



**Report of the
Oregon Telecommunications Coordinating Council**

**Presented to the
Joint Legislative Committee on Information Management and
Technology on November 16, 2004**

**for the
Seventy-Third Legislative Assembly**

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to the
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"The future always comes too fast and in the wrong order."
Alvin Toffler

**Report of the Oregon Telecommunications Coordinating Council
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Executive Summary

The Council finds we continue in the early stages of a rapidly emerging and changing historic telecommunications transition. The pace of change seems to accelerate daily as we transition from an analog narrowband circuit-switched telephone technology to a digital broadband Internet-protocol based multi-media network.

Among the urgent realities we face in Oregon today is the need to provide “jobs, jobs, jobs.” One fact that cuts across every region is that broadband technologies enable many applications that provide enormous benefits to citizens. Broadband is an accelerator of economic development. We must find the means to ensure broadband is available to all who want it. This is among the critical success factors identified for Oregon’s economic future. At the start of the twenty-first century people and communities that lack advanced telecommunications services (i.e., broadband) are disadvantaged in the same way that people and communities without electricity or telephone service were disadvantaged in the first half of the twentieth century.

The Council believes that the stage has been set in Oregon. The state of Oregon is unique among the states in that we have established in law a clear set of policy statements on the criticality of broadband telecommunications for its citizenry.

- Oregon has a broadband goal

“...it is the goal of this state to promote access to broadband services for all Oregonians in order to improve the economy in Oregon, improve the quality of life in Oregon communities and reduce the economic gap between Oregon communities that have access to broadband digital applications and services and those that do not, for both present and future generations...” (ORS 759.016 (1))

- Guidelines for broadband goal implementation are established

“That the goal set forth in subsection (1) of this section may be achieved by:

- (a) Expanding broadband and other telecommunications services;
- (b) Creating incentives to establish and expand broadband and other telecommunications services;
- (c) Undertaking telecommunications planning at the local, regional and state levels that includes participants from both the public and the private sectors;
- (d) Removing barriers to the full deployment of broadband digital applications and services and providing incentives for the removal of those barriers; and

(e) Removing barriers to public-private partnerships in areas where the private sector cannot justify investments.” (ORS 759.016 (2) (a)-(e))

- Telecommunications is public works infrastructure

“The improvement, expansion and new construction of the state's sewage treatment works, water supply works, telecommunications infrastructure, roads and public transportation provide the basic framework for continuing and expanding economic activity in this state, thereby providing jobs and economic opportunity for the people of Oregon” (ORS 285B.413)

- Telecommunications has a key role to play in the state’s economy

“Focus on strategies and investments that maximize the economic benefit to the state of the global shift to an information, science and technology driven economy and on industries and companies that make significant use of the high-capacity telecommunications, science and technology-related manufacturing processes or knowledge transfer typical of these emerging economic sectors.” (ORS 285A.020)

- Telecommunications has a role in public safety

“It is the policy of the State of Oregon to encourage and support the rapid deployment of broadband telecommunications services in areas of the state where such services do not exist, to support redundancy of critical telecommunications assets in order to ensure homeland security protections in the state and to ensure that a secure conduit is available for emergency communications and public safety networks in all Oregon communities.” (ORS 401.706)

It pleases the Council to report continued progress in the deployment and usage of broadband in Oregon. Most rural Oregon cities now have better telecommunications infrastructure, thanks in large part as a result of Senate Bill 622 in the 1999 legislative session. There is more broadband service availability and more reliable network capacity as a result of the five self-healing fiber optic rings serving different parts of Oregon. For these areas of the state, the current focus should be on how best to use that economic competitive advantage to recruit new businesses, to grow existing businesses and develop the applications that will utilize the technology to improve quality of life. In particular we need to work on public sector applications in healthcare, education, public safety, and government as well as electronic commerce and other business applications.

The Council also observed that several municipalities and organizations have built out fiber and deployed wireless to push broadband into rural areas (e.g., NoaNet Oregon and its members). Additionally, other businesses and consortiums have built or created competitive fiber networks.

Yet even with the progress noted since our last report, substantial work remains to ensure that access to route diverse broadband is available to all Oregonians and that they know how to use it. While the future is far from certain, we believe there are some critical steps to be taken to guide our progress and to ensure our successes as a state. Pursuant to its mandate and after

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considerable analysis and thoughtful review, the Council finds there are a several specific public policy issues and additional steps that need to be addressed to reach the goal identified for the state in ORS 759.016.

Council Legislation Recommendations for Oregon's Broadband Future

- Expand the number of eligible Electronic Commerce Enterprise Zones (SB 12).

E-Commerce is a growing force for economic recovery in Oregon. The Legislature should facilitate and promote E-commerce through the expansion of E-commerce Zones to more communities.

- Fix the Advanced Telecommunications Facilities Tax Credit (SB 11).

The existing tax incentive legislation for telecommunications infrastructure will be more useful and stimulate investment when it allows "carry-forward" and also "assignment" of the tax credit.

- Provide new authority for the Public Utility Commission (PUC) to include consideration of the impact of regulatory decisions on the Oregon economy and to facilitate public-private partnerships (SB 16).

New legislation is needed to give the PUC authority to take into account the effect of its decisions on the economy of Oregon in general and the rural economy in particular.

- Provide new authority for the Public Utility Commission (PUC) to use universal service funds to support broadband services (SB 14).

ORS 759.016(1) says, "(1) That it is the goal of this state to promote access to broadband services for all Oregonians in order to improve the economy in Oregon, improve the quality of life in Oregon communities and reduce the economic gap between Oregon communities that have access to broadband digital applications and services and those that do not, for both present and future generations;" The council recommends that the PUC be given authority needed to achieve that goal.

- Extend Public Utility Commission (PUC) Reporting (SB 13):

- Establish benchmarks for evaluating broadband

We need to expand the collection and reporting of data on the profile of broadband in Oregon.

- Extend the sunset date for a reporting requirement to ensure consistency with the federal Telecommunications Act of 1996 (P.L. 104-104), to enhance fair competition and to promote deregulation of the telecommunications industry.

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The Council recommends that section listed after ORS 759.030 be retained by extending the sunset date from June 30, 2005. The amended Section 3 would be changed to at least June 30, 2007.

- Extend the Telecommunication Coordinating Council's sunset date (SB 15).

Issues relating to telecommunications will continue to play a critical role in Oregon's economic development and quality of life. The Council recommends extending the life of the Council by amending the sunset date to January 2, 2010.

Council Legislation Concept for Oregon's Broadband Future

- Create an "Oregon Broadband Authority."

The Oregon Broadband Authority's mission would expand broadband access for Oregon's citizens, institutions and businesses. Organizations in the public and private sector would be offered low-cost financing for the acquisition of hardware, software and services (e.g., assistance with preparation of federal broadband grant or loan proposals) that will improve or increase their use of broadband technologies.

Collaboration Opportunities for Oregon's Broadband Future

- Oregon would benefit from having its own Tier 1 Internet backbone peering point.
- Provide backbone network route diversity to all regions of the state. The network reliability it provides is critical for commerce as well as for education, government, healthcare, and public safety.
- Complete and implement the Network Sharing Plan for Distance Learning for Healthcare and Education.
- Continue pursuit of public-private partnerships.
- Collaborate to resolve rights of way (ROW) and joint use issues.
- Implement statewide Extended Area Service (EAS).

The Council strongly believes that our greatest progress comes from working together across our state's many communities of interest to secure Oregon's future. Change is upon us and we need to respond by taking a realistic "Oregonian-oriented" view of the impact of market and regulatory forces at play. Legislation is only one approach to ensuring a path to success. Working together in a collaborative manner is also critical. We are at a point in the evolution of this marvelous technology resource that requires thoughtful, clear, and predictable channels to guide development of this critical infrastructure. Much work lies ahead.

In Oregon we love dreamers and the Council dares to dream big. Come join us as we work together to realize that dream!

Introduction, Authority, and Report Organization

The outcomes of studies and research undertaken by the Council during the period of March through October 2004 will be found in this report. While the focus of our study is on Oregon, we found it important to start by placing our findings in the context of the national broadband landscape.

The Oregon Telecommunications Coordinating Council (herein after referred to as the Council) was continued under HB 2577 with an expanded set of responsibilities, including planning for education and health care telecommunications infrastructures necessary for distance learning.

“The Oregon Telecommunications Coordinating Council shall study alternative approaches to providing coordinated statewide, regional and local telecommunication services, including providing services to unserved or underserved areas of the state. In addition, the council shall study the manner in which telecommunication investments can be coordinated to facilitate partnerships between the public sector and the private sector and between state and local governments.”¹

The 2003 Legislative Assembly’s Findings on Broadband Services recognized the criticality of broadband for all Oregonians, rural and urban, and provided a clear statement of the state’s telecommunications policies in its goal and guidelines.²

In this report we share our findings from our study of alternative approaches to providing coordinated statewide, regional and local telecommunication services, including providing services to unserved or underserved areas of the state. In addition we provide insight and recommendations on how telecommunication investments can be coordinated to facilitate partnerships between the public sector and the private sector and between state and local governments.

Why Broadband Matters

The Council finds that many are not yet acquainted with the myriad benefits of broadband. In this section we cover some of the significant driving factors for why we need ubiquitous broadband, why it is no longer a luxury item but critical to daily living. These uses and benefits also point to why broadband is more than ever a matter of public policy.

Jobs, jobs, jobs!

Broadband is critical for our Oregon economy!

The introduction of broadband technologies has enabled traditional and new forms of communication to become a reality throughout the world. One fact that cuts across every region is that broadband technologies enable many applications that provide enormous benefits to citizens.

Broadband is an accelerator of economic development. This is because there are significant economic benefits to using broadband technologies for many applications. With broadband access, worker productivity increases, jobs are created, and wages grow. Broadband creates opportunities for bundling services together and enables operators to offer more services to consumers at lower prices, creating added efficiencies in both time and money. In addition, new or offshoot industries are created as a result of broadband. As broadband penetration rates grow, there will be a resulting demand for computer and home networking equipment, as well as wireless handheld devices and other equipment that facilitates broadband use.

The economic benefits of broadband can also be attributed to indirect factors, including increased e-commerce, reductions in commuting, increased consumption of entertainment, Internet telephony (VoIP), and savings in healthcare as a result of sophisticated telemedicine. For the entertainment sector, the economic benefits result from efficiencies in the distribution of goods, services, and information. The economic benefits of broadband arise from both direct and indirect sources.

The ability to telework -- to work either from home or another location, such as a telecenter outside a person's regular office -- is a very significant broadband application. Teleworking can contribute to time and cost savings for both employees and employers as well as to enable persons with disabilities to work. While teleworking is generally thought to be "working from home," it is not limited to this. It also refers to using virtual or satellite offices to work. In a virtual office, employees may share a reduced office space at a nearby employer facility, use the same offices on a rotating basis, or participate in a fee-based telework center arrangement.³

Many community banks already offer online banking to help meet the ever-evolving needs of bank customers. Some banks see high-speed access as a way to expand those services. Broadband connectivity allows banks to offer everything from talking ATMs and digital check processing to two-way video interactions with bank personnel. The result is more competitive banks and efficient anytime/anywhere banking.

High-speed connections are as vital to today's transportation companies as railroad tracks, highways, and airports. Broadband-enabled devices help fleet managers monitor the routes of long-haul trailers, track cargo, and protect against security threats at ports, airports, and warehouses. Wireless broadband connections keep truckers in touch with loved ones while on the road, and help incident commanders provide emergency responders with critical data in the event of a transportation emergency.

From the oil company sending 3-D maps of the ocean floor to land-based operation centers via satellite links, to the gas company monitoring pipeline safety via fiber optic connection, to the electric utility that monitors hydro-electric generation facilities or reads meters remotely, energy companies use broadband technologies to improve the energy exploration, production, and distribution process to help bring affordable, reliable energy to customers.

Our children -- our future⁴

Broadband is critical for Oregon's children and their futures!

Based on the data collected over the past decade, there is no doubt that more Oregon children of all incomes and backgrounds are using computers and the Internet than ever before. But it is also clear that some groups of young people -- primarily rural, low income and minority youth -- have poorer access to technology than others.

Since it was coined in the mid-1990s, the term “digital divide” has mostly been used to describe the gap between those who have “ever” and those who have “never” used a computer or the Internet. But as technology and its role in our society evolve, the concept of what constitutes access is evolving, too. Some updates to the definitions are needed, as suggested below:

- *Basic access*: the ability to get to a wired computer somewhere, at some time.
- *Quality of access*: some homes have high-speed of access and some homes have high-speed connections that make it easy to view graphics and download documents, while others have much slower “dial-up” connections; and some schools have wired computers in each classroom, while others have only a few for the whole student body to share.
- *Technological literacy*: the degree to which people know what they are doing online, how many applications they know how to use, and how easily they can learn new ones.
- *Access to useful content*: the information and software they need the information and software they need to do their schoolwork, protect their health, or find a job.

Put these together, and the resulting definition of access is much more meaningful -- but nearly not as easy to turn into a sound bite -- as whether a child has ever used the Internet.

