statewide, multilevel initiative for maintaining and sharing geographic data and services. It provides public access to current geographic information with nothing more than a Web browser. A unique partnership among all government agencies in Oregon facilitates the compilation and sharing of the data, while technology experts assemble and manage the computing infrastructure required to deliver it. navigatOR supports decision making and field activities for natural resource management, social service provision, public safety and emergency management and response, and economic development statewide.



The GEO team is comprised of experienced state and national experts in GIS and statewide planning, coordination, project management and oversight, and the field of GIS. Sean McSpaden, Oregon's Deputy State Chief Information Officer and Cy Smith, Oregon's Geospatial Information Officer will provide leadership and direction of GEO's resources throughout the project in support of the OPUC and the broader Oregon Team. Sean has extensive experience in statewide IT strategy development, IT project oversight, and coordination of Oregon's state agency IT community. Further, Sean has served on Oregon's Statewide Interoperability Executive Council in a variety of capacities, including participation in the inventory and analysis of Oregon's public safety wireless infrastructure and the development of a business case and implementation strategy for the replacement of that infrastructure by February 2013.

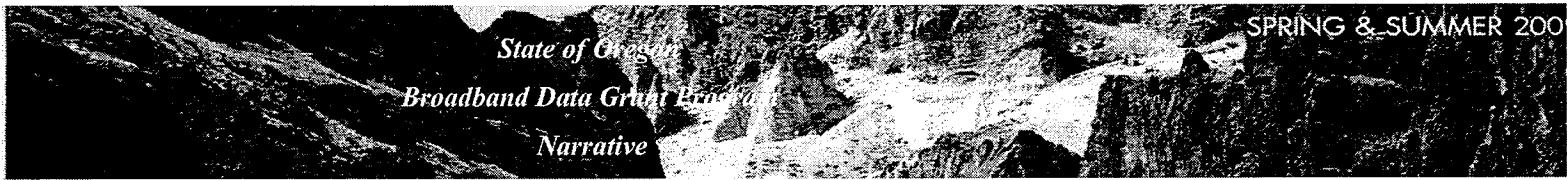
Cy Smith is Immediate Past-President of the National States Geographic Information Council (NSGIC) and has over 25 years experience in developing and managing GIS programs. Cy is the President elect for the Urban and Regional Information Systems Association (URISA) and is the current chair of the Coalition of Geospatial Organizations (COGO). Cy serves as Oregon's Geographic Information Officer and manages GEO.

Ed Arabas serves GEO as a Senior Policy and Operations Analyst specializing in geographic information systems (GIS) technology and architecture, with over thirteen years of experience in the public sector. His work has focused on enterprise architecture, transportation planning, data management and the integration of enterprise data systems using GIS. Ed has provided GIS planning and design guidance for state and federal GIS coordination efforts, state agency GIS implementations, and local government GIS data creation and modeling efforts.

Further expertise in Geographic Information Systems (GIS), data mapping and processing, and public applications access will be provided by BroadMap. BroadMap has proven and extensive capabilities in data management and GIS, and operates a vast inventory of baseline data, such as sub-census population data, parcel-level tax maps, community anchor institution locations, and other data sets critical to the success of the effort. BroadMap also has expertise in handling large volumes of data, managing sensitive information access, and a wide range of web-based GIS solutions for public access to baseline and near-real-time information for user-generated product automation.

Comment [EPA2]: Shouldn't we include additional named Oregon Team members from PUC, OECD (Chris Tamarin), One-Economy, BroadMap, Sanborn, etc.? Alternatively, we could decide to step back to the organizational level where GEO is concerned and simply describe the organization as opposed to individual contributors (cy, sean, ed). That might align the text better across the TEAM and provide room for text on Sanborn, OPUC, and OECD.

Broadband specific domain expertise will be supplied by BroadMap and their national coalition (including One Economy and New America Foundation). BroadMap has extensive experience in digital mapping and Broadband serviceability data (such as availability, type of service, and speed of connection, pricing, and promotional data). The team has over 150+ person-years of experience in the digital mapping business working for market leaders including Etak, GDT and TeleAtlas prior to joining BroadMap. Their capabilities are far reaching in the GIS space with expertise in geo-coding, GIS tools, mapping, spatial and relational databases and quality control. BroadMap has extensive experience in the development of State Mapping



solutions. Their team was the first to launch a national Broadband Serviceability engine in 2000 that aggregated together all of the major Broadband carriers into a single, web based engine that was utilized by major retailers including Circuit City and CompUSA.

