



# Enhancing Broadband in Washington

Effective Means to Improve Connectivity and Awareness



**Report of the  
Governor's  
Broadband  
Advisory Council  
July 17, 2009**





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## Letter from the Chair

July 17, 2009

Dear Governor Gregoire,

I am pleased to provide the enclosed report of the Governor's Broadband Advisory Council providing background information and recommendations on funding of potential broadband initiatives in Washington using federal stimulus monies. The report reflects the consensus views of a diverse group of policy experts dedicated to ensuring Washington's position in an increasingly online economy and society. It also takes into account the comments, testimony, and feedback received from a number of additional parties with interests in the state's broadband policies and its response to the federal program.

I also wish to acknowledge the contributions of staff, who spent considerable time and effort in drafting this report; Brian Thomas, Senior Telecommunications Policy Advisor for the Washington Utilities and Transportation Commission; Angela Wu, former staff to FCC Commissioner Chong, for her work on Appendix B; and the Communications Division at the Department of Information Services, for providing the composition and relevant graphics for the report.

On behalf of the entire Council, I thank you for the opportunity to serve and to develop this report for the state. We hope you, your Cabinet and staff find our insights and recommendations useful and we look forward to following your initiatives on this important issue.

Sincerely,

Sharon L. Nelson  
Chair

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## Introduction and History

In May, 2009, a blue ribbon Governor’s Broadband Advisory Council (“GBAC” or “Council”) was established to evaluate and make recommendations regarding the creation of a broadband plan for the state of Washington in the context of federal funding arising from the American Recovery and Reinvestment Act of 2009 (ARRA). Specifically, the GBAC was asked to advise the Governor on the principal components of the state’s use of federal stimulus funding to promote and sustain broadband service availability and utilization as an engine for economic development, job growth, education and research, and other recognized public purposes. This report reflects the consensus recommendations of a diverse group of experts in the broadband community, representing business, education and libraries, public health, and governmental entities.

It is clear that broadband service is becoming an essential service for many households; and for most businesses, broadband is absolutely necessary for almost every type of transaction. For example: over the course of our three meetings, the Council heard that most job applications must now be filled out online; that many student tests required online broadband speeds; and that battered women often prefer to seek restraining orders online at libraries rather than venture to the courthouse. In the business context, one only needs to look at the growth of e-retailing for the ever growing necessity of universal broadband.

It goes without saying that Washington is an important leader and employment center for telecommunications. Two national wireless companies are headquartered in the state, and a third operates national services out of its regional headquarters here. The Puget Sound region is a center of excellence for wireless technology and has spawned numerous new businesses over the past five years. It has been estimated that between 8-10% of wireless employment nationally is located in the state; and a number of innovative companies that provide content and services on the web are also located in Washington.

Our state has been a leader in anticipating community needs for broadband and for facilitating access for impoverished, disabled, and rural residents. Projects such as the technology bill of rights — fostered by the Access to Justice Board — and the stunning achievement of our K-20 network (which provides high-speed services to the state’s higher education institutions, public school districts, and libraries) show how state government working with a variety of not for profit entities, other governmental agencies, and the private sector can enable deployment of advanced technologies to potentially underserved populations. Nevertheless, despite these efforts many rural areas and some demographic groups of Washington lack meaningful or affordable access to broadband services.



*“Washington’s primary goal should be to support proposals that effectively and efficiently extend broadband access to every Washington resident and facilitate broadband adoption in ways that stimulate its economy and create sustainable jobs.”*

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At its core, the federal American Recovery and Reinvestment Act (ARRA) is about stimulating the economy and promoting job creation. Broadband service was included as a component of the legislation to ensure the Obama administration's goal of bringing broadband connectivity to all corners of the nation is realized while simultaneously creating jobs. After a healthy and vigorous debate, the GBAC embraced the following policy goal regarding the importance of broadband technology and use of ARRA funding for our state:

Washington's primary goal should be to support proposals that effectively and efficiently extend broadband access to every Washington resident and facilitate broadband adoption in ways that stimulate its economy and create sustainable jobs.

Although the ARRA provides a short term financial boost towards achieving this goal, it clearly recognizes that longer-term sustainability is vital to a successful broadband initiative and to job creation. Accordingly, the GBAC believes applicants need to have an experienced track record, proven technology, and a business model that addresses proven demand. Given the history of telecom and technology innovation in the state of Washington, we should be open to new approaches that address the goals of the ARRA. Additionally, applications that effectively leverage other ARRA components — such as education, energy efficiency, transportation, and public safety — should be actively encouraged and supported. Finally, we believe the state of Washington must recognize that support for broadband is not just about building infrastructure; it is also about assisting programs that effectively promote adoption by Washingtonians.



### **Timing and Process for Washington Applications for Broadband Stimulus Funds**

Our report is timely. The recently released joint Notice of Funds Availability (joint NOFA) from the National Telecommunications and Information Administration (NTIA) of the Department of Commerce and the Rural Utilities Service (RUS) of the Department of Agriculture contains very aggressive timeframes for disbursing ARRA monies for broadband projects. The window for funding under the first tranche opened July 14, 2009, and closes on August 14, 2009, with funding awards expected to begin on or about November 7, 2009. The NTIA program includes a consultative role for the Governor's office of each state during the second step of the agency's review process. NTIA expects to provide a list of applications it receives and each state has 20 calendar days after notification to submit its proposed funding recommendations. Federal funding for state mapping initiatives is the subject of a second NOFA (broadband NOFA) from NTIA that will be operating on a similar expedited timeframe. This means, in no uncertain terms, that time is of the essence and the state of Washington must take steps immediately to maximize receipt of funds available for all Washington State broadband proposals.

During our three meetings, we asked for and provided opportunities for public comment. A list of comments and testimonies received, and other resources relied on to produce this report, is attached as Appendix A. Additionally, the Governor and her cabinet are fully aware of the linkage between high-tech industries and job

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creation in Washington's economy. The high-tech community and economic prognosticators in turn are fully cognizant of the constellation of technologies called broadband as the next platform for job creation, innovation, and economic growth in Washington (see Appendix B for an illustrative discussion of these linkages).

## Summary of Recommendations

Our recommendations, identified below, reflect the collective input and lively debate by all members of the Council. We believe they provide you and your agencies a thorough foundation for evaluating the full-range of ARRA-broadband proposals that will be submitted over the coming months. We recommend that Washington:

- Proceed immediately with a comprehensive broadband mapping initiative consistent with the provisions of the broadband NOFA, Broadband Data Improvement Act and recently enacted state legislation.
- Encourage public-private partnering in the development of ARRA grant applications in order to minimize duplicative efforts and maximize coverage.
- Support proposals that pursue federal stimulus funding to address broadband connectivity for Anchor Institutions.
- Support proposals that clearly target unserved and underserved areas of the state to retain Washington's place in an increasingly global economy.
- Leverage other avenues of ARRA funding (including provisions intended to preserve and create new jobs) and provide investment to spur advances in science, healthcare, smart grid and energy efficiency, innovation in education, and improved transportation infrastructure.
- Encourage and support proposals that effectively promote efforts to increase broadband access and adoption by Washington residents and businesses.

Our record shows that the Obama administration's broadband stimulus money will be put to productive use in Washington. We believe the recommendations contained in this report will assist the Governor, her cabinet and staff, and potential applicants who will be seeking stimulus dollars to present Washington's case for the funds in a fashion that is compelling and persuasive to federal grant makers. Additionally, implementation of the recommendations contained herein will require effective leadership and coordination by two state agencies — the Department of Information Services (DIS) and the recently renamed Department of Commerce (Commerce) — to support and realize the goals of this report.

Finally, we note the state has abundant talent on the issue of broadband. The Governor may want to seek additional advice from disinterested public and private sector citizens, including telecom and technology experts, to advise on the state's input to NTIA for projects that are submitted in Washington.