With wired computers in most schools and libraries and rising home connection rates, almost all children have at least the possibility of basic access. Yet many advocates argue that ongoing inequities in *meaningful* access have real implications for children’s educational and economic opportunities. These inequities are reflected in the use of terms such as “digital opportunity” and “digital inequality” as alternatives to “digital divide.”

Whatever they call the current digital divide, policy experts and advocates generally agree that increasing technology access for disadvantaged children is a worthy policy goal. They also see a natural evolution from policies focused on major infrastructure investments, such as wiring the nation’s schools and libraries, towards integrating online access into other policy objectives. Instead of technology goals, there are goals to help children learn, develop, and succeed in the workforce with the help of technology. Where policy and political differences arise is over how to define the significance of the current divide, and what role the government should play in narrowing it.

A great deal of progress has been made in closing the digital divide. Most children from all major income groups and ethnicities have gone online, but significant gaps in both the quantity and quality of access remain: where their access is located, the speed of their connection, and the skills they are taught for making the most of their online experience. These gaps could have real implications for children. Will all young people be prepared to participate in an increasingly digital economy and culture? Or will those who are already at risk be left farther behind as those with high-quality access -- from better computers at school to high-speed connections at home -- move ahead?

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What role can or should state government play in closing today's digital divide? The remaining gaps in technology access may well be the most challenging to bridge. They are both less visible and more complex than the gaps we have already closed. As the first generation to grow up with the Internet starts to enter the larger world, we will undoubtedly learn more about the effects of the digital divide and see new directions for state policy.

In the meantime, there appears to be enough information about today's divide, in all its aspects, to inform a state and national debate about the educational importance of children's access to technology, what meaningful access looks like, and how much private and public investment is enough. While it may require new language and new approaches, this could be a very fruitful time for policymakers, industry leaders, and advocates to refocus on the digital divide, especially as it relates to the future of our state, our children.

Healthcare

Broadband is critical for healthcare in Oregon!

Broadband technologies can eliminate the distance barrier for rural patients by providing access to out-of-area physicians and health care resources. High-speed links let doctors deliver medical care more quickly and efficiently. Broadband-enabled medical devices are currently being used to improve the quality of life for all Americans.

The costs of health care impose an enormous burden on the economy. The latest projections from the Centers for Medicare & Medicaid Services show that annual health-care expenditures are expected to reach \$3.1 trillion by 2012, growing at an average annual rate of 7.3% during the forecast period or 17.7% of gross domestic product, up from 14.1% today. Telemedicine will become a multi-billion dollar industry. But just what are the benefits of telemedicine? A recent white paper by the Telehealth Association of Oregon (TAO) examined this from three perspectives.⁵ For purposes of this report we only list below the three perspectives and the impact category analyzed.

Economic Development and Quality of Life Perspective:

- Advancements in delivery of services
- Keeps dollars in the local economy
- Aids business recruitment and retention
- Workforce development / jobs
- Quality of life and longevity gains are worth a lot
- Clinical trials – expands opportunity for participation

Patient's Perspective:

- Access to healthcare
- Saves time, travel, and other expenses
- Healthcare at home
- Health provider integration
- Increased comfort-level with the technology

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Provider's Perspective:

- Emergency Room “front line” support
- Accuracy of diagnosis / reduction of medical errors
- A multifold increase in efficiency
- Continuing Medical Education / Lifelong learning

The advent of telemedicine brings some very useful technology to the medical community of Oregon and the rest of the U.S.. Yet many challenges remain ahead. Everything about the suggested programs for telemedicine also depends on the hurdle of availability. *Will broadband Internet services be available to all Oregonians?* Within the answer to this question lies the answer to whether telemedicine is going to be a beneficial product of the technological age.

Telemedicine, if used to its full extent, has the potential to cause great and far-reaching effects on the field of medicine. That is why it is important to take a look at the possibilities and limitations now. In that way we prepare to make the most of the technology available to us in the 21st Century.

Access to Government⁶

Broadband is critical for Oregon government!

The big idea here is “e-the-people.” E-government links people not just to each other and the e-commerce marketplace, but also to the public marketplace of ideas, debate, priorities, initiatives, innovation, services, transactions, and results. It puts ownership of government truly in the hands of all Oregonians.

Imagine government truly of, by, and for the people -- where individuals and organizations no longer wait in line between eight and five on weekdays only, but where they can be online at any time or place they wish. A place not only to get information but also to complete transactions with government, get services, talk with elected representatives -- even to vote; a government that organizes and furnishes information and services around the needs of people while protecting their privacy.

Imagine people in government who are excited about using the Internet to make a difference and produce results, answering questions instantly, using secure networks that cross organizational boundaries to serve the public. Imagine people in business enjoying fast and easy interactions with government that produce results in the public interest.

Imagine people in all sectors—government, business, non-profits, and the research community -- working together to make this happen quickly, creatively, and cost effectively. This is e-government—*our* government of the future, not *the* government of the past.

But don't stop there. E-government is not just about speed, efficiency, or accessing information online. It can also be tailored by individuals according to their preferences and needs. Imagine individual Americans creating customized, one-stop sites for themselves online, where they can choose to get information, conduct transactions, or communicate with their elected

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representatives. Imagine having your own self-designed, interactive site where you can directly conduct all your business with government whenever you wish. You can pay taxes, check your Social Security earnings, find out whether your building permit has been granted, renew your driver's license after your site has reminded you without being asked that it is coming due. You can also participate in public hearings, create communities of interest with others online, monitor voting records, and express your views to your representatives. In short, you can choose how and when to connect with government, with the ability to choose appropriate levels of privacy and security.

We do not just advocate substituting electronic for personal communications between people and public servants. Rather, we envision more strategic and satisfying personal communications of higher quality, supported by electronic information, sources, transactions, and interactions.

Public Safety⁷

Broadband is critical for Oregon's public safety!

Disaster relief and being committed to the relief of suffering people in situations of complex humanitarian emergencies and natural disasters is an enormous task. Not only does this involve technical equipment but also human engagement and methods of communication are important factors to guarantee the safety of people and nature.

A growing demand for mobile broadband services within telemedicine, fire fighting, mobile robotics and peacekeeping operations is rapidly emerging. Remote patient monitoring is one of the key aspects of crisis and disaster management is the effectiveness of frontline medical assistance to injured citizens. The concept of remote patient monitoring is the subject of intense study in both the civil and military peacekeeping sectors where the need for a reliable, secure and very high capacity mobile technology has been identified in order to address activities on the scene of incidence.

Another area of interest in this field is mobile robotics. This is also a subject of active study in both the public safety and military sectors, and is also depending upon the application of a highly reliable and broadband wireless technology. Robots designed in both micro and macro scale may be used to assist in the rescue of people from hazardous areas, to provide for automated inspection of non-accessible areas, to offer the safe and swift clearing of land mines or other hazards and to assist in the difficult process of resolving terrorist actions. Interconnection to one or more of the planned broadband satellite constellations is also in order to ensure a stable communication path from remote areas where terrestrial infrastructures may be seized during natural disasters. To be able to communicate, it is crucial that both people and various types of terminals understand each other.

Capabilities, involving either an ad hoc or day-to-day operational environment, include:

- Wireless mission-critical broadband data
- Secure and interoperable capabilities
- Multiple users with multiple applications
- Self-establishing and -healing network nodes (i.e., route diversity)
- IP-based mobile networking

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- Robust management and control systems
- Flexible existing infrastructure dependence
- Dynamic and flexible radio configuration
- Real-time digital voice, video and sensing
- Still photos, complex graphics and drawings files
- Enhanced bio-telemetry information
- Maintain integrity/security of national networks

Non-profit organizations

Broadband is critical for Oregon not for profits!

Foundations and their grantees, no longer are solely at the mercy of the mass media for coverage, have an important new platform of their own from which to express views, exchange ideas, publicize their work, and continue to do what they do best -- touching the lives of millions.

Nowadays, most people expect that all organizations - including nonprofits - will be able to connect to the Internet. Internet connectivity allows organizations to perform a wide variety of mission critical tasks: use e-mail, conduct research on the web, post information to the web, create and maintain a web site and use web-based software applications. The question for nonprofit organizations is no longer whether they should have Internet connectivity, but rather what type of connection, and who is the best provider.

Not unlike other sectors non-profit organizations are increasingly taking advantage of video conferencing, distribution of educational videos, Internet telephony (i.e. Voice over Internet Protocol – VoIP), and other large demand bandwidth applications.

Recreation

Broadband is critical for Oregonian's recreation!

Many people have used broadband to further personal hobbies, browse the Internet for fun, play games, gamble, and download music, videos and movies. In addition, position location technology, combined with broadband, can allow people to obtain restaurant information, local maps, and museum and tourist information. Broadband will increasingly be used to download on-demand movies and other entertainment content.

Entertainment is one of the fastest growing uses of the Internet, demanding more and more bandwidth for its applications. It is also a large contributor to our economy.

Rural Communities

Broadband is critical for Oregon's rural communities!

Rural folks need telecommunications as a substitute for transportation even more than urban folks. Telehealth, distance learning, e-government, and e-commerce are more important to rural communities than to urban communities because of they have lower population densities, greater travel distances and fewer local services. Most urban folks do not realize how much “drive time”

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is required to conduct business and government in rural Oregon. Broadband infrastructure suitable for telecommuting, including from rural Oregon to government offices in Salem and even to local government offices, can make a significant difference to the economy and the quality of life in rural communities.

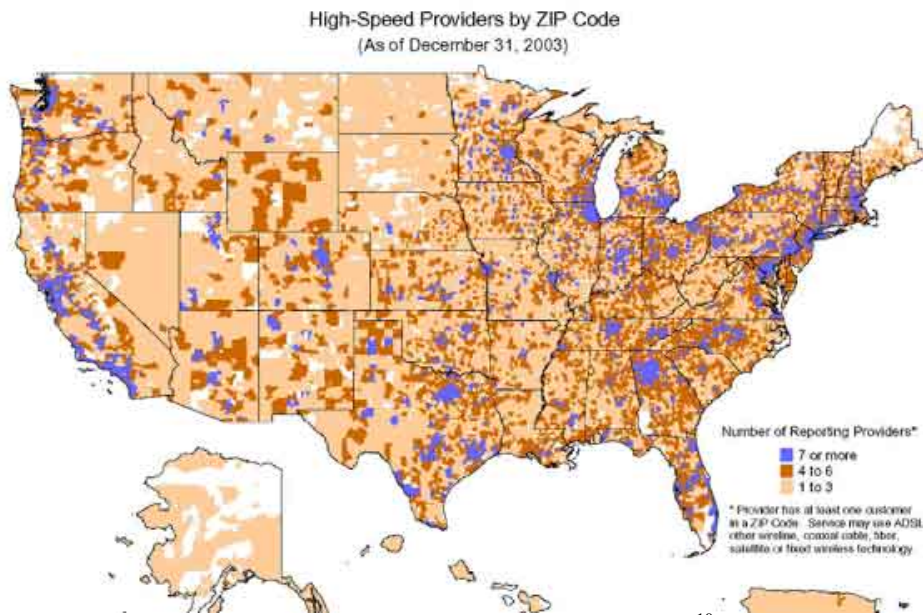
National Landscape

The FCC reports progress

The Federal Telecommunication Commission’s recently released report (September, 2004) on the “Availability of Advanced Telecommunications Capability in the United States” reports that overall growth targets are being met and that “advanced telecommunications capability is indeed being deployed on a reasonable and timely basis to all Americans.”⁸ The report further states:

“...subscriberhip to these networks and services has increased significantly since the issuance of our last report. Specifically, subscriberhip to high-speed lines—defined as 200 kilobits per second (kbps) or greater transmission speed in at least one direction—has almost tripled from 9.6 million in June 2001 to 28.2 million in December 2003, and subscriberhip to advanced services (200 kbps or greater transmission speed in both directions) more than tripled in this same period, from 5.9 million lines to 20.3 million lines.

Perhaps more important than these statistics, however, is the fact that the *Fourth Report* also documents the continuation of a positive trend that first emerged in our last report: namely, the increasing availability of advanced telecommunications capability to certain groups of consumers -- those in rural areas, those with low incomes, and those with disabilities -- who stand in particular need of advanced services.”⁹



National High-Speed Providers by ZIP Code¹⁰

Chairman Powell notes:

“Since I became Chairman, 36 million Americans have signed up for high-speed service. Across America, the availability of ubiquitous, reliable broadband access is changing the way we work and live. Overall, 48 million adults use high-speed connections in the home, representing growth of 60 percent from a year earlier. And, as the Report catalogues and USA Today recently trumpeted, ‘Internet-based phone services are taking off by offering cut-rate prices and funky features.’”¹¹

Issues – the definition of broadband and the value of reported statistics

The Council concurs with dissenting opinions found in that same FCC report, addressing the definition of broadband as well as the statistical approach, that it is misleading to claim that broadband is available to everyone in a zip code if it is offered to only one person in that zip code.¹² So while it appears that progress has occurred, there is uncertainty in the actual degree of progress and a shadow of doubt is cast across the accuracy and optimism of the report. This uncertainty results from the way in which the measurement is obtained and the inconsistencies with other surveys.^{13,14,15,16}

This effort at statistical analysis lacks precision and borders on being useless for decision-makers in education, government, public safety, healthcare, business and other critical sectors of the economic and quality of life for Americans. Further, defining broadband as “200 kilobits per second (kbps) or greater transmission speed in at least one direction” falls seriously short of being adequate in even today’s broadband applications world. It has set the bar too low. Surely in this country we are capable of conducting a sincere and definitive statistical analysis based on a contemporary definition for broadband on which to base those statistics.