BroadMap's Leadership Team has held executive positions at global digital mapping companies, global telecommunications carriers and multi-national consumer electronics firms, and the coalition headed by BroadMap offers end-to-end expertise in broadband service planning at a large scale and has access to a variety of national, interstate, and intrastate broadband data that are important to the Program.

One Economy's Leadership Team has held Executive positions at global digital mapping companies, global telecommunications carriers and multi-national consumer electronics firms. One Economy offers end-to-end expertise in broadband planning at a large scale, and has access to a variety of national, interstate, and intrastate broadband data that are important to the Program. Together, the above team of the GEO, BroadMap, One Economy, and New America offers vast capacities in GIS, broadband domain expertise, data processing and automation, systems engineering, and secure (but open) public access application and data services expertise for the implementation of a comprehensive solution that meets or exceeds the Grant requirements within the stated timelines.

Additionally, One Economy has over 150 years of digital mapping and serviceability experience, including development of core platforms that allows for automatic and manual conflation of data from over 50,000 sources nationwide. These sources of data included large imports from the Department of Transportation and InfoUSA (Geo-referenced Points of Interest Data) and others to individual user street geometry corrections. The ability to manage such diverse input mechanisms (including other diverse sources of data explained earlier) attest to strength of our solution. We will manage the Broadband serviceability in the same manner.

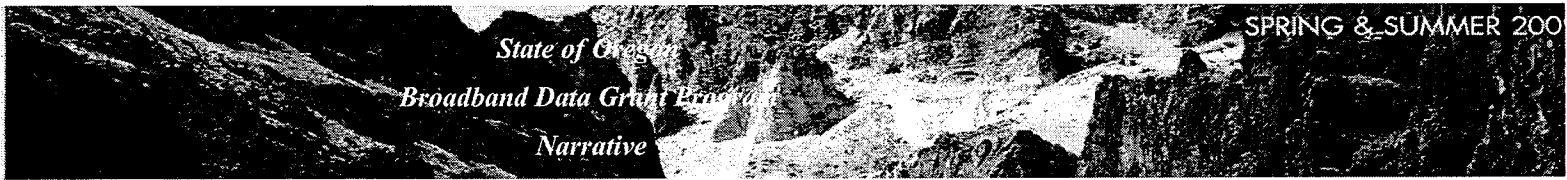
Core Team Personnel and Skill Categories

- o **Special Assistant to the CEO of One Economy** will be responsible for Broadband Planning project management, creation of user experiences, & external partner coordination.
- o **Program Manager** will focus on oversight of project management application, development and implementation of methodology, guides, best practices and metrics.
- o **Technical Project Manager** will focus on assisting with managing the day-to-day details of the technical execution and is also specifically tasked with ensuring high quality standards are met.

- **Database Engineer** and **Requirements Engineer** will create and design RDBMS database model to store Broadband maps, demographic data, broadband assets and services. Also responsible for the creation of collection requirements and specifications for all databases.
- **Database Administrator** will manage and coordinate project database services.
- **GIS Systems and Mapping Engineer** will be responsible for deploying the selected GIS suite of tools for production; write required production scripts and tools to interact with and or to incorporate other 3rd party sources.
- **Applications and Tool Engineer** will be working with Google KML and Microsoft.net / Bing environments to integrate 3rd party data and applications on top of Google Earth or Microsoft Virtual Earth.
- **Geo-coding and Conflation Engineer** will be developing algorithms and tools to perform geo-coding and reverse geo-coding to assist with geo-coding functionality. Will manage geopolitical and postal structures.
- **Sr. Quality Control Manager** will be responsible for the overall quality metrics which includes measurement criteria, definition of quality requirements, development of quality tools, and quality & certification processes. Responsible for conducting and executing quality control / assurance programs to ensure that all input data sources and generated map data meet quality control specifications and requirements.
- **Senior Web Designer** will be responsible for Broadband Portal development; integration with Google maps or MS Virtual Earth and One Economy content to render broadband availability and serviceability result.
- **Cartographic Specialist** will be responsible for the production aspects of street map data manipulation, X boundary generation, creation and aggregation, geo-referencing 3rd party data, such as demographics data and serviceability data to highly accurate street map data. Also responsible for the formatting and preprocessing of 3rd party input sources to meet preproduction specifications and requirements.