*"Our record shows that the Obama administration's broadband stimulus money will be put to productive use in Washington."*



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# The Governor's Broadband Advisory Council

## Members and Affiliations

**Sharon L. Nelson, Chair**

**Marc Berejka** — Senior Director, Technology Policy and Strategy, Microsoft Corporation

**Betty Buckley** — Executive Director, Stone Soup and Communities Connect Network

**Bill Covington** — Director, Technology Law and Public Policy Clinic, Assistant Professor of Law,  
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**Federico Genoese-Zerbi** — Vice President of IT Business Partners, Boeing Corporation

**Tren Griffin** — Partner, Microsoft Corporation

**Ron Johnson** — Chief Technology Officer, University of Washington

**Jeff Mero** — Executive Director, Association of Washington Public Hospital Districts

**Viji Murali** — Vice President for Information Services and Chief Information Officer, Washington State University

**Mike Scroggins** — Deputy Executive Director of Information and Technology,  
State Board of Community and Technical Colleges

**John Stanton** — Co-Founder, Trilogy Partnership

**Tony Tortorice** — Director, Washington Department of Information Services

**Jan Walsh** — State Librarian, Washington State Library

**Rogers Weed** — Director, Washington Department of Commerce



# Recommendations

## I. Broadband Mapping

An unfortunate divide exists between those in Washington who have access to broadband service and those who lack access and the means to use it effectively in an increasingly online-centric society. Broadband mapping holds the promise of determining, both quantitatively and geographically, the availability and adoption levels of broadband service for Washington policy makers, local planning organizations; and most importantly, supporting the Governor's project recommendations to the federal agencies responsible for making ARRA grants and loans. Accordingly, we believe that Washington should proceed immediately with a comprehensive broadband mapping initiative consistent with the provisions of the federal Broadband Data Improvement Act and recently enacted state legislation (See sections 3 – 5 of Second Substitute House Bill 1701).

Increased deployment and adoption of broadband technology and services hold the promise of enhanced economic development and public safety for communities across the state of Washington. Additionally, expanded broadband access can promote improved health care, educational opportunities and a better quality of life for Washington's residents and businesses. Continued progress in the deployment and adoption of broadband technology is vital to ensuring that Washington retains its advanced competitive position in the global economy and continues to promote an attractive and innovative business environment and sustainable job growth. Although some incremental studies have been conducted in the

recent past by two state agencies, the GBAC strongly believes the time is now for initiating a comprehensive effort to commence a statewide broadband mapping exercise that tracks in sufficiently granular detail, the deployment and adoption of broadband service. At least six other states have completed extensive mapping exercises that may enhance their prospects in obtaining federal broadband stimulus monies. Detailed mapping will help the state fill in the gaps of information necessary to specifically identify unserved and underserved communities in our state and is required to guide the efforts of the Governor's office in advising the NTIA and RUS.



*“Continued progress in the deployment and adoption of broadband technology is vital to ensuring that Washington retains its advanced competitive position in the global economy and continues to promote an attractive and innovative business environment and sustainable job growth.”*

### **Washington State Department of Information Services (DIS) Directed to Proceed with Mapping Immediately**

The Governor should direct DIS to proceed immediately with its own mapping exercise that effectively captures, in sufficiently detailed form, public and private broadband infrastructure, service availability (including upload and

download speeds) and tracks adoption and awareness in accordance with the provisions of the Broadband Data Improvement Act (BDIA) and Second Substitute House Bill 1701. DIS should begin drafting a specific proposal to obtain funding for mapping from federal funds as further mapping efforts are conditional to Washington State's ability to develop a well-considered broadband plan. DIS should identify all potential state funding resources sufficient to support the required 20% match required to receive the corresponding 80% federal funding under the matching provisions of the BDIA component of the ARRA.

Because broadband NOFA was released on July 1, 2009, the GBAC believes it is appropriate to start immediately with a Washington mapping program overseen by DIS. Although state broadband mapping is not a prerequisite to obtaining broadband-related ARRA funding, the GBAC strongly believes that time is of the essence and that our state's effort should begin immediately, with the goal of having a meaningful tool in place and operating no later than November 30, 2009. The joint NOFA establishes a very aggressive timeframe for states seeking federal funding (state proposals must be submitted between July 14 and August 14, 2009) to be eligible for matching funds.

Due primarily to the expressed confidentiality concerns of private broadband providers, SSBH 1701 directs DIS to solicit proposals from and contract with a third party vendor to carry out the actual mapping exercise.

Consequently, DIS should be directed to undertake immediately all steps necessary to release a Request for Proposal (RFP) to solicit proposals from third party contractors to gather all necessary public and private information for establishment of a baseline map of broadband infrastructure and availability in Washington. Given the narrow timeframe contemplated for ARRA funding there is a compelling need to complete at least an initial snapshot of broadband availability as soon as possible. DIS must work both rapidly and efficiently with a selected vendor to establish a preliminary view of broadband availability subject to expansion and periodic updating.



*“The end result of the state’s mapping effort should be a fully interactive website that provides in sufficiently granular detail a meaningful way to determine areas of the state that are unserved and underserved, as well as provide insights on consumer needs related to broadband.”*

## Mapping Requirements

A successful vendor should be required to create a fully searchable database and interactive mapping instrument that is accessible on the internet. It should contain a list of each entity (public and private) providing broadband service in Washington and reflect, on an integrated basis, the effective availability of wired and wireless broadband service throughout the state, county level, and census block level. The map should reflect Washington's current state of broadband development based on information provided by the state's private and public providers. It should also identify and provide an effective inventory of existing Washington State broadband resources and assets that may be available for use by public and private sector entities to further their broadband projects and service offerings. Broadband mapping should also include a detailed assessment of consumer demand for deployed services, including information about adoption rates, barriers to adoption,

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public access to broadband services as well as information about how consumers want to use broadband in the future. Finally, we believe that upon completion of mapping public and private broadband infrastructure there is a compelling need to identify all schools, colleges, universities, libraries, public computing centers, and healthcare institutions that do not have any or sufficient broadband access.

The end result of the state's mapping effort should be a fully interactive website that provides in sufficiently granular detail a meaningful way to determine areas of the state that are unserved and underserved, as well as provide insights on consumer needs related to broadband. We also conclude that all forms of broadband technology should be included in the state's mapping exercise including, but not limited to, wireline and fixed and mobile wireless service offerings, to capture effectively the evolving nature of technology in the broadband market.

### **Addressing the Digital Divide in Washington**

In addition to identifying and tracking areas where broadband infrastructure and services are available, it is important to address the equally relevant "digital divide" issues that greatly affect our state's citizens. The broadband mapping exercise we undertake should also seek to address concerns regarding public awareness and effective access to broadband service; the concept often referred to as "digital inclusion." As an example: we believe the broadband mapping website should, through coordinated efforts, consolidate available state information and provide a map of public broadband access points; particularly libraries, since in the majority of communities served by them are the only free public access to the internet. Similarly, but perhaps as a longer term objective, there should be some effective form of demand-side mapping as a means to track and evaluate changes in consumer adoption of broadband to assure that those segments of Washington's population most challenged by the digital divide are afforded greater access to and appreciation for broadband technology.<sup>1</sup>



## **II. Public/Private Partnerships**

Washington State should encourage public-private partnering in the development of ARRA grant applications in order to minimize duplicative effort and maximize coverage. A principle goal of the ARRA is to help extend broadband service to unserved and underserved areas of the nation. Promoting the deployment of broadband infrastructure not only increases jobs in, and collateral to, broadband technology in the short term, it also strengthens our economic foundation and ability to compete in the global economy over the longer haul. Although the state has extensive broadband resources, both public and private, there are gaps. To assure ARRA funding opportunities produce the broadest economic, educational, and social benefits for Washington's residents and businesses, the state should adopt policies to encourage and facilitate coordination in the development of broadband infrastructure proposals.