Role of government

The FCC report offers many truisms in its report while it also reflects a strongly biased point of view to advance the cause of minimalist regulation. The conclusion derived on this point results from fallacious reasoning, as the facts simply do not lead to the conclusion

“Minimal regulation of advanced telecommunications networks and services is needed to ensure that this happens.”¹⁷

Many in America believe that there is a reasonable role for government consistent with our history, a role that must be appropriately balanced and constantly scrutinized. Time and time again we’ve seen what happens when the regulatory hand becomes either too relaxed or too stiffened, especially when dealing with our critical infrastructure and services. Commissioner Cops commented on the role of government (i.e., regulations) as well as that of public-private partnerships¹⁸:

“The history of great infrastructure developments in this country is a tale of private sector-public sector partnership. In broadband, business will lead the way—as it should. But there is a role for government, too—a statutorily mandated role totally in keeping with how this country historically built its infrastructure.”¹⁹

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Let's leave political dogma out of this discussion and focus on what's best for all Americans.

"Our work is not done"

On the whole there is little or no disagreement on the criticality of broadband or that we are anywhere near complete. Chairman Powell states in the FCC report:

"Our work, however, is not done. Americans deserve information at the speed of light—and it is the country's next challenge to deploy a network that is at least as capable as any other nation's. ... As regulators, we must embrace the reality that the torrent of change from new broadband technologies has arrived, is unstoppable, and will accelerate over the years ahead."²⁰

Commissioner Kevin J. Martin weighed in on the "rate of progress" issue and acknowledges the need for continued efforts with regard to rural America, as follows:

"While I am pleased by the rapid progress made to narrow this deployment gap, there is a need for continued efforts to ensure comparable access for consumers in rural America."²¹

Commissioner Capps also commented on the challenge ahead:

"Broadband is our central infrastructure challenge. High-capacity networks are to the Twenty-first century what roads, canals and railroads were to the Nineteenth and highways and basic telecommunications were to the Twentieth. Our economy and our future will be driven by how quickly and completely we deploy broadband."²²

He further took the FCC to task over its strategy to achieve the goals mandated by Congress and issued by the Whitehouse:

"When we find ourselves eleventh in the world, something has gone dreadfully wrong. When Congress tells us to take immediate action to accelerate deployment, we have an obligation to do it. When the highest reaches of government aim for universal broadband by 2007, we need a strategy to meet that goal. I see none here."²³

Yes, there is disagreement on certain facets of broadband deployment at the federal level. Yet we note that even in their disagreement, which could be argued as "healthy," there is considerable progress and recognition that we have much work ahead of us. Not surprisingly some of that same "healthy" discussion is at play in Oregon.

Oregon Landscape

Oregonians need jobs!

The Oregon economy has taken a substantial hit in recent years. Only now are we starting to see some daylight. Job recovery appears to be underway as reported in the Oregon Office of Economic Analysis September 2004 Oregon economic forecast²⁴:

“The Employment Department reports that we have regained two-thirds of the lost jobs as of June of this year. The national economy is projected to continue its growth path into 2005 and the Oregon economy will be pulled along for the ride. The questions of uncertainty that now loom are: How strong and how long?”

OEA also predicts:

“Oregon will be pulled along with a stronger U.S. economy, but Oregon’s slower growth may try the patience of those who desire much faster relief to the unemployment situation in the state.”

Unemployment Rates Seasonally Adjusted

	Aug 2004	Jul 2004	Aug 2003
Oregon	7.4%	6.8%	8.4%
United States	5.4%	5.5%	6.1%

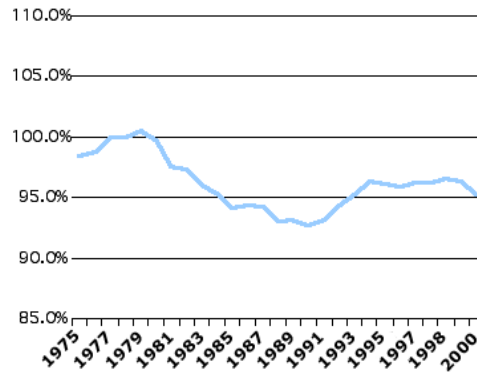


25

The Oregon Business Plan (OBP) makes this evaluation:

“For some time, Oregon’s overriding economic goal has been to increase and maintain high-wage jobs that support families and maintain strong communities. Key measures of success are per capita income relative to the national average, reduction in poverty, and statewide job stability.”

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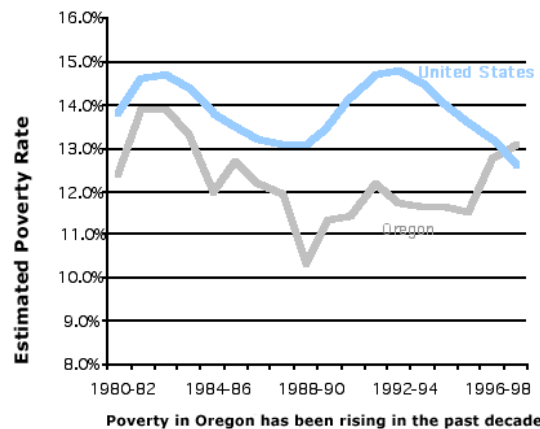


Since the early 1980s, Oregon per capita income has fallen as a percentage of the national average.

26

All sources would seem to agree that the nature of the Oregon economy has changed.

“Natural resource industries, particularly forest products, were once Oregon’s dominant traded-sector employers, and they had a large role in supporting family-wage jobs and strong communities. That changed in the early 1980s when the forest products industry in Oregon encountered tougher out-of-state competition, market demand for lower cost substitute products, and supply constraints that forced it to drastically downsize and restructure. Although still important, natural resources are no longer a mainstay of Oregon’s economy.”



Poverty in Oregon has been rising in the past decade

Source: Census Bureau

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Oregon is now a set of regional economies, not a single statewide economy. Oregon can now be seen as nine distinct regions, each with its own values, economic approach and political outlook.²⁸

It’s the OBP view that four factors characterize a regional view of Oregon:

- Different parts of Oregon have distinctive economies reflecting the locational preferences of various industry clusters.
- Declining pay is the chief economic problem of rural regions. All of the regions outside the Willamette Valley have lower average wage levels today, adjusted for inflation, than in 1976. Northwest Oregon wages are up 20 percent.
- Regional pay differentials closely correlate with variations in educational attainment -- rural areas have far fewer highly educated workers as a fraction of their population than does the Portland metropolitan area.
- No region has failed to create jobs. Every region has more jobs than in 1976; growth rates in lagging regions (Eastern Oregon, Coos-Curry-Douglas) have been a third to 40 percent of the state average. Southern and Central Oregon are growing faster than the rest of the state.²⁹

Across the state we are seeing evidence of these dramatic changes occurring in Oregon. In every sector there are substantial and continuing changes in technology, markets, and competition. Firms that have been most successful in Oregon, indeed across America, have been those that have developed new and more efficient production techniques and better products. Telecommunications plays a significant role in these successes.

Oregon recognizes the importance of broadband

Over the past few legislative sessions Oregon has been moving forward and positioning the state for a future with broadband by placing key concepts into Oregon statute.

- Oregon has a broadband goal

“...it is the goal of this state to promote access to broadband services for all Oregonians in order to improve the economy in Oregon, improve the quality of life in Oregon communities and reduce the economic gap between Oregon communities that have access to broadband digital applications and services and those that do not, for both present and future generations...”³⁰

- Guidelines for broadband goal implementation are established

“That the goal set forth in subsection (1) of this section may be achieved by:

- (a) Expanding broadband and other telecommunications services;
- (b) Creating incentives to establish and expand broadband and other telecommunications services;
- (c) Undertaking telecommunications planning at the local, regional and state levels that includes participants from both the public and the private sectors;
- (d) Removing barriers to the full deployment of broadband digital applications and services and providing incentives for the removal of those barriers; and
- (e) Removing barriers to public-private partnerships in areas where the private sector cannot justify investments.”³¹

- Telecommunications is public works infrastructure

“The improvement, expansion and new construction of the state's sewage treatment works, water supply works, telecommunications infrastructure, roads and public transportation provide the basic framework for continuing and expanding economic activity in this state, thereby providing jobs and economic opportunity for the people of Oregon”³²

- Telecommunications has a key role to play in the state's economy

“Focus on strategies and investments that maximize the economic benefit to the state of the global shift to an information, science and technology driven economy and on industries and companies that make significant use of the high-capacity telecommunications, science and technology-related manufacturing processes or knowledge transfer typical of these emerging economic sectors”³³

- Telecommunications has a role in public safety

“It is the policy of the State of Oregon to encourage and support the rapid deployment of broadband telecommunications services in areas of the state where such services do not exist, to support redundancy of critical telecommunications assets in order to ensure homeland security protections in the state and to ensure that a secure conduit is available for emergency communications and public safety networks in all Oregon communities.”³⁴

Oregon broadband today -- progress continues

The Council reports continued progress in the roll out and usage of broadband in Oregon. Most rural Oregon cities now have better telecommunications infrastructure, thanks in large part to the infrastructure investment Qwest made as a result of Senate Bill 622 in the 1999 legislative session. There is more broadband service availability and more reliable network capacity as a result of the five self-healing fiber optic rings serving different parts of Oregon. For these areas of the state, the current focus should be on how best to use that economic competitive advantage to recruit new businesses, to grow existing businesses and develop the applications that will utilize the technology to improve quality of life. In particular we need to work on public sector applications in health care, education, public safety, and government as well as electronic commerce and other business applications.

Oregon has seen significant fiber network infrastructure deployment in addition to the SB622 Sonet Rings. The Northwest Open Access Network of Oregon (NoaNet Oregon) is a nonprofit cooperative corporation that has licensed fiber optic facilities from the Bonneville Power Administration and other sources. NoaNet Oregon is unique in the nation for creating a cooperative to provide a competitive, open access fiber optic backbone in the state with local members to build out the middle and last mile. NoaNet Oregon has also been turning up its backbone network over the past two years along with the fiber distribution networks of its members, providing communities with additional capacity and route diversity in a fiber network completely separate from the incumbent Telco's. The Council reports that several municipalities and organizations have built out fiber and deployed wireless to push broadband into rural areas.

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Primarily Electric Co-operatives along with some municipalities and an Indian Tribe are building the local fiber distribution networks. NoaNet Oregon has announced an extension of its network backbone to Southern Oregon and California with plans to connect with its eastside network completing yet another SONET ring backbone serving the state.

Additionally, other businesses and consortiums have built or created competitive fiber networks.

According to a June 2004 FCC report, high-speed lines in Oregon increased from 27,062 in December 1999 to 380,507 in December 2003.³⁵ One source shows by June of 2002 Oregon ranked 24th in the U.S. in broadband subscribers.³⁶ Yet another report shows Oregon ranked as 11th using a broadband index approach that is based on the extent to which policies spur or impede broadband deployment or demand.³⁷ As of October in 2003 in the US as a whole, 2.8% of households added high-speed Internet service in the second half of 2002 – with Connecticut, Oregon and New Jersey leading the nation in incremental broadband growth.³⁸ The available data does not present a clear picture of Oregon's current status beyond indicating that progress is underway.

Yet we honestly must report, based on the preponderance of anecdotal evidence, that not all areas of the state are served with the benefits of broadband. Just as it's been conceded at the national level that the work is not done, so too is the case in Oregon. Cities remain without access to broadband services and there continue to be areas without the benefit of route diversity. Even in those places in Oregon with the best current infrastructure and services the current advantage will be short-lived as other states catch up and as the rapid changes in information technology continue. We will need to run fast to avoid falling behind other states and regions and to maintain our economic competitive advantage. In this section we report on the status of various deployments of technology and usage.

DSL

Telephone companies now offer DSL services in selected locations in Oregon over the same copper wires as the analog telephone transmission, using a higher frequency (see Appendix 6 – Maps and Charts, "Oregon Cities with High Speed Data Services – DSL"). Current DSL technology is at best a stop-gap interim technology because it is restricted to limited distances from the central office and has too little capacity for many of the new broadband applications that consumers will want, including high quality digital video transmission. To complete the transition, we will need to convert all our special-purpose analog circuit-switched voice networks to multi-purpose digital broadband packet-switched networks. And, we will need to provide quality of service capabilities on our digital networks to support voice and video applications with the quality we have come to expect.

Telephone companies are now starting to offer Internet telephony (i.e., Voice over Internet Protocol – VoIP) using their DSL capabilities. One example is Qwest's OneFlex™ Hosted VoIP³⁹, referred to as "naked DSL"⁴⁰ in some quarters, because an analog phone line is not required.

Cable

Cable television began using coaxial cables for one-way distribution of analog television signals, and are now well into the process of converting to multipurpose bi-directional broadband digital transmission. All segments of television distribution are converting to digital media. Cable companies offer digital video through cable converter boxes that support both standard analog television signals (converted back from digital to analog so people with analog TV receivers can view them) or for direct transmission to digital TVs that can receive either standard or high definition digital TV signals. They also offer broadband data transmission through data modems in selected locations in Oregon (see Appendix 6 – Maps and Charts, “Oregon Cities with High Speed Data Services – Cable Modem”).