Extended Team

One Economy plays a major role in the supply and demand-side “Planning” phase for this Program, bringing resources of 90 full-time employees at 10 offices worldwide. One Economy uses innovative approaches to deliver the power of technology and information to rural and low-income people. In these efforts, One Economy has worked with a wide range of partners including CTIA, NCTA, Microsoft, Google, Cisco, Allstate, the Ford Foundation, and others.



In addition to involvement in broadband access programs, One Economy has a track record of delivering programs that result in broadband adoption. The resulting effort will be a comprehensive supply and demand side solution that contains the most comprehensive and verifiable broadband data set and map available for the State of Oregon.

One Economy will be working with a selection of interest group stakeholders that represent a wide range of interests. The stakeholders include:

- **The New America Foundation** is a nonprofit, nonpartisan public policy institute. Through its Wireless Future Program and Open Technology Initiative, New America pursues a mission of ubiquitous and affordable broadband connectivity for all.
- **Broadband Opportunities Coalition** – Major national civil rights organizations have come together with One Economy to focus on addressing policy barriers that have slowed broadband growth, and promote the need to increase the adoption and use of related technologies to create greater wealth and new job opportunities.
- **Schools, Health and Libraries Coalition** – The coalition promotes connecting anchor institutions with high-capacity broadband to provide the greatest benefits to the disadvantaged and other unserved and underserved segments of the population.
- **BroadMap L3C** is a digital mapping and data aggregation company based out of Michigan. They have extensive experience in digital mapping. Their team has spent over 150+ years working for and with companies in the space including eTak, Geospatial Data Corporation and TeleAtlas. They have extensive work in the Broadband serviceability area, assisting in the creation of a nationwide Broadband serviceability tool in 2000.

3. EXPEDIENT DATA DELIVERY

The State of Oregon and its partners have the ability to reach all the timelines set forth by the NTIA. The plan is to utilize a three stage process to launch multiple versions of the solution, as summarized in the Table below. In order to meet the timelines, the Team has allocated considerable resources within the first two quarters of the project. These resources can assist with data collection, processing, and automation, as applicable.

Initial Set of Data on November 1, 2009

The deliverable of a substantially complete set of data, as *substantially complete* is defined in the Program, with provider supplied data as required in the Technical Appendix by November 1, 2009 is beyond the reach of the State's proposed effort. However, the Team is proposing to provide alternative baseline data using the latest raw Form 477 Data that the FCC releases. The keys to this first data set are:

- The Ingestion of the Raw Form 477 Data.



- All Data Licensable Sources
- Integration of Core Digital Mapping.
- Ingestion of Demographic Data
- Core Points of Interest and Anchor Institution Data

The Team will then be able to assist the state in developing its initial assessment of unserved and underserved Broadband areas and their ranking based upon agreeable demographical attributes. During this period, the Team will also begin to dynamically integrate into the carrier systems.

Project Timeline	
Tasks	Time frame
Acquisition of hardware, software and data sources	20 Days
Initial configuration, integration, implementation, data ETL, output definition	30 Days
Generation of initial analysis and results	45 Days
Refinement of analysis and results, plus integration of additional sources & capabilities	4 Months
Completion of the development of dynamic mapping platform. Full integration of all carrier serviceability data and third party source data.	6 Months

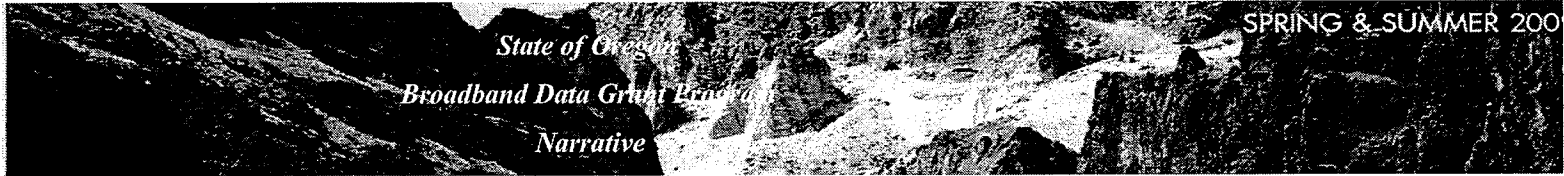
Table 1 - Project Timeline for Substantially Completed Data