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<sup>1</sup> This approach could follow that used by the Washington Utilities and Transportation Commission in evaluating consumer perception and adoption habits for broadband services in five of the state's less urban counties. See <http://www.wutc.wa.gov/webimage.nsf/0/OC107F2AECEC013A8825733800684FCF> .

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Specifically, GBAC recommends that over the life of the ARRA, the state, through DIS and Commerce, should develop and facilitate an ongoing public/private sector match-making process or series of conferences that can lead to subsequent collaborations or partnerships that address sustainability of broadband infrastructure proposals. Doing so increases prospects for private-sector leadership while addressing critical public sector broadband requirements. The Governor should make it clear to broadband applicants that projects that effectively demonstrate a significant degree of consultation between and amongst public entities, private entities, or a mix thereof, are more likely to receive a higher priority, ranking, or endorsement from the state than isolated proposals that appear to have a more limited or singular purpose.

### **Roles for Public Entities and Expectations for Private Entities**

GBAC recognizes that, for the most part, broadband infrastructure should and will be constructed by private entities or carriers and we certainly don't want to appear to be requiring forced public - private ventures. Rather, we acknowledge that public entities can effectively serve as anchor tenants for private entities interested in creating or expanding broadband systems. By signaling to broadband applicants the state's intent to support partnerships with (for example: libraries, health care providers, and educational institutions) broadband applicants may be more aware and responsive to the authentic needs of anchor institutions and the synergies inherent in pursuing joint proposals. Given the contribution made by research universities — as well as national and corporate laboratories — to the development of the internet, it is desirable to encourage consultation with such institutions as well.

### **Local Government Proposals**

Finally, we note that local governments are likely to put forward broadband proposals which address unserved or underserved broadband requirements of their communities. Additionally, local governments (or coalitions of local governments) are likely to put forth public-safety-related applications that are by their very nature designed to enhance the inter-connection of, and inter-operability of, these critical networks. We respect these entities' familiarity with and closeness to their respective jurisdictions and constituencies. Accordingly, to the extent their individual or collective broadband proposals meet federal funding requirements and the other recommendations contained herein, we believe they deserve meaningful consideration as long as fair competition rules and practices are followed.

### **Role of the State through DIS**

To facilitate such proposals, the state (through DIS) should establish a clearinghouse function and website that facilitates collaboration among private sector and public entities in application development — as well as information sharing between public entities such as fire and police departments, libraries, and schools — to enable them to leverage their combined purchasing power for broadband related services and applications. Additionally, although not required, Section 10 of SSHB 1701 allows





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DIS to reconvene the “Advisory Council on Digital Inclusion” to address and report on a number of broadband issues including public/private partnerships. This group could effectively serve as an ongoing forum for such discussions.

### III. Enhancing Broadband Connectivity for Public Benefit

Our state’s schools, libraries, hospitals, community resource centers, justice, tribal centers, research institutions and other organizations (collectively “Anchor Institutions”) have long been recognized as key components to Washington’s long-term economic success. Each entity requires full access to the resources necessary to address their charge to advance collectively the interest of Washingtonians in a global economy. For example, in our schools and libraries it is no longer sufficient to address basic bricks and mortar and staffing requirements to satisfy the learning requirements of our students. Rather, increasingly, broadband access is necessary to allow schools, parents, teachers and students to communicate and exchange valuable information online. For example, improved access to electronic medical records and online healthcare resources is necessary to dramatically improve the quality of healthcare delivery for our citizens. Similarly, enhanced electronic access to justice system records and between justice system personnel and agencies will result both in increased public safety and more and higher quality justice accessibility and delivery of justice more efficiently and at lower cost and use of resources. Finally, our research institutions play a decisive role in addressing the development of exciting new technologies that hold the promise of medical breakthroughs, energy efficiency, and other desired advances to consumer welfare. Broadband access, regardless of technology has become the linchpin that is indispensable to addressing these objectives for our residents.



*“Broadband access is necessary to allow schools, parents, teachers and students to communicate and exchange valuable information online.”*

We’ve known this for some time. Anchor Institutions currently obtain broadband services from a range of public and private sources. In the educational sector, one important provider is Washington’s K-20 network, the statewide broadband network designed to address the diverse needs of the state’s educational community. The K-20 network provides broadband services to many public colleges, universities, K-12 school districts and many, but certainly not all, of the libraries in the state. The services provided by the K-20 network include video services that are primarily used for distance education and teacher training. Additionally, its data services are used for Internet access by faculty and students and processing of education related applications at over 500 locations across the state. However, despite substantial efforts in this area many Anchor Institutions do not have any broadband connection in any meaningful sense. For example, at present, hundreds of libraries in Washington have so many computers using a single connection it means, effectively, these libraries have no broadband



Internet connectivity.<sup>2</sup> In the healthcare and research sectors we believe similar challenges exist. In other words, the mission of connecting all schools, libraries, hospitals, and community resource centers with meaningful broadband access throughout the state remains unfinished.

Unfortunately, our record indicates that existing broadband network resources that serve Anchor Institutions are rapidly being overcome by more robust online applications and content requiring augmentation of current network capacity. Accordingly, given the near-term availability of ARRA broadband funding, the state is presented with one-time unique opportunity to think “outside the box” and look beyond traditional infrastructure and network procurement models to address existing and future broadband requirements for Anchor Institutions.

Specifically, GBAC recommends the Governor strongly encourage and support proposals that pursue federal stimulus funding to address the broadband connectivity for Anchor Institutions because we no longer believe in the “one size fits all” approach for addressing their requirements. Collaborative proposals that seek to use ARRA broadband funding to create or extend research and education infrastructure to enable all Anchor Institutions to have access to meaningful broadband connectivity should be supported and allowed to operate independently from the existing K-20 network and be permitted to connect to it or to other education, health care, or other networks. By signaling our intent to support proposals that come forward from such efforts we open the door to more robust broadband solutions for the state’s education, public health, library, justice, and research communities.



*“By signaling our intent to support proposals that come forward we open the door to more robust broadband solutions for the state’s education, public health, library, justice, and research communities.”*

We believe such consortia will seek to procure or partner with other public or private entities to obtain reasonable terms and conditions for capacity on fiber facilities, wavelengths, or other network facilities where gaps or choke points exist in “middle mile” and “last mile” coverage. In particular, we note there may well be opportunities to create or participate with others in local loop partnerships to connect Anchor Institutions with meaningful broadband access under the existing model. For education and libraries, GBAC recommends the Governor strongly encourage and endorse coordinated proposals coming from public, private or consortiums that seek to use federal stimulus funding to support video and media-rich applications at each school or library currently served.<sup>3</sup>

<sup>2</sup> See <http://www.secstate.wa.gov/library/libraries/projects/broadband/resources.aspx>

<sup>3</sup> Over the next three years, meaningful broadband access for schools should reflect an external Internet connection of 10 Mbps per 1,000 students/staff and internal wide area network connections from the district to each school of at least 100 Mbps per 1,000 students/staff. Beyond three years, the goal should be raised to an external Internet connection of 100 Mbps per 1,000 students/staff and internal wide area network connections from the district to each school of at least 1 Gbps per 1,000 students/staff. For libraries, we support the standard increasingly being adopted nationally of a minimum of 256 Kbps per concurrent internet user at each library location.

See <http://www.ala.org/ala/mgrps/divs/pla/plapublications/platechnotes/internetwanaccess.cfm>

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## GBAC Recommendations for Upgrades to “Middle Mile” and Regional Network Infrastructure

Separately, GBAC recommends that the Governor strongly encourage community driven, but coordinated, proposals and collaborations that pursue federal stimulus funding to secure and support sustainable upgrades or extensions of “middle mile” and regional network infrastructure to support health care, justice, and research and experimental sites and incubators, and other public interest and support activities. Specifically, proposals that seek to establish or extend existing, complementary, “middle mile” networks, including those originated by established state, regional and national medical networks which already connect clinical and public health sites and activities should be given strong support by the Governor. The Governor should consider endorsement of proposals that will clearly stimulate the establishment and availability of “middle mile” broadband fiber infrastructure and backhaul which provides optical wavelengths, or at least dedicated gigabit Ethernet, including affordable provisioning of such capacity to public, educational, health care, library, local government, justice, community networking, research and not-for-profit institutions in areas of the state where their proponents can effectively demonstrate a lack of sufficient and affordable network capacity from existing providers.