Many of the major cable providers have either begun providing digital telephone service or have announced plans to start such services later this year, using “voice over Internet protocol” (VoIP) technology.

Wireless

This rapidly emerging technology is truly exciting and holds great promise for rural Oregon. Two technologies are emerging in the Oregon landscape. Wi-Fi, short for Wireless Fidelity, is a term that is used generically to refer to any product or service using the 802.11 series standards developed by the Institute of Electrical and Electronics Engineers (IEEE) for wireless local area network connections. Wi-Fi networks operate on an unlicensed basis in the 2.4 and 5 GHz radio bands and provide multiple data rates up to a maximum of 54 Mbps. The bandwidth is shared among multiple users. Wi-Fi enabled wireless devices, such as laptop computers or personal digital assistants (PDAs), can send and receive data from any location within signal reach of a Wi-Fi equipped base station or access point (AP).

The expansion of Wi-Fi access to the Internet has recently seen the explosive growth of hotspots on a commercial and noncommercial basis. A public wireless “hotspot” is an area where a computer or PDA equipped with a wireless local area network card can connect to the Internet through wireless access points. Networks of hotspots consisting of a number of access points have also been constructed to cover larger areas such as entire airports. Driven by low cost devices operating on an unlicensed basis, the expansion of hotspot access points has become rampant as build-out continues with the assistance of numerous entities including small- and large-scale businesses, public institutions, and individual entrepreneurs. Providers use the technology for everything from enterprise networks to purely ad hoc provision of access points for either non-commercial use or for their potential to attract customers. For instance, both Starbucks and McDonald’s are using Internet access to attract patrons, and some colleges and universities are deploying ubiquitous Wi-Fi networks. Even entire municipalities -- from large metropolitan areas such as Seattle to smaller communities such as Chaska, Minn. -- are providing Wi-Fi access on either a no-fee basis or on a modest fee-for-service basis.

WiMax, short for “Worldwide Interoperability for Microwave Access” refers to any broadband wireless access network based on the IEEE 802.16 standard. WiMax includes fixed systems employing a point-to-multipoint architecture operating between 2 GHz and 66 GHz. WiMax is capable of transmitting network signals covering in excess of 30 miles of linear service area,

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which is much greater than Wi-Fi's coverage area. It provides multiple shared data rates of up to 75 Mbps. At the same time that Wi-Fi networks are reaching a more mature state, WiMax has the potential to alter and further accelerate the evolution of broadband services. Coincident with the integration of Wi-Fi into devices, Intel has announced the integration of WiMax into its next generation chipsets for mobile devices. Analysts suggest that WiMax, although still in an early state, could complement or even supplant the development of Wi-Fi networks in the long run. It is anticipated that new standards for wireless networks will incorporate both roaming and handoff capabilities, which will further enhance the potential for broadband fixed and mobile applications in both licensed and license-exempt spectrum.⁴¹

Wireless deployments in Oregon are underway (see Appendix 6 – Maps and Charts, “Oregon Broadband Wireless Providers”). Wireless broadband is seeing rapid growth in Oregon. A few Oregon communities have had access to one form of wireless for several years now.

Among its advantages, wireless broadband does not require extensive tearing up of streets or hanging of fiber in the “eye space.” As such it is growing in popularity among community planning circles. Utility companies like it too as there are no requirement for use of poles.

Satellite

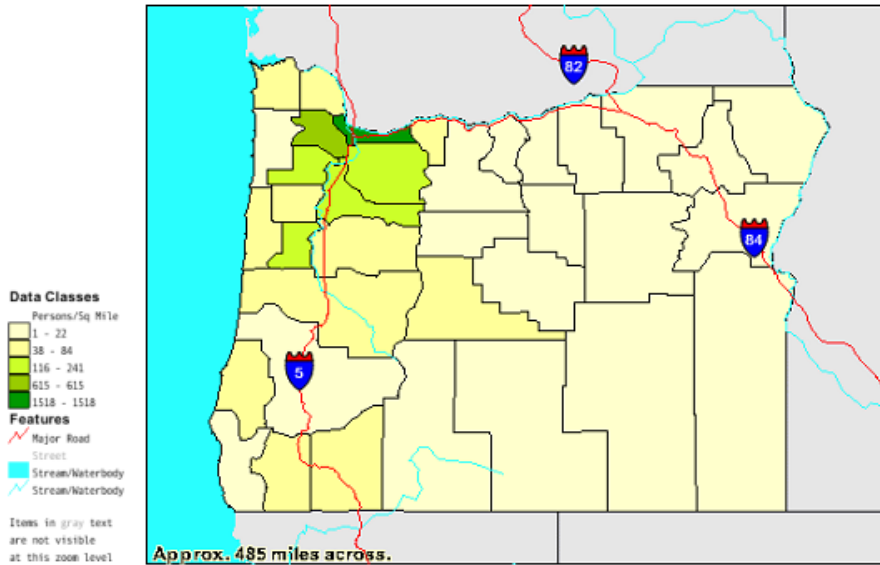
Direct broadcast satellite television has been digital for some time. Broadband over satellite is available in Oregon and may be the only option for many rural locations today. Initial investment and monthly costs present a barrier to many in rural areas of Oregon, locations where the annual take home pay is substantially less than in urban areas.

Current satellite-based broadband providers include Starband⁴² and DIRECWAY[®] offered through DIRECTV⁴³. Pricing ranges with an initial setup fee of approximately \$600 and a \$60 per month fee.

Coming in early 2005 is a new satellite service from WildBlue. WildBlue's always-on broadband Internet connection provides speeds that are comparable to DSL and cable modem service (up to 1.5 Mbps and upstream speeds of up to 256K - expected to begin activating residential customers early 2005). WildBlue plans to provide customers with a "one dish solution" for their video and high-speed Internet needs (i.e., one WildBlue dish can physically receive both WildBlue's high-speed Internet access and either of the two U.S. satellite TV services - DirecTV[®] and DISH Network TM).⁴⁴ Pricing has not yet been announced.

Many areas of rural Oregon remain “broadband-challenged”

As illustrated by the following map, Oregon's population density accrues to a few modest sized cities. Most of the state is sparsely populated, but never the less contain substantial numbers of persons.



Persons per square mile⁴⁵

The growth in availability of broadband is primarily seen in cities or areas demonstrating significant demographic clustering. One only need cross just outside the city centers or be slightly off the path of a cable run to discover this fact. One Oregon city serves to illustrate this issue.

The city of Rogue River in southern Oregon is on the I-5 corridor and benefits from Charter’s cable modem service, Pipeline, and Qwest’s DSL service (note: Qwest has been actively expanding DSLAMs near the outer boundaries of the city’s footprint). The footprint for the city of Rogue River contains approximately 1,800 residents. Within a 10-mile radius of the downtown area, and living outside the city limits, are an estimated additional 8,000 resident without access to broadband (except for satellite – see the above discussion for affordability of satellite access).

The Rogue River scenario is replayed throughout rural Oregon. Solutions to provide broadband to these folks, who indicate they want it and are willing to pay cable and DSL-like rates for it, need to be pursued in the interest of leaving no community behind. Just because you don’t live in a city doesn’t mean you’re not a part of a community.

Legislative Recommendations for Oregon’s Broadband Future

Broadband services are essential for all businesses, government, healthcare, public safety, education, and consumers, not just information-intensive businesses. We are still in the very early stages of a long transition. Oregon’s legislative statutes need to keep pace with the rapidly changing world of telecommunications technology. We need to make the transition as orderly as possible and without causing harm to the economy and quality of life in Oregon in the process.⁴⁶ Many opportunities lie ahead.

The Council recommends passage of the following legislative concepts (See Appendix 5 for preliminary draft language – i.e., pre-legislative counsel crafting of the language. Measures denoted with “LC” at the top were received from legislative counsel.):

Expand the number of eligible Electronic Commerce Enterprise Zones (SB 12)

E-Commerce is a growing force for economic recovery in Oregon. The Legislature should facilitate and promote E-commerce through the expansion of E-commerce Zones to more communities.

Effective January 1, 2002, a new Act by the State of Oregon Legislature took effect. Because of this law, four of Oregon's nearly fifty enterprise zones have received special status to encourage electronic commerce, or "E-commerce" investments.

These four enterprise zones are as follows (with zone sponsor):

- **Harney County/Burns/Hines** (city of Burns, city of Hines & Harney County)
- **Medford Urban** (city of Medford)
- **N/NE Portland** (city of Portland)
- **Roberts Creek** (city of Roseburg & Douglas County).
- In addition, the city of **North Plains** and its urbanized environs are also designated as a special "electronic commerce city" or " . . . community."

The most significant feature of these new designations is that qualifying business firms may receive a credit against the firm's annual State income or corporate excise tax liability, up to \$2 million. The credit itself equals 25 percent of that tax year's capitalized investment in operations related to E-commerce. The amount of credit remaining unclaimed is carried forward over the succeeding five years.

To obtain this State tax credit the business firm also must be receiving the three– to five–year exemption on qualified property from local property taxes, regularly available in an enterprise zone. Receiving this property tax abatement entails the creation of new plant or equipment and of new full–time, year–around employees.

In one of the four E-commerce enterprise zones, "being engaged in electronic commerce" is itself an eligible activity for the property tax abatement. Though, in any of Oregon's enterprise zones such an operation could very well be eligible for other reasons, too. For the E-commerce community of North Plains, being engaged in electronic commerce offers the only means by which a business firm's new investment may be eligible for the property tax abatement and the State tax credit.

In addition to expanded eligibility of business operations, the type of personal property equipment and machinery that qualifies for the exemption also is more broadly defined. Usually, such property that costs less than \$50,000 per item qualifies only if used in the production of tangible goods. In the case of an E-commerce enterprise zone or community, using it in electronic commerce alone suffices for the exemption.

The exemption still does not cover vehicles or personal property items costing less than \$1,000, and all other enterprise zone criteria and procedures apply, as well.⁴⁷

The following is a recap of the Electronic Commerce impact within the Medford Urban Enterprise Zone from February 2002 through February 2003.⁴⁸

Number of companies applying:	13
Existing jobs saved:	1,242
New jobs created:	447
Average wage for new jobs created:	\$14.63/hour (does not include benefits)
Total New Annual Salary:	\$13.6 million
Total New Investment:	\$110,115,778

Future impact from investment and new job creation:

New Annual Property Tax Revenue:	\$ 1.54 million (Exempt for 3 years)
New Annual Income Tax Revenue:	\$ 1.2 million
Estimated Indirect Jobs Supported:	625

Equivalent results have continued in this E-commerce enterprise zone as well as in the Roberts Creek area in Douglas County where they report the E-commerce Zone designation as a significant factor for Dell locating a service center in their community and creating hundreds of new jobs.

Fix the Advanced Telecommunications Facilities Tax Credit (SB 11)

The existing tax incentive legislation for telecommunications infrastructure will be more useful and stimulate investment when it allows “carry-forward” and also “assignment” of the tax credit.

Current statutes provide none of the incentives as originally intended by proponents of SB 229 (2001 session). Legislative “good housekeeping” would correct calculation issues as well as to include a larger group of eligible organizations, including but not limited to, non-profits, consortia, cooperatives and Internet service and access providers, and will also increase the usefulness. The 20% tax credit should be increased to 50% to improve the economic impact of the credit on investment decisions and the \$2 million cap on annual tax savings (20% of the current \$10 million cap on investment) should be increased to \$25 million (50% of the proposed \$50 million cap on investment).

The tax credit opportunity is scheduled to sunset on December 31, 2005. The Council recommends extension of the telecommunications facilities tax credit.

Fiscal impact from passage of this legislation most likely will not be seen until calendar year 2007. Passage in 2005 with a January 1, 2006, implementation date would require the Oregon Economic and Community Development (OECD) to complete the administrative rules by that date. Based on prudent expectations for applications and approval processes the earliest year in which capital investment might occur would be mid-2006 to 2007. Businesses making this sort

of capital investment generally are not profitable until their third year (2009 – 2010). As such the realization of the tax credit would not occur until 2009 – 2010. During the period in which eligibility for the credit exists, the business would realize a 50% tax credit. The credit allowance would expire in the 5th year of the investment at which time all of the earnings would be subject to taxation and would add to state revenues.

This measure would add revenues from the business and from employees while incenting further build out of the broadband infrastructure. Rural areas could utilize this vehicle to craft business models to add wireless broadband access for their residents.

In the meantime there is a high likelihood of adding jobs at the point of investment to support the infrastructure build and subsequent maintenance. These jobs would be subject to state income tax, generating additional revenues in the short run.

Provide new authority for the Public Utility Commission (PUC) to include consideration of the impact of regulatory decisions on the Oregon economy and to facilitate public-private partnerships (SB 16)

New legislation is needed to give the PUC authority to take into account the effect of its decisions on the economy of Oregon in general and the rural economy in particular.