Substantially Complete Set of Data By February 1, 2010

The secondary release of data will be a more thorough perspective of broadband availability. Along with the data that was ingested and inflated in the first release, additional data sources will be incorporated into this release. Those sources include:

- First Generation of Real-time Broadband Provider Data
- Quality Control Release of Initial Anomaly Batch of Data
- Broadband Data Sampling interface will be launch to allow Carriers data sampling
- Ingestion of first release of wireless spectrum data
- Speed Test Ingestions
- Release of 1st Generation of State, Regional and Municipal Data Ingestion

This release provides data that meets or exceeds the definition of *substantially complete set of data*.



Complete Set
2010

of Data By March 1,

This final launch will include the completion of the following areas of development:

- Launch of All Broadband Provider Data
- Finalization of Development of Ingestion Process To Manage All State, Regional and Municipal Data.
- Full Automation of Wireless Spectrum and Serviceability Data
- Crowd Sourcing Ingestion Tool Completed

Access Applications Going Forward

Finally, the Team's experience in automated processing, ingest, and publishing data will be used during the course of the project to ensure timely access to accurate and updated information for various constituents (and according to the security guidelines). Activities here will include:

- Continual fine-tuning of the automated data processing and ingest;
- Developing web-enabled and web-accessible applications based on existing models;
- Defining and releasing standard web-enabled "feature" and "map" services; and
- Developing automated processes for data export and reporting, including those required to meet the "updatability" (and associated periodic reporting) requirements by NTIA.

Data delivery requirements are supported by the Team's capacities, knowledge, and experience in data collection, automated processing, and existing applications and methods for data publications which are actively being used to support a number of critical services. The same experiences will be used to offer optimal data delivery options for this Program.

4. PROCESS FOR REPEATED DATA UPDATING

The data updates and maintenance phase will start initially as soon as data inventory is built, but will increase as the platform ages. To address the long-term data updatability and accuracy issues, several approaches will be taken, depending on the nature of the data sets.

For baseline data, the information exchange GIS services as well as the web-based applications, existing processes for periodic updates will be leveraged. Additionally, and as appropriate, the Team will take maximum advantage of data services from the original sources (such as obtaining the transportation network from commercial mapping partners, such as Navteq, DOT, demographic data from US Census, and base imagery from Yahoo!, Bing, or Google, etc.).



For the broadband data sets, to the maximum extent possible and according to predetermined specifications, the Team will work to establish bi-lateral data exchange agreements between the GEO (or designated State Agency) as the trusted owner of the platform and the data providers. The data specifications will then be used to periodically automate processing and ingest of data and metadata. The processing will also include error report generations that can be used to identify inaccurate or incomplete data sets.

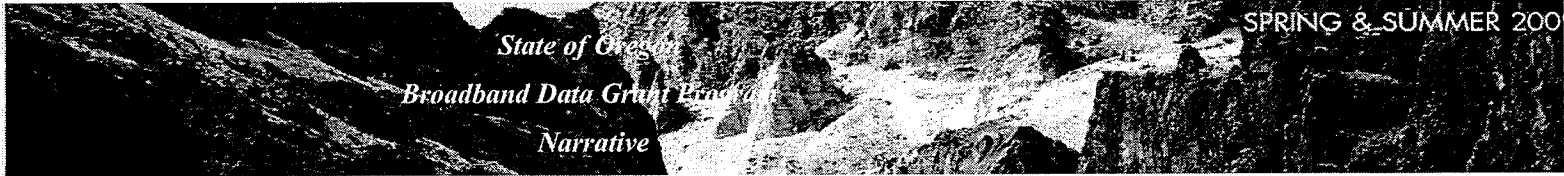
A web-based data access tool will be provided so that data providers may evaluate and sample their serviceability data and to ensure that their data are accurate and up-to-date. While mapping all available carrier data and other serviceability data will be the initial and immediate priority, a second phase of data collection can cost-effectively supplement and verify this data with survey data collected directly from consumers. The collection and layering on of consumer experience data can be done in two basic ways: First, and most cost-effectively, it can be done in volume online by “crowd-sourcing” data from automated ‘speed tests’ that individual users can run and receive immediate feedback for their own use as an incentive. Viral outreach efforts can encourage tens of thousands of users to ‘take the test,’ receive a ‘report card,’ and as a byproduct add to the automated aggregation of consumer experience data. Second, resources permitting, surveys of small business, residential and community anchor tenant broadband users can collect richer profiles of actual user experience and preferences.