Finally, GBAC believes the state should encourage inclusion of “pre-kindergarten” educational programs and facilities championed by organizations such as Thrive by Five and Washington Learns, as participants in “K-20” concept and/or other established national and/or regional scale Research and Education networks that come forward. Thus, the “K-20” concept becomes “P-20.”

### IV. Unserved and Underserved Areas

Advanced broadband infrastructure across the state is crucial to retaining Washington’s place in an increasingly global economy. Although providers of wireline, wireless, and other technologies offer broadband services with varying speeds and functionalities, there remain significant pockets or corners of the state where available broadband service is either negligible or nonexistent. With respect to the State’s advisory role to NTIA on broadband proposals, the GBAC recommends that in determining which projects put forward by private or public sector entities to support, the Governor should embrace the following principles.

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Nearly 60 percent of libraries report that their connection speeds are insufficient to meet patron needs some or all of the time as compared to 57.5 percent reported in 2007-2008. Urban libraries, in particular, report insufficient speeds some or all of the time (71 percent) as compared to 67 percent last year. Rural libraries also reported a slight drop in the percentage reporting sufficiency at all times (42.9 percent in 2008-2009 versus 46.3 percent the previous year).

See <http://www.ala.org/ala/aboutala/offices/ors/plftas/connectivity09.cfm>

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## Unbiased Approach for Technology or Architecture

First, there should be no presupposition regarding an appropriate network architecture, technology, or provider as a solution to delivering broadband service in unserved or underserved areas. In other words, the State should be technology-agnostic in its approach to evaluating specific broadband funding proposals. Projects are likely to be brought forward by a variety of public and private entities reflecting an array of wireline, fixed and mobile wireless, satellite, and other emerging or established technologies with differing capabilities in the upload and download direction.

## Flexibility is Essential

Second, because broadband can be defined in innumerable ways depending on the scope of the intended applications and uses by businesses and consumers, the state needs to be flexible in determining which projects best meet the unmet needs



of underserved and unserved areas of Washington. To the extent that broadband is defined by “speed,” we should recognize and take into account the evolving nature of the speeds and technologies that will characterize meaningful broadband service over time. The state should avoid any implicit or explicit criteria that bias against a technology. For example, wireless services may provide slower speed but be a much more cost efficient solution in certain circumstances. Any definition of broadband should not be static; rather, it should reflect the dynamic and evolving nature of consumer habits that increasingly challenge some current service offerings. There should be a “floor” or, minimum qualitative service level that is expected from any broadband provider, public or private, that seeks support for an ARRA funding recommendation from the Governor.<sup>4</sup> How a minimum level is reached, of course, is up to each applicant but the state’s expectation should reflect the fact that consumer expectations, online applications, and technology are developing at a rapid rate.

Proponents of any given technological platform must demonstrate an ability to increase effective transmission speeds to meet these shifting requirements. Because consumer bandwidth requirements will continue to grow, the state should take into account an applicant’s ability to demonstrate its chosen technology platform’s ability to boost or augment prevailing bandwidth speeds in ways that promote economic recovery in Washington. In other words we wish to avoid supporting proposals that do not effectively demonstrate this capability because, over time, their service offerings may become obsolete or an obstacle to improving Washington’s economy and opening doors of opportunity for its citizens.

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<sup>4</sup> The High-Speed Internet Strategy Work Group (HISWG) that was convened in 2008 by DIS produced a report which, among its many recommendations, suggested the state should adopt a definition of broadband based on the speed tiers used by the Federal Communications Commission’s (FCC) for periodic reporting by certain providers. The HISWG did not include the FCC’s lowest speed tier in its definition recommendation, finding that the lowest tier was simply an insufficient level to reasonably characterize as “broadband.”

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## Target Unserved and Underserved Areas

Third, the State should actively support broadband infrastructure proposals that effectively and demonstrably target “recognized” unserved or underserved geographic areas of the state. The State should recognize that many of the state’s private providers have a consistent record of delivering cost-effective, economically efficient and sustainable broadband services to consumers in their existing service areas. Our state is fortunate to have both large carriers that serve broad swaths of the state and smaller, more niche players that have used innovative and home-grown approaches to address gaps in coverage and, from their perspective, underserved populations within the state. Indeed, we note that there are Washington-based rural service providers that have constructed broadband networks that offer innovative service offerings in competition with larger incumbent carriers or in areas overlooked or too remote for the larger carriers’ business model. Together, these networks and their providers (large and small) are a vitally important element of the state’s economy and the Governor’s advisory staff should recognize that private sector proposals designed to augment existing broadband infrastructure may be a highly cost-effective and efficient means to expand the reach of such services to those areas of Washington that are currently unserved.

By the same token, there may well be proposals originating in the public sector or from new private providers that can effectively demonstrate an ability to fill in the gaps and address unserved or underserved requirements of their unique service areas and constituencies. In particular, the state should support those broadband infrastructure proposals that “improve access to, and use of, broadband service by public safety agencies.” Washington has a long history of supporting inter-operability, consistency, and inter-connectivity of public safety and emergency response systems and we note that some of the BTOP provisions within the ARRA recognize the critical importance of integrated public safety communications networks. Indeed, current public safety facilities including 911 systems, radio broadcast systems, and computer information systems increasingly depend on broadband access for maximum effectiveness and reliability. Accordingly, the state should actively encourage efforts on a collaborative, multi-jurisdictional, or regional scale that enhance the quality, effectiveness, and reach of public safety networks, especially those that make vital “middle mile” and “last mile” connections and offer current or future access capabilities for schools, hospitals, and libraries.

There are some members of the GBAC that strongly believe that wireless technology is the most effective means to efficiently and cost-effectively “fill in the gaps” for unserved areas of the state. Regardless, to the extent any of these providers, wireless, wireline, public or private, come forward with specific proposals to utilize ARRA-related broadband funding to expand the reach of their current or prospective broadband service offerings, the State should consider endorsing/supporting such proposals especially if the proponents can effectively demonstrate a business plan that is sustainable over the long run (i.e. requiring minimal subsidies not beyond those currently available through RUS and, indirectly, the federal universal service fund). We note here that the term “underserved” can also be construed to mean areas that are served only by one provider or where only one service offering is available and affordable.





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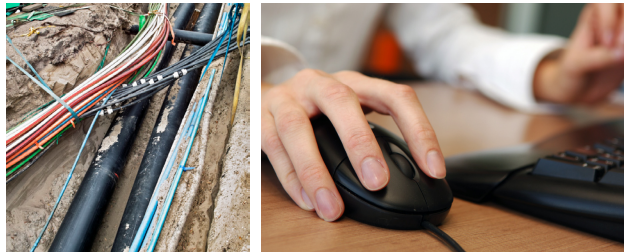
## New Jobs are Critical to our Future

Fourth, the prospect of new jobs that can be created as Washington State and the United States move to a broadband economy are critical to our future. It is increasingly clear that jobs in most sectors of our economy require digital skills for a variety of online applications. Moreover, it will require highly skilled people to build-out and provide ongoing long-term support for new broadband infrastructure and services. Applicants seeking the Governor’s support for their broadband proposals should include specific quantifiable facts and commitments concerning the number of jobs that will be retained and incrementally created by their specific proposal for Washington (listed by company, and type of job). For example, broadband providers seeking to expand or upgrade their networks in rural or low-income areas need to quantify and include in their submission the number of so-called “shovel-ready” jobs – the workers and technicians required to build network infrastructure – and the areas of the state where these workers will be deployed.