The 2003 Oregon Legislature unanimously passed legislation establishing a state goal for broadband services, including guidelines for achieving the goal⁴⁹ (see ORS 759.016, <http://www.leg.state.or.us/ors/759.html>). The Council recommends the addition of an amendment confirming that the PUC is given the authority to work toward goals already specified in law.

PUC decisions on telecommunications policy that are made without taking into account the effects on telecommunications infrastructure investments that are critical to the future of the Oregon economy could cause serious harm to rural Oregon and to the state economy as a whole. We understand that State and Federal law will continue to prohibit the PUC from requiring private sector businesses to make investments that they believe will not provide a sufficient return on investment. Nevertheless, the PUC could be given broader authority to ensure that its decisions do not have negative impacts on the Oregon economy. The PUC could provide regulatory incentives for carriers to assist in the transition from analog telephony monopolies to a competitive digital broadband world. A key issue today is how to provide incentives for investment and incentives for public-private partnerships to speed the transition to the new digital broadband infrastructure that will be essential for the 21st Century economy in all communities.

Whether or not there is new Oregon legislation on the role of the PUC in the Oregon economy, the PUC should work cooperatively with carriers and local governments to create public-private partnerships to invest in rural telecommunications infrastructure in locations where private sector funds are not available because the projected return on investment is insufficient. We need to find a way to stimulate joint public-private investments instead of wasting both private and public sector funds in needless legal, political and regulatory battles over the right of local governments to invest in essential infrastructure. Competition can work in urban settings. To solve problems in rural Oregon we need to cooperate. We need to protect the right of local

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governments to invest in essential infrastructure when the private sector is unable or unwilling to invest. But, more importantly, we should focus on ways to combine private sector and public sector investment in public-private partnerships to build essential infrastructure that is uneconomic for the private sector alone. The Oregon PUC can play a key role in sponsoring and supporting that public-private dialog.

The most serious telecommunications infrastructure investment needs in rural Oregon are now in territories of telephone carriers other than Qwest. Let's start a three-way dialog among the PUC, the carriers and representatives of rural communities to find out what it will take to fix the problems and facilitate the transition to a new digital broadband world for the rest of rural Oregon. Let us first get the parties to the table so we can figure out how to cooperate. With enough goodwill, and clear understanding by all parties that telecommunications carriers have a fiduciary responsibility to their shareholders not to make uneconomic investments, we should be able to find mutually satisfactory arrangements that meet the needs of all parties, just as was done with Qwest.

Unlike other critical infrastructure, which is usually provided by governments, telecommunications infrastructure is usually provided by private businesses including some that are subject to state Public Utility Commission (PUC) and Federal Communications Commission (FCC) regulation. The private sector, understandably, does not make investments unless the expected return on investment is greater than other investment opportunities. Except for small rural telephone companies with no urban properties, those investment opportunities are usually greater in urban locations, because the urban market is larger and competitive pressures are greater there. Nevertheless, some private sector telecommunications providers engage in political, legal or regulatory attempts to block public investment in rural telecommunications infrastructure, even when they are not willing or not able to make the investment themselves.

Instead of wasting legal and lobbying dollars in a public-private fight, we in Oregon need to find a way to build cooperative public-private partnerships so that public monies can be used to bridge the gap when private sector return on investment calculations are not sufficient to justify private-sector-only investments. We also need to protect the legal right of the public sector to install and operate telecommunications infrastructure in locations where the private sector is unable or unwilling to invest in infrastructure that is essential for economic and community development.⁵⁰

Provide new authority for the Public Utility Commission (PUC) to use universal service funds to support broadband services (SB 14)

ORS 759.016(1) says, "(1) That it is the goal of this state to promote access to broadband services for all Oregonians in order to improve the economy in Oregon, improve the quality of life in Oregon communities and reduce the economic gap between Oregon communities that have access to broadband digital applications and services and those that do not, for both present and future generations; " The council recommends that the PUC be given authority needed to achieve that goal.

Small rural telephone carriers currently depend on the per-minute subsidy from long distance carriers for termination of long distance calls, even though their costs do not depend on the minutes of use. (Costs are based on peak load capacity, not minutes of use.) Regulators created

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that subsidy in the monopoly era to keep local rates artificially low (to please urban consumers) by using higher than cost long distance rates to subsidize local service. Now, wireless providers and Internet providers are taking long distance traffic (and revenues) from the public switched wireline network, reducing total revenues and thereby putting further pressure on universal service subsidy funds. Large urban-based carriers propose a “bill and keep” regime that would do away with per minute terminating access charges. As a result, smaller rural carriers are at serious risk. Both federal and state universal service funds are already under pressure and may be unable to take up the slack. We need to plan ahead to avoid disaster in rural communities. In principle, it would be a good idea to have both Federal and Oregon Universal Service Fund support for broadband services. In practice, it may not be fiscally prudent at this time to expand the obligations of funds that may not be sufficient to meet current obligations to support expensive special-purpose telephone technology. Instead we need to rethink how best to facilitate the transition to lower cost digital technology that can support multiple applications.

Rural telephone carriers get payments from three sources in addition to monthly payments from customers for basic local telephone service. These include subscriber line access charges (the \$6.50 per month per residential line for access to the long distance network we see on our phone bills), inter-carrier compensation (primarily the payments long distance carriers make to local carriers for originating or terminating long distance calls), and subsidy from State and Federal universal service funds (USF) (from two USF surcharges on all our telephone bills). Access charges, inter-carrier compensation and universal service fund payments are all interconnected. Push in the balloon on one of these fronts and the costs and consequences will pop out in one of the others. The underlying costs do not go away when payments from one of these sources are reduced. The part of the funding system most at risk now is compensation from long distance carriers to local carriers. Now that long distance service is more competitive, that traditional source of subsidy will go away as people and businesses choose lower priced alternatives to traditional wireline long distance service, including cellular and Voice over Internet Protocol (VoIP). The only certainty we have is that there are not enough funds in the present system to keep all of the current subsidies flowing at the current level AND pay for the capital costs of conversion to new and different broadband networks with a different underlying cost structure. What is worse, most of the regulatory decisions affecting the transition will be made in Washington, DC, not in Oregon. Unfortunately, Washington DC is a long way away from the rural Oregon communities that will suffer if the transition is botched. For example, if the FCC accepts the recommendation of the Universal Service Joint Board to provide Federal Universal Service Fund support for only the primary line to each business or household, the economy of rural Oregon could suffer seriously. It would be preferable to use whatever funds are available to support all rural lines at a lower rate than to provide a subsidy for some lines but not others. Higher prices on some lines will drive customers to wireless and Internet alternatives (or to do without), thereby reducing the revenues carriers need to cover their fixed costs and increasing the need for subsidy. That is a recipe for a death spiral for rural carriers, not a credible way to help them transition to a broadband digital future.

Oregon should try to get ahead of the curve with transition planning, not just react after disaster occurs. Rural Oregon is most at risk in the coming transition, because inter-carrier compensation and/or universal service funds are likely to decline, and there is no reasonable alternative source of funds in sight. We will need to dismantle and reassemble the flow of funds structure in the telephone industry that grew up in the age of regulated monopoly and is most inappropriate for the transition to a competitive broadband digital world. Absent regulatory incentives to the

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contrary, the private sector will make most of its investment in new technologies and networks in their urban properties because of the larger urban market and higher expected return on investment, and because of competitive pressures in urban areas.

The economy of rural Oregon is at risk in the transition from regulated telephone monopolies to an unregulated (or much less regulated) competitive marketplace for broadband telecommunications services. Parts of rural Oregon do not have any broadband services. Much of rural Oregon lacks any telecommunications competition. For example, the wireless (cellular) telephone services urban residents and businesses take for granted (and use regularly for long distance calling at lower costs than wireline phones) are available in only a portion of rural Oregon. Urban residents wishing broadband services can often choose between DSL services from their telephone provider or cable modem service from their cable company. Rural residents are lucky if they have any access to broadband. Many have no access. Even when DSL is available in a rural town, many rural residents live too far from the central office to be able to qualify for DSL service. Since what services are available typically have no competition, we cannot depend on competitive pressures in rural Oregon to keep prices low and quality high.

The rural goal in this process should be clear: Protect rural communities and rural people from becoming victims in the transition from an age of narrow-band analog telephone monopolies to an age of broadband digital multi-media telecommunications competition, using networks with a lower underlying cost structure and more advanced services capabilities. We do not want rural communities to be stuck with only old technologies when their urban competitors have modern telecommunications services. And we certainly do not want rural communities to lose services or pay extremely high monopoly prices if a policy of letting competitive market forces determine outcomes fails in small rural markets.^{51,52}

Public Utility Commission (PUC) Reporting (SB 13)

Establish benchmarks for evaluating broadband

We need to expand the collection and reporting of data on the profile of broadband in Oregon.

Over the course of the Council's research and study we found that accurate data is very difficult, if not impossible, to come by for use in analysis and for subsequent quality planning.

We are still in the very early stages of a long transition in the adoption of this critical technology, a transition requiring monitoring to understand Oregon's progress toward achieving the goal. To be able to measure, both quantitatively and qualitatively, progress toward achieving these goals, the Council has identified three basic benchmarks for this purpose.

- (1) The availability of, the demand for and usage of broadband.

For purposes of this benchmark we use a very broad definition of broadband as used by the general public to mean T-1 lines, cable modems, DSL or wireless broadband. We would explicitly exclude dial-up access to the Internet, although that too is of interest. With this benchmark we would gain an understanding of the true availability of broadband as well as the actual take rates.

(2) The cost of broadband to consumers.

Pricing varies across Oregon. An understanding of what people are paying is a key factor in understanding the “take rate” (i.e., demand). Emerging studies suggest that higher “take rates” reflect increased usage for both economic uses as well as for quality of life uses (e.g., education, government, healthcare, public safety and recreation).

(3) Route redundancy.

Also referred to as “route diversity”. This benchmark would indicate to what degree we have flexibility and resiliency in our telecommunications infrastructure. The most recent example that people might relate to is the completion of the five Synchronous Optical Network (SONET) rings built out by Qwest. Now when there is a fiber cut or equipment failure on one of these rings, the signal is immediately sent over another route (i.e., route diversity). End-users (i.e., customers) see no interruption in service. This has become a critical factor for public safety, healthcare and call-centers, just to give a few examples. Many areas of the state still do not have route diversity in place. Yet this is critical to the state’s future. Gauging the perception of the existence and need for this resource is very important for planning purposes.

Extend the sunset date for a reporting requirement to ensure consistency with the federal Telecommunications Act of 1996 (P.L. 104-104), to enhance fair competition and to promote deregulation of the telecommunications industry.

The Council recommends that section listed after ORS 759.030 be retained by extending the sunset date from June 30, 2005. The amended Section 3 would be changed to at least June 30, 2007.

Extend the Telecommunication Coordinating Council’s sunset date (SB 15)

Issues relating to telecommunications will continue to play a critical role in Oregon’s economic development and quality of life. The Council recommends extending the life of the Council by amending the sunset date to January 2, 2010.

The Council serves as an opportunity for bridging discussion among many parties throughout the state and for making recommendations on policy and legislative matters relating to telecommunications.

Council Legislation Concept for Oregon’s Broadband Future

Create an “Oregon Broadband Authority”

The Council recommends and supports the creation of an “Oregon Broadband Authority.” The Oregon Broadband Authority’s mission would expand broadband access for Oregon’s citizens, institutions and businesses. Organizations in the public and private sector would be offered low-cost financing for the acquisition of hardware, software and services (e.g., assistance with

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preparation of federal broadband grant or loan proposals) that will improve or increase their use of broadband technologies.

Precedents for this approach are found in Michigan^{53,54}, North Carolina⁵⁵, Alaska⁵⁶ and Kentucky.⁵⁷

Create an Oregon Broadband Authority

An Oregon Broadband Development Authority should be created, either within the OPUC or OECDD. The OECDD and the Oregon Telecommunications Coordinating Council (ORTCC) do a good job of focusing on the demand side, particularly demand for broadband services by medium and large public and private users, such as large businesses, schools, state and local governments etc. This proposal would focus on consumers and small businesses. The Oregon PUC has the experience and staff expertise in the areas of telecommunications engineering and financial analysis to implement the study portion of the Oregon Broadband Development Authority proposal with minimum additional administrative resources.

Oregon Broadband Authority to determine the availability of broadband in Oregon

A careful study of broadband availability from all service providers throughout Oregon needs to be conducted. The primary intent is to establish what broadband services are available on a very disaggregated basis in each part of the state, who the local service providers are in each area and what these services cost consumers. It would not be the intent to ask for proprietary customer or market data. This information would be made available via the Internet to all Oregonians. The study would also be used to identify those parts of Oregon where broadband access is not available. The PUC has the staff and experience to conduct this study. They should get this information from consumer data, not providers.

Designate service areas in the state where public investment could be targeted

The newly created Broadband Authority would provide assistance for development of broadband strategic plans, for development of funding requests, and for matching funds to leverage federal dollars available from the Rural Utility Service grant and loan programs. The OPUC and/or OECDD would be authorized to issue RFPs and then select the recipient of a grant for 20% of the installed system cost in each unserved area and provide technical assistance, so that the entity will be eligible for an U.S. Department of Agriculture Rural Utility Service loan. Approximately \$2 billion is available for these loans and, according to RUS, a major impediment is that applicants do not have adequate financial resources or technical expertise to meet RUS requirements. The RUS requires that applicants demonstrate the financial viability of proposals before a loan is approved as a part of ensuring that the loan will be repaid.