Specifically, the enterprise geospatial database (EGDb) production and updating process of the database is an ongoing process that provides the latest and freshest data content for the broadband service area delineation effort. The establishment of Oregon’s Master Address Repository and associated data stewardship agreements across Oregon’s various jurisdictional boundaries will significantly enhance Oregon’s ability to ensure continual address data accuracy and currency over the long term. The frequency of map/content updates varies depending on the type of data source. For example, the detailed street network shall be updated on a monthly basis. Broadband coverage and serviceability updates can range from daily for user-generated content to semi-annual for FCC Form 477 data.

The dynamic map database architecture allows for a mapping product server to be utilized for product generation and on-demand query access by any entity at anytime producing results and user experience similar to Google Maps or Microsoft BING. The product server will be refreshed on a daily basis from content updates made to the core database.

To the extent possible, the procedures developed for initially populating the Broadband database will be automated and scripted such that they can be run repeatedly throughout the 5 year grant period and beyond. The update process will involve:

- Obtaining updates from the broadband service providers (including secured service-based processes);

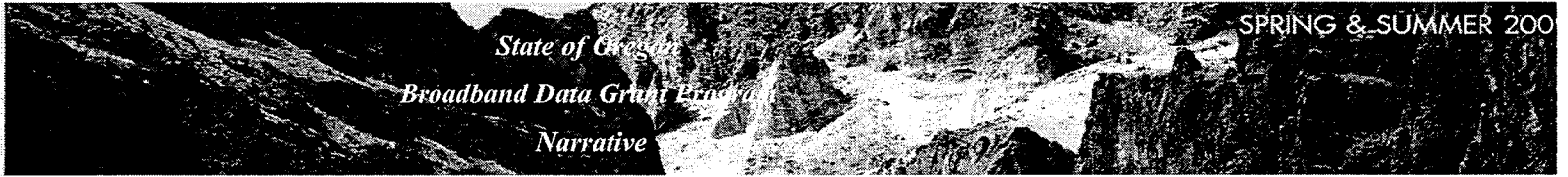


- Using pre-defined data schema and ETL processes to load Broadband Service Provider data into the Staging Area Database, performing basic pre-processing data consistency checks and data normalization, etc.;
- Periodically updating data layers associated with Community Anchor Institutions, a task which is already part of BroadMap's standard EGDb processes;
- Processing and transforming Staging Area and EGDb-stored data into the Broadband Production database, performing necessary geocoding, conflation, spatial editing and spatial overlay/analysis tasks as outlined above;
- Running scripts to prepare updated reports and datasets for NTIA; and,
- Running scripts to prepare public access data, passed through appropriate filtering steps to strip-off (or generalize) proprietary and confidential data.

Furthermore, the Oregon Team will ensure updateability by including the elements below:

- All data licenses are annual licenses and will be renewed each year throughout the grant contract term.
- Data sourcing and quality control teams will continue to work to expand the core data sourcing list to include newly licensable data as they become available.
- Quarterly updates of core digital maps which allow us to do additions and deletion in an automated manner.
- Agreements with the state, regional and municipal agencies to supply us with relevant data updates on a regular, periodic basis (monthly or quarterly).
- Key demographic information will be ingested as additions and deletions to provide a simple format to update anchor institutions, small- medium - and large-sized businesses, health care facilities and educational institutions.
- We have budgeted for ongoing surveying to allow for replicable verification of source and service provision data throughout the grant's five year term.
- All non-disclosure agreements with the service providers will extend for the period of our agreement and will be transferable to the State of Oregon.

Comment [So0D3]: Will the OPUC not be original signators for these NDAs?



With these processes in place
Data Set Updates containing
current data within three months of submission will be provided to NTIA on September 1, 2010,
March 1 and December 1 of 2011, 2012, 2013, 2014 and March 1 of 2015.