## Broadband Requirements of “Anchor Tenants and Institutions” must be Addressed

Finally, the GBAC believes it is important that project proponents seek to address the broadband requirements of potential anchor tenants and institutions for areas where they seek to augment or expand the reach of their networks. The term “anchor tenants and institutions” includes, but is not limited to, public entities such as schools, libraries, public safety agencies, community and technical colleges, community technology organizations, hospitals, tribal centers, and other community or civic oriented organizations that provide services and “public benefits” to their communities. Applicants should be strongly encouraged to engage these stakeholders in crafting their broadband proposals and actively seek endorsements or commitments from potential anchor tenants to increase or raise the possibility or likelihood of a specific endorsement from the Governor.

We note here that the joint NOFA released by NTIA and RUS provides definitions for “broadband”, “unserved” and “underserved” areas.<sup>5</sup> Further, it imposes a number of conditions on broadband infrastructure projects including, but not limited to, a commitment of applicants to adhere to the Federal Communications



Commission’s Internet Policy Statement (FCC 05-151) regarding internet management policies, any restrictions relating to content and applications by broadband service providers, and nondiscriminatory interconnection requirements.

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<sup>5</sup> Broadband is defined as “providing two-way data transmission with advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream to end users, or providing sufficient capacity in a middle mile project to support the provision of broadband service to end users.” Underserved is defined as “a proposed service area, composed of one or more contiguous census blocks meeting certain criteria that measure the availability of broadband service and the level of advertised broadband speeds...” Unserved is defined as “a proposed funded service area, composed of one or more contiguous census blocks, where at least 90 percent of households in the proposed funded service area lack access to facilities-based, terrestrial broadband service, either fixed or mobile, at the minimum broadband transmission speed (set forth in the definition of broadband above). A household has access to broadband service if the household can readily subscribe to that service upon request.”



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## V. Multi-Purpose Grant Proposals

The State should encourage broadband applicants to pursue projects that effectively leverage other avenues of potential federal funding including, but not limited to other provisions of the ARRA designed to preserve and create new jobs and provide investment to spur advances in science, healthcare, smart grid and energy efficiency, innovation in education, and improved transportation infrastructure. The State should actively support efforts by private and public entities which include plans for the use of broadband infrastructure and services in advancing consumer welfare, particularly where opportunities exist to coordinate with other aspects of ARRA funding. Specifically, efforts and proposals for advancing consumer welfare through the use of broadband infrastructure and services that provide or promote ancillary benefits in areas such as science, healthcare, job creation, transportation and education should be supported to the greatest extent possible.

First, as an example, as stimulus-related projects are initiated in the transportation sector, other governmental or private entities may have interest in laying fiber optic cabling or constructing other wireline or wireless network facilities to support critical “middle mile” or “backhaul” requirements for their broadband service offerings.<sup>6</sup> Similarly, we are aware that the Washington Health Care Authority is strongly encouraging and providing support to applicants for funding under the ARRA’s health information technology provisions.

Washington should encourage partnerships that leverage more than one stimulus area, such as Health Information Technology for wiring community clinics and simultaneous deployment of broadband to the same communities. Alternatively, rural public libraries can partner with nearby community colleges to deliver both physical and virtual resources for distance education. In essence, public computing centers in rural libraries can provide distance education students a comfortable and effective place to dwell in order to obtain broadband access where it might not otherwise be reasonably available.



Second, the State should encourage all of its own departments to coordinate all potential infrastructure projects that could have a broadband stimulating component, with a distinctively broader view beyond their own “traditional stovepipe” jurisdictions. For example, DIS and DOC should heighten awareness of projects which might facilitate broadband over powerline which, in turn, would enable more smart grid applications and “green technology” development. As another example, DIS and DOT should be aware of and consider “smart highway” opportunities to reduce traffic congestion and facilitate commerce.

*“Washington should encourage partnerships that leverage more than one stimulus area.”*

<sup>6</sup> We note that in constructing such facilities two crucial factors that greatly affect broadband deployment are the availability and affordability of roadway rights-of-way for fiber optic cabling and of access and rights-of-way for constructing wireless towers and transceivers. This is a significant issue in Washington where our challenging geography significantly restricts the potential paths that can be used to lay fiber and reduces possible locations for wireless network facilities. GBAC recommends the Governor consider directing the State’s Department of Transportation to signal its intent to liberalize and reduce the requirements for achieving access to highway and other rights-of-way to advance broadband applicant’s interest in using such right of ways for installation of new broadband facilities. A key part of a revised approach could include relaxing trenching depth and location requirements for potential applicants. Further, GBAC recommends that such a shift in policy, or at least intent, be articulated and published within the next few weeks so that it can be used as an effective selling point for Washington-centric broadband proposals.

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Finally, the state should consider supporting innovative proposals that seek to incubate and develop new broadband-related technologies supported by new science, engineering or educational positions in Washington that are funded from other sections of the ARRA.

## VI. Broadband Adoption

As noted above, the term “digital divide” is the nomenclature historically used to describe the gap in broadband access between the greater percentage of the nation’s population and certain demographic groups such as low income households and specific minority groups (e.g., low-literacy residents, residents in economically-challenged rural communities, senior citizens, people with disabilities, at-risk youth, immigrants and refugees, people of color, and even small disadvantaged businesses and non-profit organizations). It is also used to describe the difference in technology literacy, access to technological resources and skill levels necessary to effectively participate in an increasingly online and digital society.



Digital inclusion is the more positive term now being used to describe efforts to bridge the technology gap. Proponents of digital inclusion argue that meaningful inclusion efforts are broader than simple computer ownership or deployment of broadband service within a community. Instead, they suggest that digital inclusion should encompass three areas: (1) meaningful access to broadband service and computer equipment, (2) outreach programs to assist and improve technology literacy and (3), direction and support for accessing relevant online content and services. In order to accomplish digital inclusion, low income individuals and disenfranchised populations need access to effective outreach programs (commonly referred to as community technology programs) to level the playing field.

*“The State should support, indeed actively encourage, public and private proposals that seek to increase both access to and use of broadband services by lower income residents and other economically challenged and isolated populations within the state.”*

### Increase Broadband Access for Economically Challenged Residents

Just as the State should consider supporting critical broadband infrastructure proposals, similar consideration should be given to opportunities that promote private and public-sector efforts to increase broadband availability and adoption by Washington’s residents and businesses. Washington’s focus on broadband service should not be limited to proposals that seek to expand public or private infrastructure. Rather, the State should support, indeed actively encourage, public and private proposals that seek to increase both access to and use of broadband services by lower income residents and other economically challenged and isolated populations within the state. Among other benefits, doing so would strengthen public safety and delivery of vital community services, improve living standards, expand educational and healthcare opportunities, and raise levels of civic engagement and governmental transparency. Information technology and occupation specialists recognize the vital role

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that IT skills play and are increasingly required of most employees in the nation's workforce. Indeed, the US Department of Labor estimates that 80% of new jobs require some form of computer skills. Accordingly, GBAC recommends endorsements of demand-side community technology programs where and when proponents of such programs can effectively quantitatively and qualitatively demonstrate constant and continuous success in raising the digital literacy of residents in the communities where they operate. According to research by the University of Washington, there are active community technology programs that provide combinations of training in technology skills and use of online services, find creative ways to provide computers for the home and ways to access low-cost broadband service, and provide technical support. These programs are offered in a range of settings, including public community centers, senior centers, libraries, immigrant/refugee organizations, various multi-service social service agencies, and special media training centers. The ongoing Community Technology Opportunity Program (CTOP) funded by the State and operated under the auspices of Washington State University, Communities Connect Network, and the University of Washington is an effective model for these types of programs.<sup>7</sup>



GBAC also believes the State should recognize that demand, or an effective means to aggregate demand, may well promote longer term broadband availability in communities with smaller, more rural areas. Programs that effectively promote awareness and use of broadband technology among so-called “non-adopters” may stimulate broadband demand and enhance the economic feasibility for expansion or upgrading of broadband infrastructure in certain areas. This is especially important in underserved areas as it may create a more favorable business environment for carriers serving rural areas where on going operational and maintenance expenses may not be supported well by existing demand. Efforts to increase demand and aggregating customers could also increase adoption and subsequent investment and affordability for businesses and residents in economic empowerment zones and multifamily low-income housing. Accordingly, the state should consider supporting applicants and programs that offer discounts, subsidies, or other incentives to public or non-profit organizations that establish effective partnerships with broadband providers to create, maintain, and aggregate demand by its citizens.