Collaboration Opportunities for Oregon's Broadband Future

Oregon would benefit from having its own Tier 1 Internet backbone peering point⁵⁸

Despite the dramatically lower costs for digital transmission, the Internet, even with broadband access at both ends, is still unsuitable for many applications. Because it is a decentralized distributed network of interconnected networks, there is no centralized control. Some of the links

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and some of the access points are weaker than others and may not have enough capacity to permit high quality service for all users. Internet data packets are delivered on a “best efforts” basis with no guarantee of how long delivery will take or whether some packets are dropped along the way. (Since packets are numbered, a recipient that gets some, but not all, of the packets that make up a long communication, can request retransmission of the missing packets.) The two keys to making the Internet or Internet-like packet networks suitable for a wide range of multi-media applications are broadband network capacity and service quality. These two keys are inter-related. With sufficient broadband capacity throughout the network, the service quality is likely to be excellent. However, if there are bottlenecks or congestion points, then a scheme for prioritizing traffic is required for voice, video and other time sensitive applications to work reliably. The original design for the Internet called for multiple lines connecting every site on the network so that communication could be maintained even if some nodes or links were not available. However, some Internet access services, especially in rural communities, are dependent on a single link that may be cut or congested.

The Internet as we know it today is not yet the reliable broadband multi-application network we expect it to be in the future. In the United States most of the Internet currently uses version four of Internet Protocol (IPv4) software. The Internet is in the early stages of being upgraded to version six (IPv6), which will permit more address locations on the network than earlier versions and therefore accommodate expected expansion for more sites and more applications. IPv6 will also permit Quality of Service (QoS) guarantees that are not possible in the current IPv4 “best efforts” Internet. The “backbone” of the Internet is provided by a small number of large “Tier 1” providers who interconnect with each other at a number of “peering points.” Tier 1 providers do not charge each other for interconnection because they are approximately of equal size (hence the term “peering”) and because the value of each network is increased for their customers when they can connect to everybody else. Most of the Internet Service Providers (ISPs) from whom we customers get service are “Tier 2” providers that pay to lease lines from their locations to locations where they can connect with Tier 1 providers. Tier 2 providers also pay Tier 1 providers for the right to connect and to have their traffic transit the Tier 1 network. Since Oregon does not have a Tier 1 peering point, most Internet traffic between locations in Oregon travels far out of state on a long circuitous route before getting to its destination. The network routes get very complicated as each party attempts to minimize costs and maximize revenues. As a result, data packets travel through many “routers” on the way to their destination. Each router “reads” the address in the packet header and sends it on to the next point in a long chain. A small delay time is introduced at each router in the chain. That delay does not make any noticeable difference for applications such as e-mail, but can create problems for real time voice conversations and for videoconferences. Even with IPv6 software, the present Internet may not be sufficient for all of the truly broadband applications of the future. At some point we may need to transition from the current Internet to something like the experimental “Internet 2” that is now being tested by a number of academic institutions.

Route diversity⁵⁹

The Council encourages additional collaboration to provide backbone network route diversity to all regions of the state. The network reliability it provides is critical for commerce as well as for education, government, healthcare, and public safety.

Most Oregon communities have pretty good telephone service, but have great difficulty recruiting call centers, information-intensive businesses or telecommuters unless they have diverse routing (for reliability) and sufficient broadband capacity. Reliable broadband services are also essential for health care, education and government applications, including public safety.

Some parts of rural Oregon served by some of the other Oregon telecommunications companies were left relatively farther behind after that Qwest infrastructure investment. For example, we need diverse routing out of regions such as the south coast, where periodic cuts of the single fiber serving the region are a major economic disadvantage and a public safety hazard.

The stage has been set for additional work to address route diversity through passage into law of a public safety broadband policy.

“It is the policy of the State of Oregon to encourage and support the rapid deployment of broadband telecommunications services in areas of the state where such services do not exist, to support redundancy of critical telecommunications assets in order to ensure homeland security protections in the state and to ensure that a secure conduit is available for emergency communications and public safety networks in all Oregon communities.”⁶⁰

Ensuring route diversity is a critical task ahead requiring significant collaboration and cooperation, whether it be for health care, education and government applications, public safety for bio-terrorism preparedness or natural disaster recovery efforts

Complete and Implement the Network Sharing Plan for Distance Learning for Healthcare and Education

[Please note: This is a very early draft of the work underway by the Healthcare-Education Committee of the ORTCC. Considerable effort remains to bring the final plan and report to the legislature on February 1, 2005]

In 2003 House Bill 2577 was enacted into law directing the Oregon Telecommunications Coordinating Council (ORTCC) to prepare a plan to ensure that education and health care communities are able to connect by broadband and other telecommunications infrastructures necessary for distance learning.

To comply with this legislation, the ORTCC has established a healthcare-education committee, which in turn has established a steering committee and three subcommittees: Application and Content, Policy and Funding, Technology and Connectivity. While work continues to finalize the details of the plan, elements of the plan include:

- A. Need.** The policy and funding subcommittee is developing a “white paper” documenting in more detail the need for the broadband connectivity and networking specified in the legislation. We are convinced that a simulation-based healthcare workforce training program and other distance education programs are essential not only to provide the training needed to fill the many unfilled healthcare job opportunities in the state, but also to assist in the economic development of the state and its communities.

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- B. Applications.** The application and content subcommittee has been tasked with providing a summary description of the various distance education applications that could help meet the documented need, provided that network capacity is available to make that distance education available in the communities throughout the state where the jobs are available.
- C. Connectivity.** The technology and connectivity subcommittee has been tasked with preparing a map of the networks now available to meet the need, how to interconnect them, and to specify what additional technology and networking capability will be required to make the applications available in communities throughout the state where healthcare personnel shortages exist.
- D. Policy.** As a matter of prudent fiscal planning we expect to recommend that the State should NOT fund a new network dedicated to meeting the healthcare-education need, but should require the sharing of capacity on existing state-funded networks and help extend those networks to locations where need is demonstrated and adequate capacity does not already exist. Further, where such need is again demonstrated, existing public public-private networks should be encouraged to participate in local, regional and community-of-interest efforts to provide or enhance telecommunications capacity and/or connectivity not otherwise available.
- E. Funding.** Some state funding will likely be necessary to implement the network additions and expansion required to implement the broadband network capacity required by the Governor’s Healthcare Workforce Initiative. As part of its planning efforts, ORTCC will prepare budget recommendations for state funding of the incremental costs required to use existing state networks to meet the demonstrated healthcare workforce education needs. We may recommend that that such funding be granted to the agency or agencies tasked with implementing the Healthcare Workforce Initiative and that they be applied by such entities to whatever network solution best serves the requirements for healthcare workforce distance education.

Continue Pursuit of Public-private Partnerships

Oregon has an opportunity to lead the nation in realizing the benefits of telecommunications technology for economic development and growth as well as for enhancement of critical quality of life factors. When we speak of benefits we are not talking in an abstract sense. We mean jobs, improved access to healthcare, improved access to government services, better educational opportunities, the chance to spend more time with family, and the prospect of relieving traffic congestion and accompanying air pollution. This opportunity will only be realized with the active collaboration of Oregon’s residents, institutions, businesses and communities. We refer to this cooperative and collaborative approach as “public-private partnerships.” (See Appendix 4 – Public-private Partnerships for examples.)

The Oregon telecommunications infrastructure is as critical to business activity today as physical proximity to raw materials and markets in the industrial age. In the information age, it is the telecommunications network that provides proximity and access to resources and markets, both

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within the state (including rural communities) and throughout the world. Most of Oregon, including much of rural Oregon, now has better telecommunications infrastructure than any other state. Now we need to capitalize on that strategic advantage. Advanced telecommunications capabilities (i.e., broadband) is now as critical to our Oregon economy and quality of life as are highways, bridges, electrical grids and water systems. “Broadband is the answer to the often-asked question, ‘What will it take to help this industry?’”⁶¹

There are at least four areas in which we could work together to make Oregon’s broadband deployment and usage even better and to take advantage of the resources we already have. Those areas of cooperation and partnering include:

- Economic Development Partnerships
- Marketing, Demand Aggregation, Training and Support
- Applications Development
- Infrastructure Partnerships⁶²

The realization of the objective will support the vision of the Oregon Business Plan and reinforces the 4Ps in a way that promotes the growth and health of Oregon's traded-sector clusters as well as many other aspects of our economy and quality of life. Here is a brief overview of how realization of the objective impacts the five Ps as used in the Oregon Business Plan and how they contribute to a healthy economy⁶³:

People – Workforce and Education

Telecommunications provides access to education through distance learning. If you can get to them, Oregon’s educational opportunities are great (albeit at risk of degradation under the cloud of the current budgetary crisis). Many residents live at great distances from classroom-based educational resources. Even for those who reside in our larger cities, access to critical programs is often out of reach. For low-income groups seeking to advance, the opportunity to access distance learning from their living rooms after the kids are in bed can be a significant opportunity. Individuals and organizations can use distance-learning programs to effectively meet their education and workforce training needs. Through use of distance education, efficiencies in the costs of program development can be achieved (e.g., a program developed in one area can be shared across the state). Telecommunications can provide the opportunity to access these Oregon programs as well as programs offered throughout the world.

Place – Quality of Life

Through use of telecommunications we can greatly enhance the quality of life for Oregonians by providing greater access and interaction with all levels of government, by providing healthcare services through telehealth and telemedicine, by promoting the fantastic range of recreational opportunities available throughout the state, by reducing air pollution resulting from vehicular and air travel to meetings, by enabling telework and by promoting the wide range of arts and cultural activities available everywhere in the state.

Productivity – Business Costs and Business Climate

Telecommunications can reduce and even eliminate the barriers imposed by distance. These distance barriers not only contribute to travel costs but also to the time required to cover even short distances. Telecommuting eliminates further contributions to air pollution factors. Telecommuting opens up opportunities for expansion of the workforce into areas hitherto not possible, including the advent of home-based workers and businesses. E-Commerce is one of the fastest rising contributors to bringing new revenues into an area. Illustrations of e-commerce potential may be found in all areas of Oregon and in businesses of all sizes that have joined the traded sector through e-commerce. Through telecommunications global markets can now be accessed in ways previously thought to be cost prohibitive. Use of technology is considered one of the driving factors in the growing productivity of our domestic workforce, providing greater opportunities to compete in a global landscape. In March 2002, Oregon was recognized by the Progressive Policy Institute as being first in the nation in supporting Internet use by citizens as determined by state laws, regulations and administrative actions.

Pioneering Innovation and Entrepreneurship

Much of the recent growth in the Oregon economy has been propelled by knowledge-based industries such as electronics, software, and e-commerce – and through innovation and new products from all industries. Many of these advances are in large part due to the availability of advanced telecommunications services that provide the ability to quickly ship knowledge from one corner of the world to another. Knowledge comes in many forms from patented chemical formulas to detailed engineering specifications to the codes necessary to operate a computer-based lathe. Telecommunications infrastructure is the nervous system of all modern industry.

The 5th P - Public Finance:

Throughout the global economy we see a high correlation between the use of telecommunications and wealth-building activities. Interaction within and between clusters increasingly depends on the rapid exchange of information supported via broadband. Companies not availing themselves of these technologies are destined to mediocrity, if not failure. Regions not advocating and supporting the usage of these technologies will lag in many dimensions beyond their economy - healthcare, education, and access to government. Healthy economies are based on healthy businesses, and businesses pay the bills for our public services (directly and through salaries to employees).

We recommend that the public sector and the private sector in Oregon work together in these five areas of need because neither the private sector nor the public sector can do it alone. Working together in cooperative fashion, we can transform the economy of our state, including our rural communities.⁶⁴

Collaborate to Resolve Rights of Way (ROW) and Joint Use Issues

Utility poles and the rights-of-way are important components of utility systems that deliver both electrical and telecommunications services to customers. What's changed is that the market for telecommunications services -- including traditional telephone voice and data transmission and enhanced information/entertainment services -- is growing as a result of a technology-driven explosion along with increasing customer demand for those services. Utility poles are especially important to new operators (i.e., competitive telecommunications providers) because they provide the least-cost means for capturing new telecommunications customers and their expanding communications needs.

Because of growing controversies associated with the shared use of utility poles, the 1999 Oregon Legislature in House Bill 2271 (see Section 9, Chapter 832, OR Laws 1999) gave a mandate to the PUC. Since enactment of this bill, much progress has been made with respect to improving safety, efficiency and cooperation on utility poles. However, serious issues still remain, and some major disputes continue.⁶⁵

In November 1999 a task force was established by the Oregon Legislature to advise the Oregon Public Utility Commission on issues pertaining to utility poles. The task force submitted proposed rules for determining appropriate sanctions for unauthorized attachments and criteria for certifying compliance with laws regulating pole attachments. The Oregon Joint Use Association (OJUA) was formed based on the initial work from the task force and the realization of what else needed to be accomplished to help the entire industry be successful. It's the mission of the OJUA to:

“Become a resource that builds trust, cooperation and organization between support structure (pole) owners, users and government entities that will result in a safe efficient use of the Right of Way...”⁶⁶

In addition to the joint use topic opportunities exist for greater collaboration on the use of state and local public property for fiber and wireless build outs (e.g., roads, water tanks, existing radio sites, sewer pipes, etc.). Encouragement to state agencies and local governmental entities to streamline permit processes is among the proactive actions that could help facilitate deployment of broadband.