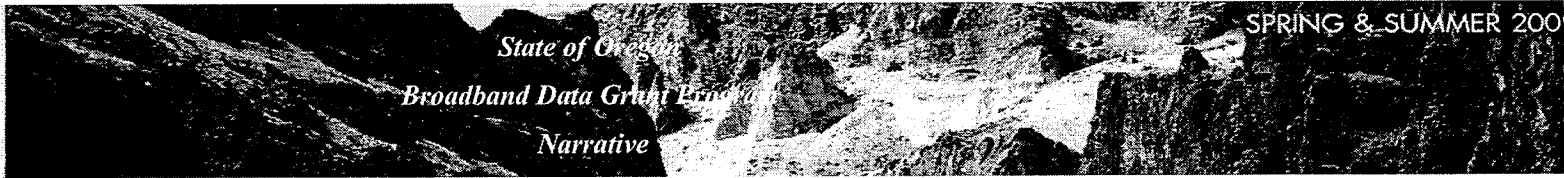
5. PLANNING AND COLLABORATION

Effective outreach to collaborators and key stakeholders, “best practices” for project management, and Key Performance Indicator (KPI) evaluations will all be used to ensure success in this effort. Reporting will also be utilized to assure transparency. Each of these approaches is described below.

A. Collaboration

The Oregon Team already has a very wide reach to and existing relationships with important stakeholders and collaborators across the State. It will be critically important to build consensus for the initiative. Our project team will include the following stakeholders within and outside of the State of Oregon:

- Oregon Public Utilities Commission – Designated Lead Entity
- Oregon Business Development Department
- Oregon Department of Administrative Services (DAS)
- Oregon Broadband Advisory Council
- Oregon Geographic Information Council (OGIC) member agencies
- Confederated Tribes of Oregon
- Oregon Department of Transportation
- Oregon Department of Education
- Oregon Department of Human Services
- Oregon Water Resources Department
- Oregon Watershed Enhancement Board
- Oregon University Systems
- Oregon Community Colleges and Workforce Development Department
- Oregon Department of Geology and Mineral Industries
- US Geological Survey
- One Economy, BroadMap, New America – Broadband Experts and Implementation;
- Other key stakeholders and collaborators include:
 - Broadband Service Provider(s)
 - Schools, Health and Libraries Coalition Representative;
 - Emergency and Disaster Management communities;
 - County GIS, Land, Public Works and Cartographer Offices
 - League of Cities
 - Association of Oregon Counties



As previously noted, the Oregon Team already has working relationships and data sharing agreements with the GIS Community across Oregon at the federal, tribal, state, and local levels. In addition the Oregon Team has working relationships with the broadband service providers, will communicate the Program objectives to the major providers, and will request their commitment to the process. And finally, the Oregon Team has access to a wide range of national resources that can augment the Team's capacities and collaborative circle. The Oregon Team will also be extending and formalizing new partnerships with Oregon Broadband service providers and other key stakeholders, as appropriate.

Additional information on project planning and collaboration is contained in detailed in the Processes and Functions Supplement and is informative for both the proposed data gathering and broadband planning efforts.

B. Broadband Planning Proposal

Broadband planning is needed to drive and support critical infrastructure funding and policy decisions by corporations and governments in Oregon. Broadband is an engine of economic growth and a collaborative Oregon broadband policy will keep the state competitive in a global economy and foster valuable urban-rural business and social relationships. Oregon business, health care, education, government, public safety and the public at large depend on broadband infrastructure. The telecommunications infrastructure of a state, county, city or town determines its attractiveness to businesses, institutions and residents and the type of industrial and commercial economic activity it can support. Competitive high-speed access to the Internet and broadband telecommunications networks is essential for Oregon's institutions, businesses and individual citizens.

Problems to be Addressed

The Oregon Broadband Planning Project will combine the comprehensive supply-side view of broadband deployment and level-of-service availability with demand-side data on the adoption and utilization of broadband services in the state. This data will enable the development of a coordinated Broadband Plan.