Finally, as discussed previously, the state should recognize that any definition of “underserved” should include that component of our P-12 and higher education students and low income populations that have limited access to broadband services at reasonable or affordable pricing. GBAC urges the state to support projects that subsidize or provide effective discounts on broadband services to encourage broadband adoption and utilization for economically-challenged segments of Washington’s residents.

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<sup>7</sup> Section 6 of SSHB 1701 transferred responsibility for CTOP to DIS.

## Conclusion

The Council thanks the Governor for this opportunity to serve our state and is pleased to submit this report. We have provided our best advice in a very short time period on a framework and strategy for evaluating final proposals that are sent to the Governor by federal officials. As the Governor said in her letter convening us, “access to affordable, robust broadband services has become fundamental to economic citizenship.”

Our recommendations surrounding broadband mapping, public-private partnering, Anchor Institutions, multi-purpose grant proposals, leveraging other aspects of the ARRA, and broadband access and adoption programs, are intended to provide an effective framework for your advice to federal officials in the context of ARRA funding. We hope this document is used to provide meaningful guidance to all potential applicants and challenges them to think broadly about serving the public interest in addition to their own enlightened self interest.

We concur with the recent statement of FCC Chairman Julius Genachowski, “Broadband is not a solution to any single problem, but it’s part of the solution to almost every problem our country faces.”

*“Broadband is not a solution to any single problem, but it’s part of the solution to almost every problem our country faces.”*

Julius Genachowski  
Chairman, Federal Communications Commission

## Appendix A

### Testimony, Written Comments, and Background Materials

#### Testimony

**Gerry Saleme** — Executive Vice President, Clearwire

**Neville R. Ray** — Senior Vice President, Engineering & Operations, T-Mobile USA

**Daniel A. Youmans** — Director, External Affairs, AT&T

**Kirk Nelson** — President, Qwest Washington

**Robert Shane** — Principal Systems Engineer, Chelan County Public Utility District

**Judge Donald J Horowitz (retired)** — Immediate Past Chair, Access to Justice Technology Committee

**Dirk Marler** — Director of the Judicial Services Division of the Administrative Office of the Courts

**Mike Weisman** — Interested Citizen

**Carolyn Robertson** — City of Tumwater

**Tim Gugerty** — City of Seattle Legislative Liaison

#### Written Comments

**Jeff Tamietti** — Chief Executive Officer, EcliptixNet Broadband, Inc.

**Mike Weisman** — Interested Citizen

**Bill Schrier** — Director and Chief Technology Officer, City of Seattle

#### Background Materials

Washington Utilities and Transportation Commission – Broadband Study Final Report

<http://www.wutc.wa.gov/webimage.nsf/0/0C107F2AECEC013A8825733800684FCF>

Second Engrossed Substitute Senate Bill (E2SSB) 6438 – Establishing, among other things, a High-Speed Internet Strategy Work Group (HSIWG) <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=6438&year=2007>

Final Report of the HSIWG <http://dis.wa.gov/hiswg/docs/HSISWG%20-%20Final%20Report%20-%201Dec08.pdf>

Libraries Connect Communities: Public Library Funding & Technology Access Study 2007–2008

<http://www.ala.org/ala/aboutala/offices/ors/plftas/0708/LibrariesConnectCommunities.pdf>

The Economic Impact of Stimulating Broadband Nationally

[http://www.connectednation.org/documents/Connected\\_Nation\\_EIS\\_Study\\_Executive\\_Summary\\_02212008.pdf](http://www.connectednation.org/documents/Connected_Nation_EIS_Study_Executive_Summary_02212008.pdf)



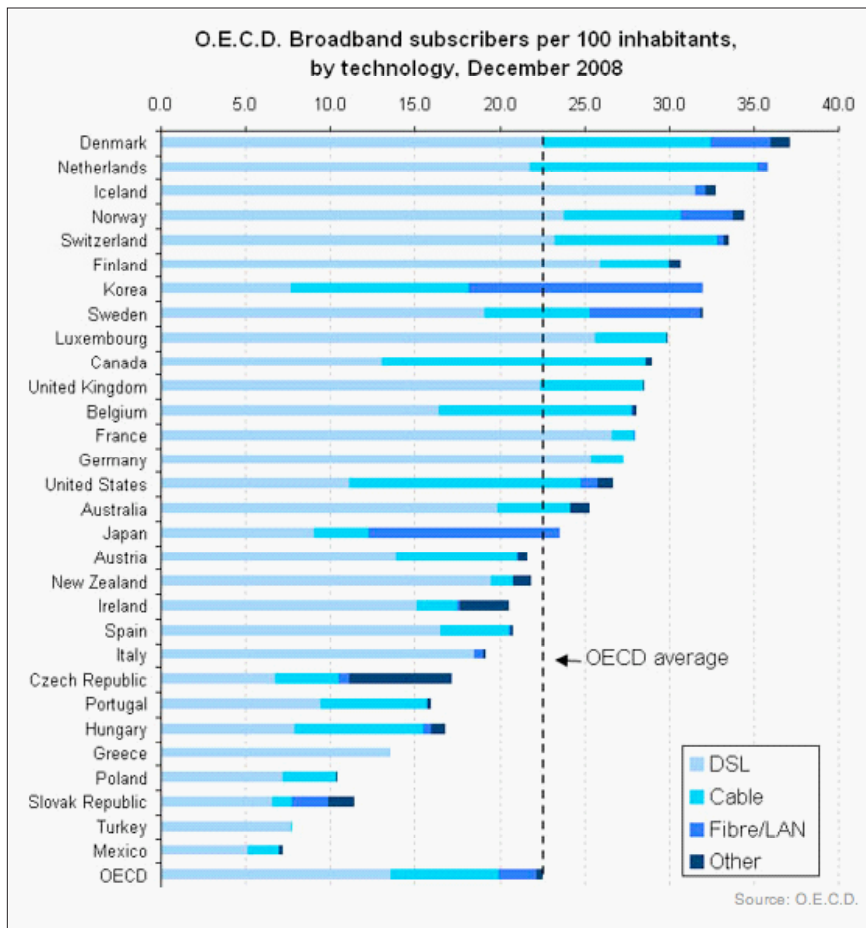
## Appendix B

### Why Broadband is Important to Washingtonians

#### Broadband Adoption is Now a Global Measure of Economic Growth

The fundamental objective of the ARRA is job creation as a goal in itself and as the primary method to aid the economic recovery of the nation. Separate titles of the Act target specific sectors of the economy for job creation. The broadband title focuses on jobs but also recognizes that telecommunications and information technology infrastructure now serve as a platform for innovation, economic development and competitiveness in the world's economy. Unfortunately the nation which gave the world the Internet is now falling behind in broadband deployment. OECD data reveals that the U.S. fell from fourth place in consumer subscription to broadband technologies in 2001 to 15th place.

Diagram 1 (Source: OECD)



Given that broadband adoption is now considered an official economic indicator; and thus, a predictor of the current economic growth and future stability of a particular economy; the national drop from a leadership role, from fourth to 15th, indicates that we are lagging in technology progress behind other countries.

Additionally, based on 2006 data, Washington state was ranked 13th in the United States in broadband penetration. However, this data includes only cable and DSL technologies, which were the only broadband providers available at the time.