The Council supports these and other collaborative efforts to resolve ROW and joint use issues. Such collaborations have the opportunity to avert lengthy and costly court cases with prolonged decisions. We need to find more ways to resolve these issues.

Implement Statewide EAS

The Portland metropolitan area has a multi-county Extended Area Service (EAS) local calling area. Beginning in October, Southern Oregon will have a multi-county EAS. Rural counties outside the I-5 corridor do not have multi-county EAS. Instead, they have high intra-county toll rates that sometimes make local in-county calling costs higher than calling New York. High intrastate toll rates are the result of an historical subsidy system that was aided and abetted by the PUC to keep local telephone service rates low for urban consumers. It is, and always was, a

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perverse subsidy that harmed rural Oregonians in order to benefit urban Oregonians. Intrastate toll rates were kept substantially above cost in order to keep “local” rates low. Rural Oregonians, on average, have lower incomes than urban Oregonians, but are more dependent on long distance calls for most services than urban Oregonians. Long distance charges are a much higher percentage of total telephone bills for rural Oregonians than they are for urban Oregonians. These artificially high intra-state toll rates harmed rural businesses in two ways. They created higher costs for rural businesses (compared to urban businesses) and they created a high economic and psychological cost for potential urban customers to contact rural businesses.⁶⁷

Summary and Conclusions

The Council finds that we are in the early stages of an historic telecommunications transition similar to the transition from telegraph to telephone service. The pace of change is now much faster as we transition from an analog narrowband circuit-switched telephone technology to a digital broadband Internet-protocol based multi-media network.⁶⁸ At the start of the twenty-first century people and communities that lack broadband services are disadvantaged in the same way that people and communities without electricity or telephone service were disadvantaged in the first half of the twentieth century.

The Council further concurs with the opinion that we are in a continuing communications-information age revolution with far reaching implications.⁶⁹ We also strongly hold that our telecommunications infrastructure while of considerable importance in the past has now risen to a new level of criticality with far reaching implications.

“Broadband is *not* about some grubby industry food fight over sharing, collocating or unbundling. Broadband *is* about finding the keys to unlocking a fresh flood of investment, innovation and competition. Broadband *is* about building a foundation for a dramatic leap forward in how we communicate, how we educate, and how we live our lives. Accordingly, our broadband actions must be as broad as our broadband vision.”⁷⁰

Broadband is now critical to nearly every aspect of the economy and across the many dimensions of quality of life for the citizenry.

“Reliable and affordable telephone and broadband services are essential to the economy and the quality of life in all Oregon, especially in rural Oregon. Broadband services are essential for all businesses, government, health care and education institutions and consumers, not just information-intensive businesses. Telecommunications infrastructure is as important to the economy as electricity, clean water and transportation. Rural communities have a transportation disadvantage compared to urban communities because of greater distances, but there is no reason in the information age for rural communities to suffer a telecommunications disadvantage. Telecommunications can give rural communities a more level playing field in the economic competition with urban communities.”⁷¹

This is NOT to say that we are in any way adverse to competition in the private sector but rather that the criticality of telecommunications can not be left solely to Adam Smith’s “invisible

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hand”. Nor should this be taken as a statement that supports the heavy-handed intrusiveness of excessive regulation. Finding a balanced approach that assures the private sector retains the opportunities of ownership and profits, while not restricting the option for public ownership, as we move toward achieving the greater good of public policy goals will create a win-win for all.

We are at a point in the evolution of this resource that requires thoughtful, clear, and predictable channels to guide development of this critical infrastructure. Much work lies ahead.

"The current generation of broadband technologies may prove woefully insufficient to carry many of the advanced applications driving future demand. Today's broadband will be tomorrow's traffic jam, and the need for speed will persist as new applications and services gobble up existing bandwidth."⁷²

The Council believes that the stage has been set in Oregon through the passage into statute of a number of legislative mandates, previously listed in “Oregon recognizes the importance of broadband” in this report. The state of Oregon is unique among the states, as we have established into law a clear statement of intent for broadband for its citizenry (ORS 759.016 (1)). The legislature also saw fit to accompany that goal with guidelines for its implementation (ORS 759.016 (2) (a)-(e)).

Pursuant to its mandate and after considerable analysis and review, the Council finds there are a number of specific public policy issues and additional steps that need to be addressed to reach the goal identified for the state in ORS 759.016. While the future is far from certain, we believe there are some apparent and obvious steps to be taken to guide our progress and to ensure our successes. As it has been stated before, “Failure is not an option!”

Appendix 1 - Council Membership

Oregon Telecommunications Coordinating Council Members

Chair:

John Irwin

Representing Southern Oregon Telecommunications and Technology Council

Phone: (541) 664-2456

E-mail: Jirwin@mind.net

Vice-Chair:

Link Shadley

Representing Industry

Phone: (541) 340-9545

E-mail: lshadley@noanetoregon.net

Members:

Dan Bartlett

Representing Oregon Cities

Phone: (503) 325-5824

E-mail: dbartlet@orednet.org

Pam Berrian

Representing Oregon Cities

Phone: (541) 682-5590

E-mail: pam.c.berrian@ci.eugene.or.us

Agnes Box

Representing Klamath Falls Telecommunications Task Force

Phone: (541) 885-1728

E-mail: boxa@oit.edu

Catherine Britain

Representing Eastern Oregon Telecommunications Consortium

Phone: (541) 963-7366

E-mail: cbritain@orednet.org

Betty Dickson

Representing Regional Fiber Consortium

Phone: (541) 882-9633

E-mail: consortia@charter.net

Lylla Gaebel

Representing North Coast Telecommunications Consortium.

Phone: (503) 325-1000

E-mail: commissioners@co.clatsop.or.us

Erick Larson

Representing Gorge Teleconsortium

Phone: (541) 296-2266

E-mail: lee@mcedd.org

Rob Myers

Representing Frontier TeleNet
Phone: (541) 384-6331
E-mail: rmyers@ncesd.k12.or.us

Edwin Parker

Representing the Oregon CoastNet
Phone: (541) 764-3058
E-mail: edparker@teleport.com

Curt Pederson

Representing Education - Universities
Phone: (541) 737-0739
E-mail: curt.pederson@oregonstate.edu

Sylvester "Sal" Sahme

Representing Oregon Tribes
Phone: (541) 553-3468
E-mail: ssahme@wstribes.org

Marlyn Schafer

Representing Oregon Counties
Phone: (541) 247-3296
E-mail: schaferm@co.curry.or.us

Andrew Spreadborough

Representing Central Oregon Telecommunications Task Force
Phone: (541) 504-3306
E-mail: aspreadborough@coic.org

Brant Wolf

Representing Oregon Telecommunications Association
Phone: (503) 581-7430
E-mail: bwolf@ota-telecom.org

Paul Zastrow

Representing Education K-12
Phone: (541) 354-1002
E-mail: pzastrow@gorge.net

Vacant

Representing Fiber South Consortium
Phone:
E-mail:

Vacant

Representing South Coast Telecommunications Task Force
Phone:
E-mail:

Vacant

Representing Education - Community Colleges
Phone:
E-mail:

Vacant

Representing Oregon Counties
Phone:
E-mail

Ex-Officio Member:

Kim Hoffman

Representing Oregon Health & Sciences University
Phone: (503) 494-6089
E-mail: hoffman@ohsu.edu

Appendix 2 – Guest Speakers and Presentations to the Council

Guest Speakers and Presentations to the Council

May 27, 2004

“Why Connect to the Competition Jere Retzer,” Senior Manager for Next Generation Computing, Northwest Access Exchange (www.nwax.org), Oregon Health Sciences University. Presented on establishing an Internet tier 1 peering point in Oregon.

June 24, 2004

Marty Brantley, Director of Oregon Economic and Community Development Department (OECD) (www.econ.state.or.us)

Oregon Virtual Tribal College initiative, Bill McCaughan, Oregon State University, www.oregonstate.edu

Art Hill, Vice President, Blue Mountain Community College, www.bmcc.cc.or.us, briefed the Council on the Eastern Oregon Rural Alliance www.ruralpolicy.org/partners/eora.cfm. The group has been performing a “research and development” function for rural policy.

Eric Englund, K&B Engineering, briefed the Council on a project his company has undertaken for the Oregon Joint Use Association (www.OJUA.org). The OJUA is a non-profit corporation that grew out of a task force that was established by the Oregon Legislature to advise the Oregon Public Utility Commission on issues pertaining to utility poles.

August 5, 2004

Shirley Roberts, Interim Library Director for Eastern Oregon, University (<http://eos.eou.edu>), provided an overview of the Pioneer Library System.

Onno Husing, Executive Director, Oregon Coastal Zone Management Association, Newport, reported that his organization has begun work on the development of a coast region strategic plan to accelerate the deployment and usage of advanced telecommunications on the Oregon coast.

September 23, 2004

Stephen Schneider, Senior Advisor to the Governor, indicated that he has been tasked to be the telecommunications and energy advisor to the Governor. Steve has had several meetings with Oregon Public Utility Commissioners Beyer and Baum regarding telecommunications, but this is his first meeting with the members of ORTCC. He expressed his interest in the views and recommendations of ORTCC.

Mark Oberle, Chair of the Oregon Joint Use Association (www.OJUA.org). The OJUA is an association of pole owners and pole users representing electric utilities, communications companies, and government. HB 2271 charged the Oregon PUC with creating a task force to recommend changes to administrative rules for pole attachment rent reduction, sanctions, and

conflict resolution and create an advisory group on joint utility issues. The task force concluded it's work, disbanded, and reorganized as the OJUA.

William Hersh, M.D. Professor and Chair, Department of Medical Informatics & Clinical Epidemiology at Oregon Health & Science University. Dr. Hersh delivered his presentation, "Think Globally, Act Locally: The National Health Information Infrastructure (NHII) in Oregon." www.ohii.org, <http://www.ohsu.edu/dmice/>

Appendix 3 - Broadband Descriptions

Broadband descriptions in this appendix are sourced from the FCC⁷³

Cable

Cable modems allow subscribers to access high-speed data services over cable systems that are generally designed with hybrid fiber-coaxial (HFC) architecture. Cable modem service is primarily residential service, but may also include some small business service. Sample prices for cable modem service range from \$35 to \$80 a month, including the lease of the modem.

Overall, the cable industry has maintained the course outlined in the *Third Report* by continuing to upgrade and improve cable systems and broadband service offerings and by extending the offering of such broadband services to at least 90 percent of homes passed by cable systems. The cable industry expects that industry-wide facilities upgrades enabling the provision of broadband Internet access to residential customers will be completed soon.

At the same time that the cable industry has expanded the reach of upgraded broadband facilities, cable operators have increased download transmission speeds from 200 kbps to as much as 6 Mbps.

Copper (DSL)

The technology that local telephone carriers predominantly use for providing high-speed data services is the digital subscriber line (DSL) service offering. DSL is a copper-based service that allows the telephone carrier to add certain electronics to the telephone line to enhance the copper loop that provides the customer voice service so that it serves as a conduit for both voice and high-speed data traffic.

There are a number of variations of DSL service. The DSL service primarily used by residential customers is asymmetric DSL (ADSL). ADSL provides speeds in one direction (usually downstream) that are greater than the speeds in the other direction. Since the *Third Report*, carriers have increased the speeds typically offered in their ADSL services. For instance, a number of carriers are now offering download speeds of 1.5 Mbps and 3.0 Mbps and upload speeds as high as 768 kbps. Sample prices for 1.5 Mbps/384 kbps service range from \$34.95 a month with certain promotions to \$64.95 per month for a service that can serve multiple computers in a house. Prices for an even faster download speed of 3.0 Mbps range from \$44.95 to \$99.95 depending upon the upload speed, which ranges from 384 kbps to 768 kbps. Installation for ADSL services typically range from free to \$99.95, because many carriers are using self-installation kits themselves.

Fiber To The Home

In the last several years, carriers have begun constructing entirely fiber optic cable transmission facilities that run from a distribution frame (or its equivalent) in an incumbent local exchange carrier's (LEC's) central office to the loop demarcation point at an end-user customer premise. These loops are referred to as fiber-to-the-home (FTTH) loops. FTTH technology offers substantially more capacity than any copper-based technology.

There are three basic types of architectures being used to provide FTTH. The most common architecture used is Passive Optical Network (PON) technology. This technology allows multiple homes to share a passive fiber network. In this type of network, the plant between the customer premises and the headend at the central office consists entirely of passive components—no

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electronics are needed in the field. The other architectures being used are home run fiber or point-to-point fiber, in which subscribers have a dedicated fiber strand, and active or powered nodes are used to manage signal distribution, and hybrid PONs, which are a combination of home run and PON architecture.

[Note: The FCC report totally ignores municipal or other similar ownership models for fiber deployments.]