- *Broadband Availability:* The project will utilize the specified supply-side data collected for Oregon Broadband Data Collection and Mapping Project to conduct an effective gap analysis of broadband service quality and availability.
- *Barriers to Broadband Adoption:* The project will collect demand-side data, with a focus on unserved and underserved communities to identify and understand the barriers to broadband adoption. A Broadband Planning Report will be prepared from this data that will include comprehensive and highly localized short, medium, and long term

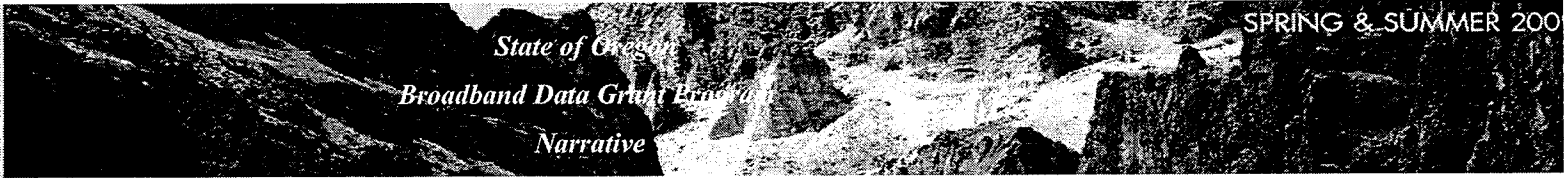
State of Oregon
Broadband Data Grant Program
Narrative

recommendations for increasing Broadband adoption and utilization throughout the state. Targeted action will then be taken with periodic monitoring of results. The Plan will be adjusted based on prior success.

- *Computer ownership and access programs:* The project vendor has extensive experience and a record of success in creating programs to increase broadband adoption and computer access among unserved and disadvantaged communities which will greatly assist Oregon in increasing computer access and use in targeted areas. The project vendor will also establish an affordable hardware acquisition program for the underserved and unserved communities in Oregon. Results will be monitored through the evaluation of broadband adoption rates of targeted communities.
- *Small Business Adoption:* The project will collect demand-side data on the adoption and utilization of broadband by small businesses, the state's greatest source of job creation, to assess barriers to adoption and identify unmet needs
- *Local Community Engagement:* Oregon has an established history of local "grass roots" community involvement in broadband telecommunications issues. The recently created Oregon Broadband Advisory Council will convene the state's local organizations and consortia to make recommendations for the broadband plan and to identify and resolve broadband issues. The project vendor will enlist the support of the Broadband Opportunities Coalition which consists of the National Association for the Advancement of Colored People, League of United Latin American Citizens, National Urban League, National Council of La Raza, and the Asian American Justice Center, who will all volunteer resources and access to ensure that all communities are included.
- *Service Provider Engagement:* Oregon has an established history of dialogue with telecommunications service providers on broadband issues through the Oregon Telecommunications Coordinating Council. The project will engage public and private sector service providers through the new Oregon Broadband Advisory Council to make recommendations for the broadband plan and to identify and resolve broadband issues.

Proposed Solution – Broadband Planning Process

Through information gathering, planning and collaboration, Oregon can facilitate and stimulate the activities required to bring broadband to all areas of the state, rural and urban. Through planning and collaboration, the deployment and usage of broadband will be increased and Oregon's economy and quality of life will be improved.



input will be solicited in the assessment of broadband opportunities and development of a plan to address gap analysis findings. These stakeholders include but are not limited to:

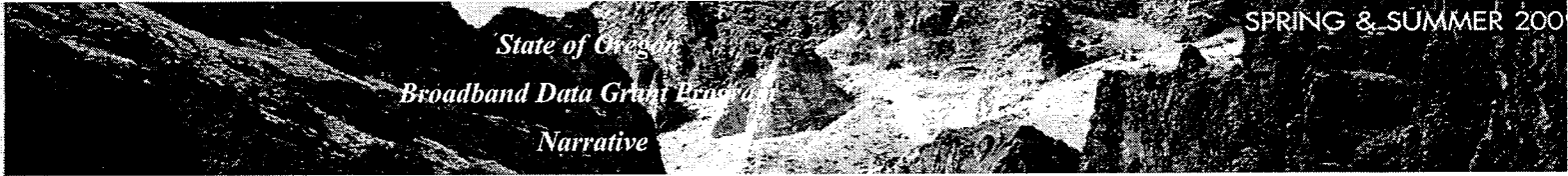
- State residents
- Healthcare providers and consumers
- Pre-K-16+ educators and students
- Government (includes cities, counties, state agencies and Tribal Sovereignities)
- Libraries
- Public Safety agencies (law enforcement, fire, emergency medical technicians, public health)
- Community-Based Organizations
- Seniors
- Business Sectors
- Underserved populations, i.e., minorities, persons with disabilities, low income, seniors
- Telecommunications service providers (telephony and broadband)
- Potential investors for broadband infrastructure/services and economic development