Diagram 2 (Source: Free Press Analysis of FCC and Census data)

**Figure 3: U.S. State-Level Broadband Data, June 2006<sup>33</sup>**

State	Percent of Homes Subscribing to Broadband (2006)	Rank	Cable Modem Availability Where Cable Systems Offer Cable TV Service (% of end user premises)	xDSL Availability Where ILECs Offer Local Telephone Service (% of residential end user premises)	Percent Rural Population
Hawaii	61.1	1	N/A	N/A	8.5
New Jersey	60.7	2	99.9	88.0	5.6
Connecticut	59.9	3	83.7	N/A	12.3
Massachusetts	57.3	4	98.9	N/A	8.6
California	56.8	5	97.2	85.9	5.6
New Hampshire	56.8	6	82.8	59.4	40.7
Maryland	53.3	7	97.6	75.1	13.9
Rhode Island	52.6	8	N/A	N/A	9.1
New York	51.8	9	98.8	78.1	12.5
Delaware	51.4	10	N/A	N/A	19.9
Nevada	50.4	11	N/A	85.3	8.5
Florida	48.2	12	95.9	88.0	10.7
Washington	47.9	13	93.6	80.1	18.0
Colorado	47.9	14	95.8	82.0	15.5
Oregon	47.5	15	89.7	80.7	21.3
Kansas	46.9	16	86.1	79.5	28.6
Virginia	46.1	17	95.9	65.6	27.0
DC	45.0	18	N/A	N/A	0.0
Arizona	45.0	19	91.4	66.9	11.8
Alaska	44.4	20	N/A	77.9	34.4
Georgia	44.1	21	89.1	87.3	28.4
Illinois	44.0	22	97.2	77.9	12.2
Texas	43.8	23	95.1	75.4	17.5
Nebraska	42.9	24	91.4	86.1	30.2
Minnesota	42.8	25	90.8	81.1	29.1
Maine	41.6	26	89.1	67.0	59.8
Utah	41.1	27	N/A	82.1	11.8
Pennsylvania	40.8	28	93.5	82.5	22.9
Ohio	40.2	29	94.8	81.0	22.6
Vermont	40.2	30	N/A	59.9	61.8
Wisconsin	39.0	31	96.3	76.1	31.7
Missouri	38.9	32	96.0	71.9	30.6
Indiana	37.6	33	94.0	74.2	29.2
Oklahoma	37.0	34	87.6	75.0	34.7
Michigan	36.8	35	91.7	66.4	25.3
Louisiana	36.1	36	87.1	87.4	27.4
Wyoming	35.6	37	N/A	77.3	34.9
South Carolina	34.5	38	84.2	78.2	39.5
Tennessee	33.5	39	95.2	80.7	36.4
Montana	33.4	40	83.3	76.1	45.9
North Carolina	33.3	41	94.8	82.7	39.8
Iowa	32.5	42	88.5	83.1	38.9
Kentucky	31.7	43	90.6	84.5	44.2
Idaho	31.4	44	83.3	75.6	33.6
West Virginia	30.8	45	88.2	68.3	53.9
Arkansas	30.1	46	77.3	65.6	47.5
New Mexico	29.8	47	79.5	75.0	25.0
Alabama	29.4	48	90.9	78.1	44.6
South Dakota	21.3	49	58.5	76.0	48.1
North Dakota	20.4	50	79.4	86.2	44.1
Mississippi	20.2	51	78.9	73.5	51.2
<b>Nationwide</b>	<b>44.6</b>		<b>93.1</b>	<b>79.3</b>	<b>21.1</b>

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## **Report on the Impact of the Technology-based Industry on Washington's Economy**

In light of the national objectives of the ARRA, both with respect to job creation and broadband adoption, Washington state, with its large technology-based industry, is in a unique position to both advance the objectives of the ARRA, as well as benefit from the federal funding available to safeguard and accelerate our economy if we move quickly.

For example, a study commissioned by the Technology Alliance, "The Economic Impact of Technology-Based Industries in Washington State (June 2008), ("Technology Alliance Report"), conducted by the Department of Geography, University of Washington, documents the impact of the technology sector in Washington (through 2007), i.e., its contribution to continuing economic development, and especially, in the area of research and development.

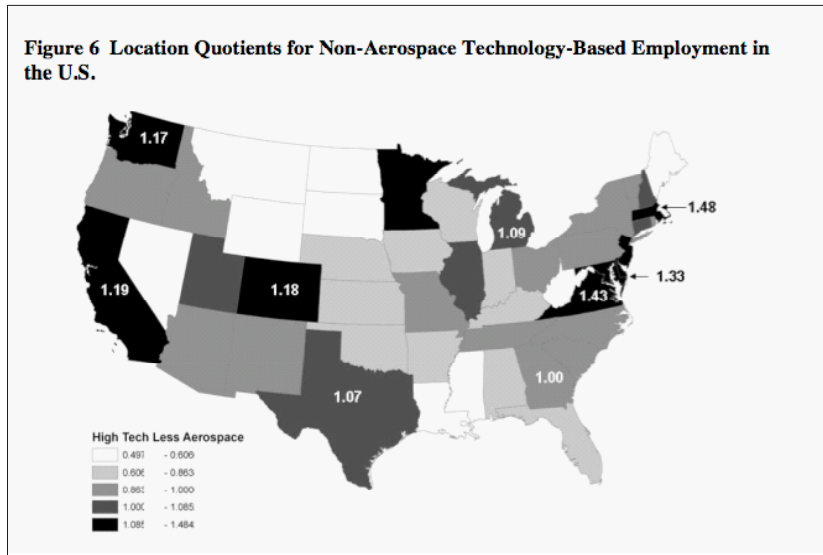
This study does not focus specifically on broadband, but it provides some context of the vital importance of advancing broadband for Washington because the technology-based sector contributed 4.3% to the State's Gross State Product in 2004 (compared to the national average of 2.4%), and generated significant employment as well.

### **Technology-based Industry Contributes To 40% of Our Total Employment**

According to Washington Employment Security Department (ESD) data, when applied with multiplier effects, an estimated 1.16M jobs were created due to technology-based industries, which amounts to approximately 40% of the total employment in the state.

And, between 1974 and 2007, the total technology-based employment grew from 6.7% to 11.8%. Furthermore, based on the data from the Technology Alliance Report, technology jobs support an average of 3.39 jobs for each direct wage and salary job (compared to 2.75 jobs for all industries). And, labor income in technology averaged \$117,691, compared to the state average of \$54,097; approximately 117% above the state average. It appears evident that technology based employment is important to our state, and moreover, broadband is important to other technology-based industries.

Diagram 3 (Source: Technology Alliance Report)

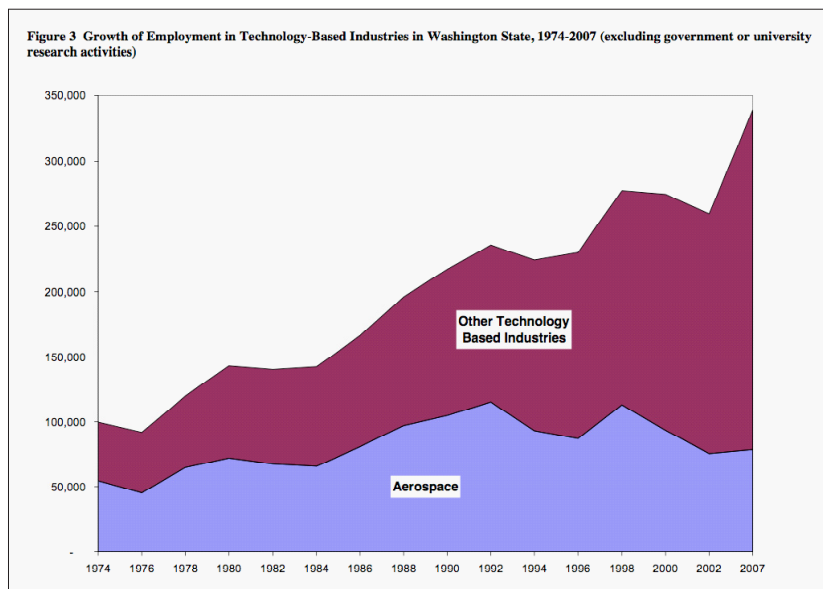


### Innovation by Technology-based Industry Requires Advanced Broadband Infrastructure

And, while technology-based businesses are already a major source of sustainable jobs, broadband is still an emergent infrastructure and continues to evolve its capabilities and reach.