Proposed Solution – Personnel

Consistent with Oregon’s approach on leveraging technology to promote economic growth, the project vendor will create and develop a customized “Digital Connector” program for this project. Digital Connectors are a task force, who live in underserved areas, who are exposed to the benefits of information technology through a comprehensive curriculum, and further trained to be technology ambassadors in their communities. The main responsibility for the Digital Connectors in this program will be to aggregate survey data at the street level, conduct and gather data through town hall meetings, and to present communities with the project vendor’s affordable hardware acquisition program. The energy and commitment of Digital Connectors have proven to be unmatched in terms of their willingness to train and assist underserved populations in technology use, as well as serve as living testaments to the power of technology and its ability to change lives.

Oregon will work with the project vendor on a team of community and research experts to ensure expedient and quality delivery of the data analysis and report generation. The project vendor brings eight years of broadband adoption blueprint development experience and verified success as noted through independent studies by SRI International and the Knight Foundation. Supporting its program manager, the project vendor will leverage the insight and knowledge of its Director of Research/Evaluation/Documentation, Chief Program Officer, Head of Access Services, Head of Public-Purpose Media, and Head of Community Planning.

Timeline



*November
Need*

*2009 - Identification of
Counties*

As Oregon prepares the first deliverable map to the NTIA, the project vendor will assess and prioritize the counties that show the lowest levels of service availability and broadband adoption. The program manager will assemble the Digital Connectors based on this assessment, with higher concentrations being placed on the communities with the greatest need.

May 2010 - Launch of Digital Connectors program

The Digital Connectors will undergo their training curriculum. Beyond the leadership curriculum, they will learn the process of data aggregation and be trained to aggregate demand data at the ground level.

August 2010 - Beginning of Data Analysis and Report Generation

The team will ensure consistent data aggregation, quality and insightful data analysis, and the generation of the strategic recommendations document.

October 2010 - Report Delivery

The final Digital Inclusion / Adoption Blueprint covering data findings, key insights and methodologies to achieve increased adoption along with a sustainability plan for the programs designed to ensure ongoing increases in broadband adoption and economic growth will be delivered to the state.

Anticipated Outcomes of the Project

This project will have a positive impact on the residents of the State of Oregon. It will provide independently derived quality data and analysis for broadband infrastructure investment decisions. It will identify opportunities for rural and urban business development, jobs, access to quality healthcare, and educational opportunities. Seniors and persons with disabilities will benefit with increased access to telework, healthcare and reduced social isolation. The deployment and utilization of telecommunications services will reduce the reliance on traditional forms of transportation and commerce by moving information – not people, and improve the economic prospects of Oregonians living in isolated communities.

The primary goal of the project is to facilitate the deployment of broadband services to all communities, rural and urban. The project will profile and aggregate user demands, engage providers, seek to reconcile/coordinate state, county and municipal policies and provide actionable information to entrepreneurs. The project will determine the size and location of unserved and underserved areas in Oregon and offer specific recommendations to close the gaps.

Sustainability

*State of Oregon
Broadband Data Grant Program
Narrative*

Oregon sees this project as one that will continue to evolve and grow as it acquires updates regarding the state of broadband. It will continue to develop recommendations on how to increase broadband adoption and resolve conflicting priorities in underserved and unserved communities. The project vendor commits to acquiring additional resources to ensure continued development of the program. The project vendor has received over \$8 million to date for the development of planning and broadband adoption programs from the private sector.

REPORTING

As the main “awardee” and administrator, the Oregon PUC recognizes that pursuant to OMB Memorandum M-09-21, it is ultimately responsible for the reporting of all data required, though it may delegate certain reporting requirements to sub-awardees. In turn, as the sub-awardees, the Oregon Team acknowledges the guidelines and requirements set forth by the Federal Funding Accountability and Transparency Act of 2006 and OMB Requirements for Implementing Sections 1512, 1605 and 1606 of the Recovery Act, and provisions regarding “Buy American,” wage rate, and separate identification of funds. Oregon PUC will ensure compliance with all federal reporting requirements by all sub-awardees.