It is, therefore, essential to our state’s continued economic development to continue to nurture and preserve the vitality of its technology-based businesses by supporting deployment, adoption, and use of broadband throughout our state.

Diagram 4 (Source: Technology Alliance Report)



## Technology-based Industry Creates Jobs, Yet Areas of Washington May Become Isolated from Such Opportunities Without Access to Broadband, Training and Education

Additionally, as “newer” technology-based jobs are created, which will be broadband dependent, communities with access, education and training in the skills required, could benefit substantially in the future. However, providers perceive that the costs to deploy next-generation technologies may be higher than potential profits and thus, those areas that lack broadband access will fall farther behind in economic development. Studies show that technology-based businesses support job growth, and thus, the deployment of broadband to communities in rural areas is vital for the state’s overall economic health. Anecdotal evidence suggests that areas lacking broadband access, education, and skills are the same areas where unemployment is the highest.

Diagram 5 (Source: WA State - International Trade & Economic Development)

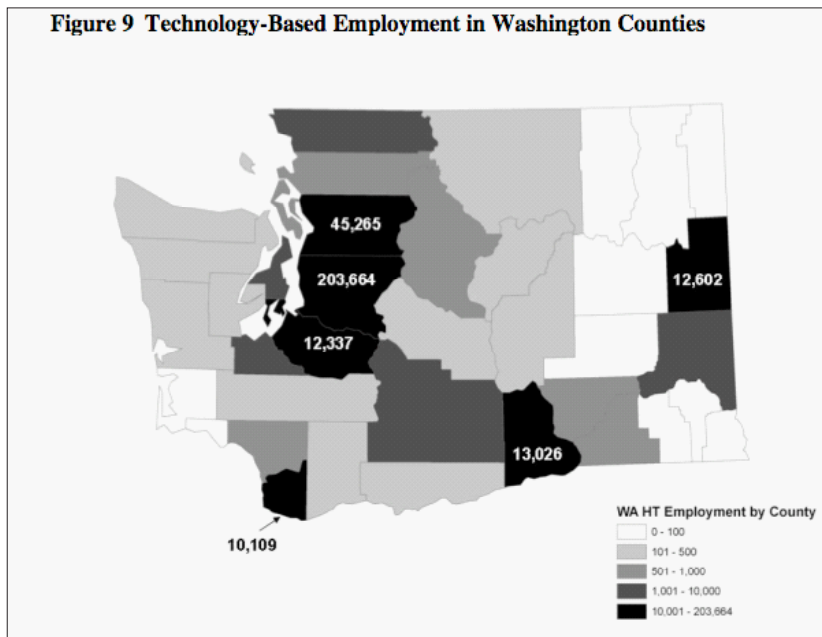
INDEX									
HIGHEST INCOME									
LOWEST INCOME									
UNEMPLOYMT HIGH (10 or above)									
6 mo's AVG UNEMPLOYMT	County	2007 Median Salary	2008 Projected Salary	Dec	Jan	Feb	March	April	May
15.1	Pend Oreille	36,921	37,381	11.8	15	14.4	17.9	16.9	14.7
14.1	Wahkiakum	44,751	44,923	9.4	13.7	15	15.6	16.5	14.2
13.8	Ferry	32,497	33,115	10.2	13.6	14.4	16.7	15.2	12.9
13.7	Cowlitz	45,069	45,649	11.3	13.3	13.9	14.5	15.1	14.2
13.7	Stevens	43,225	43,558	10.6	13.8	14.3	15.9	14.5	13.2
13.6	Skamania	46,964	47,526	11.7	14.5	14.2	15.1	14.2	11.7
13.1	Lewis	41,575	42,072	10.9	12.8	13.5	14.2	13.9	13.5
13.1	Grays Harbor	42,049	43,199	10.7	12.9	13	13.8	14	13.9
12.9	Pacific	39,125	39,406	9.9	12.2	14.3	14.4	13.4	13.1
12.7	Clark	57,248	57,917	10.5	12.4	12.7	13.7	13.9	13.2
11.9	Columbia	39,674	40,071	10.1	11.6	12.5	13.6	12.3	11
11.8	Klickitat	41,831	42,217	9.6	12.7	12.3	12.9	12.1	11.4
11.1	Okanogan	40,257	40,474	9	11.9	12.4	13	11	9.5
10.8	Mason	48,433	48,511	8.8	11.1	10.7	11.6	11.9	10.7
10.7	Grant	43,754	43,902	9.9	12	11.9	11.5	9.7	9.4
10.3	Clallam	47,401	47,594	8.6	10.5	10.3	11	11.5	10
10.0	Asotin	42,110	42,750	8.6	10.6	10.5	10.8	10.5	9.2
10.0	Adams	35,221	36,274	9.9	12	11.5	10.3	8.4	7.9
9.9	Yakima	40,527	40,794	9.3	10.7	10.1	10.1	9.6	9.3
9.6	Skagit	53,841	54,160	7.6	9.6	9.5	10.4	10.4	10.1
9.4	Franklin	44,820	44,800	9	10.7	10	10.1	8.8	8
9.3	Pierce	57,733	58,903	7.1	8.8	9.2	10.2	10.1	10.1
9.2	Spokane	44,979	45,552	7.3	9.4	9.5	10.3	9.3	9.1
9.1	Douglas	45,399	45,713	7.3	9.6	9.7	10.1	9.3	8.8
9.0	Chelan	48,982	49,212	7	8.9	9.2	10	9.6	9.2
8.9	Kittitas	40,219	40,235	7.6	9.5	9.3	9.7	8.7	8.7
8.7	Snohomish	66,755	67,324	7	8.4	9.6	9.6	8.3	9.5
8.7	Lincoln	42,868	43,758	6.6	9	9.6	10	8.7	8.3
8.6	Jefferson	48,112	48,069	7	9.1	8.8	9.4	8.8	8.5
8.2	Island	56,837	57,207	6.5	7.9	8	9	8.9	8.8
7.9	Whatcom	50,375	50,777	6.1	7.8	7.8	8.8	8.3	8.4
7.6	Kitsap	56,774	57,186	5.9	7.3	7.5	8.4	8.2	8.1
7.5	Thurston	59,547	59,885	6	7.4	7.5	8.1	7.9	8
7.4	Benton	55,429	56,683	6.5	8	7.7	8	7.3	6.8
7.2	King	68,152	68,832	5.6	6.6	7.9	7.9	7	8
7.2	Walla Walla	44,401	44,912	5.8	7.9	7.7	7.9	7	6.9
7.2	Garfield	38,973	40,303	6.2	8.2	7.8	8.6	6.3	5.8
6.9	San Juan	55,862	55,938	5.4	7.8	7.4	7.7	6.7	6.2
4.9	Whitman	38,505	38,948	3.7	4.8	4.9	5.6	5	5.3



For this reason, persistent efforts should be made to ensure our citizens are provided the necessary access, education, and training, to realize the economic benefits of broadband, particularly in our rural areas, and other communities that are at the highest risk of being isolated from economic progress.

Based on the diagram below, it appears that technology as an economic engine exists in the urban areas, but not in rural areas, where it is most needed.

Diagram 6 (Source: Technology Alliance Report)



### Government Leadership, Collaboration and Coordination are Key to Successfully Securing Federal Funding

In order to be granted the maximum amount of federal monies to fund the recommendations suggested by this report, and given the quick turn-around expected by the federal government for applications, government leadership is needed to send signals to the businesses and consumers in the state. This will set into motion collaboration and coordination among public and private sector entities over the ensuing weeks.