Unlicensed Wireless Technologies

Wi-Fi, short for Wireless Fidelity, is a term that is used generically to refer to any product or service using the 802.11 series standards developed by the Institute of Electrical and Electronics Engineers (IEEE) for wireless local area network connections. Wi-Fi networks operate on an unlicensed basis in the 2.4 and 5 GHz radio bands and provide multiple data rates up to a maximum of 54 Mbps. The bandwidth is shared among multiple users. Wi-Fi enabled wireless devices, such as laptop computers or personal digital assistants (PDAs), can send and receive data from any location within signal reach of a Wi-Fi equipped base station or access point (AP). Typically, mobile devices must be within approximately 300 feet of a base station.

The expansion of Wi-Fi access to the Internet has recently seen the explosive growth of hotspots on a commercial and noncommercial basis. A public wireless “hotspot” is an area where a computer or PDA equipped with a wireless local area network card can connect to the Internet through wireless access points. Networks of hotspots consisting of a number of access points have also been constructed to cover larger areas such as entire airports. Driven by low cost devices operating on an unlicensed basis, the expansion of hotspot access points has become rampant as build-out continues with the assistance of numerous entities including small- and large-scale businesses, public institutions, and individual entrepreneurs. Providers use the technology for everything from enterprise networks to purely ad hoc provision of access points for either non-commercial use or for their potential to attract customers.

WiMax, short for “Worldwide Interoperability for Microwave Access” refers to any broadband wireless access network based on the IEEE 802.16 standard. WiMax includes fixed systems employing a point-to-multipoint architecture operating between 2 GHz and 66 GHz. WiMax is capable of transmitting network signals covering in excess of 30 miles of linear service area, which is much greater than Wi-Fi’s coverage area. It provides multiple shared data rates of up to 75 Mbps.

At the same time that Wi-Fi networks are reaching a more mature state, WiMax has the potential to alter and further accelerate the evolution of broadband services. Coincident with the integration of Wi-Fi into devices, Intel has announced the integration of WiMax into its next generation chipsets for mobile devices. Analysts suggest that WiMax, although still in an early state, could complement or even supplant the development of Wi-Fi networks in the long run. It is anticipated that new standards for wireless networks will incorporate both roaming and handoff capabilities, which will further enhance the potential for broadband fixed and mobile applications in both licensed and license-exempt spectrum.

Licensed Wireless Technologies

Mobile wireless broadband services allow consumers to access the Internet and other data services at high speeds from a cell phone, a PDA, or a wireless modem card connected to a laptop computer. Mobile broadband services are also commonly referred to as third generation,

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or “3G,” services or advanced wireless services. Several mobile wireless carriers have begun to deploy high-speed mobile Internet access technologies, and many have announced plans to launch or expand these technologies further in the future.

While the mobile data services discussed above are offered using a cellular network architecture, fixed wireless broadband services have traditionally been deployed using a point-to-point or point-to-multipoint network architecture that requires a direct line-of-sight between the transmitter and the receiver. However, since the *Third Report*, many wireless carriers have begun to deploy Orthogonal Frequency Division Multiplexing (OFDM) technology, which allows carriers to offer wireless broadband services without a direct line-of-sight between the transmitter and the receiver. Many of the wireless broadband services offered using OFDM technology also eliminate the need for subscribers to attach an antenna to their rooftop and instead allow them to access the Internet with “plug-and-play” modem devices connected to a personal or laptop computer. Customers can transport these devices to other locations where the network is available. Another advantage of such services is that they often eliminate the need for a carrier to send technicians to install equipment at an end user’s house or building. The monthly prices for these services vary by carrier and range from \$24.95 to \$129.99, with the more expensive plans typically offering download speeds up to 3 Mbps.

Broadband Over Powerline

Another mechanism for delivering broadband services that made its commercial debut in 2003 is broadband over power lines (BPL). BPL systems use existing electrical power lines as a transmission medium to provide high-speed communications capabilities by coupling radio frequency energy onto the power line. The United Power Line Council notes that BPL can currently provide symmetric speeds of 3 Mbps, and next-generation chipsets are being developed to provide 100 Mbps. BPL travels over medium-voltage (up to 40,000 volts) transmission lines. Initial trials of BPL have begun in Manassas, Va.; Allentown, Penn.; and Cincinnati, Ohio. While some challenges to the implementation of BPL remain, the technology has the potential to take advantage of the large-scale deployed infrastructure of the power grid to provide broadband services to some customers not yet served by DSL or cable modem services.

Satellite Technologies

High-speed Internet access over satellite remains a nascent technology. As of December 2003, satellite and wireless technology accounted for approximately 1.3 percent of total high-speed lines in the United States. Moreover, none of the satellite-based Internet access services satisfy the Commission’s definition of advanced services, which calls for a minimum transmission speed of 200 kbps downstream and upstream.

Starband charges a one-time fee, ranging from \$199.99 to \$699, for equipment and a monthly fee, ranging from \$49.99 to \$99.99 per month, for its StarBand 360 Internet access service. DirecWay charges \$600 for installation and equipment and a \$60 per month for the service. On July 17, 2004, WildBlue Communications announced the launch of its first Ka-band satellite payload aboard Telesat’s Anik F2 satellite. WildBlue expects to begin providing two-way wireless high speed Internet access in early 2005. WildBlue expects the service to be particularly attractive to the estimated 25 million homes and small businesses that do not have access to other broadband Internet options.

Voice over Internet Protocol (VoIP)

Because the Internet employs an open network architecture using a common protocol—the Internet Protocol, or IP—to transmit data across multiple interconnected packet networks in a manner fundamentally different from how signals transit in a circuit-switched network. As opposed to the end-to-end path that is required for a circuit-switched network, an IP network segments data into packets, which are individually addressed and then transmitted over a series of physical networks which may be comprised of copper, fiber, coaxial cable, or wireless facilities. When transmitting packets between two points, the IP network does not establish a permanent or exclusive path between the points, but rather routes the packets individually and decides which route to use for each packet.

The growth of the Internet has been accompanied by an explosion in consumer access to new services and applications. One of the most exciting new developments is the transmission of voice communications over a network using IP—also referred to as Voice over IP or VoIP. Although early attempts to offer IP telephony were unsuccessful due to limited reliability and voice quality, today technology has improved sufficiently to permit IP networks to carry voice communications. Indeed, cable operators, wireline carriers, and wireless providers have announced that they have begun to deploy, or intend to deploy, IP networks to transmit IP telephony services to their subscribers.

Companies now offer IP telephony services that permit a subscriber with a broadband connection to place telephone calls to, and receive calls from, both other broadband subscribers and end users relying on traditional public switched telephone networks (PSTN) facilities. The VoIP provider supplies software and a multimedia terminal adapter (MTA) that permits its customers to use analog phones to place calls using their broadband Internet connections. When a VoIP customer communicates with a subscriber of ordinary telephone service, the VoIP provider converts its customer's IP packets into a digital format for transfer through a media gateway to the PSTN and vice versa. The price of Vonage's IP telephony service currently ranges from \$14.99 for 500 minutes anywhere in the United States and Canada for residential customers to \$49 for unlimited calling within the United States and Canada for small businesses. AT&T's CallVantage includes unlimited local and long distance for \$19.99 a month for the first six months and \$34.99 a month when the promotional period ends.

Appendix 4 - Public-private Partnerships (examples)

Example 1 - Forks, Washington and CenturyTel Partnership

A chance encounter between two local officials in 1999 was the start of a collaborative effort to secure broadband access for Forks, Washington. Prior to 1999, the hospital, the schools and the city government in Forks each had independently attempted to obtain congressional support for projects associated with advanced telecommunications services. City Attorney/Planner Rod Fleck and the school superintendent, both having appointments with the same U.S. Senator about their individual projects, met and decided to work together. A few months later, the city, the school, and the local hospital arrived at the office of local exchange provider CenturyTel united in an effort to bring shared telecommunications services to the remote city of Forks.

Forks is a small, rural lumber town on the northwestern peninsula of Washington State. Since suffering economic depression in the mid-90's, the community has struggled to regain its footing. Now, with group efforts that began in 1999 and are still continuing today, Forks has a redundant fiber loop that encompasses Washington State's Northwestern peninsula (servicing more than 560,000 people throughout a broad area of isolated rural communities) and a computer center that has expanded the city's technological potential for businesses and city residents. "Nowhere does it say that one's zip code should be a bar to one's educational opportunities, to their business opportunities, or their ability to get health care services," said Fleck.

The city was faced with a choice between pulling together resources to build its own system, and finding a less expensive, more far-reaching way to provide access. "We realized we could not do it alone," said Fleck, "Our group has been an advocate for the 'work with your provider' approach to the needs of rural communities."

CenturyTel, impressed by the community's collective effort, selected the town of Forks for the Integrated Community Network (ICN) pilot project. The ICN process is an economic strategy that uses the combined resources of businesses and public institutions to provide advanced telecommunications services at less cost to the individual. Simply put, more people get better access for less money.

"What impressed CenturyTel the most was that it wasn't me calling them or the schools or others in the city," said Fleck. "It was all of us calling them to the table. And they said, 'these guys are serious.'"

To get advanced telecommunications services, the community first needed a main technology center. CenturyTel, which owned an unused office building in Forks, leased the building to the city for \$1 a year. Called the ICN building, its purpose was to serve as an 'incubator' for local businesses (entrepreneurs could use the offices and technology in the building to get business started), an after-hours learning facility and a community technology center. After three years, the community was able to buy and remodel the ICN building, with the help of \$100,000 from the Veteran Affairs, Housing and Urban Development appropriations bill. It reopened in July.

The ICN committee started the Sappho Gap project: an ambitious program to obtain redundancy over a rugged 30-mile stretch of sparsely populated land. With the help of \$1.7 million awarded by the Washington Community Economic Revitalization board and a \$6 million investment on the part of CenturyTel, the project was completed in the summer of 2004.

The community center now runs programs like Tech Tuesdays and the Virtual High School, which teach adults and children technological literacy. The goal is to make Forks competitive and relevant in today's society. "We have to ensure that all parts of our great state have access to what has become the basic communication requirement of this century—a modernized telecommunications infrastructure," Fleck said.⁷⁴

Example 2 - Oregon and Qwest

Most urban areas have more than one fiber line connecting local phone systems to long-distance networks, but less-populated regions typically depend on one fiber route.

Laying fiber costs money, and many telecom carriers are reeling from fiber-overbuilding in urban areas. The largest investments in redundant loops came from the state's largest local phone company, Qwest Communications International. It spent \$70 million on network upgrades, including five redundant fiber-optic loops throughout the state. In exchange for that improvement and investments in school technology, the state deregulated Qwest's profits. The backup networks have averted outages in rural areas.

"Our investment is a result of the strong partnership that exists between Qwest and these local communities," said Judy Pepler, vice president of policy and law for Qwest in Oregon.¹²

Per Senator David Nelson, "...SB 622 and Qwest's significant investment are evidence that the unique business/government partnerships can work to the significant advantage of Oregonians."

"Absent that kind of win-win situation for the company and the state, it makes it very difficult to have a business case (that will) pencil out that says, 'This is a good use of capital dollars,'" said Judy Pepler, Qwest's president for Oregon.⁷⁵

Example 3 - Rogue Valley and Klamath Basin Schools and a private developer

Hunter Communications and Core Digital Services has deployed over 335 miles of fiber to create southern Oregon's only 'all fiber network'. This sole proprietor broadband provider continues to grow his network at a rate of 1 mile per week. After successfully completing the construction and deployment of the Ashland Fiber Network, Mr. Ryan observed that Jackson and Klamath counties could profit from the introduction of similar services.

This broadband service grew out of a creative public-private partnership model using telecommunications funds already in school budgets. The infrastructure is composed of 2 rings that serve the Rogue Valley and the Klamath Basin. It replaces point-to-point T-1 lines and allows six school districts (54 school sites) to share resources at 100 mbps and above while actually reducing their telecommunications costs in the out years. Some of the districts now are taking advantage of this service to deploy VOIP to further contain costs for internal communications between sites.

In addition to the region's schools the network also now benefits business, healthcare and government clients who previously were limited to T-1 or traditional dial up services. Among those benefiting is La Clinica del Valle, a southern Oregon safety net healthcare clinic. The network offers a world-class telecommunications capacity to businesses and organizations

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throughout Jackson and Klamath counties, including backbone access via multiple long haul providers. Some of the cities covered include: Klamath Falls, Rogue River, Medford, Central Point, White City, Jacksonville, Talent and Phoenix.

Recent projects include enabling a dedicated fiber feed to all local broadcasters from the Ashland fiber network as well as providing services for Jackson County, Erickson Air Crane, Boise Cascade, Rogue Credit Union and others.

Hunter Communications and Core Digital Services continues to actively pursue planning of additional public –private partnerships for delivering comparable services in other rural communities of Southern Oregon. <http://www.coreds.net/>

Example 4 - CoastNet

Fiber optic networks are becoming a critical part of the necessary infrastructure of economically healthy communities. A key element in Lincoln County’s long-range economic plan is the development of such a network in Lincoln County. However, the big telephone companies are not yet ready to invest the resources and finances necessary to install fiber optic networks in rural areas such as Lincoln County.

The Central Lincoln People’s Utility District (the PUD) provides electric power to the central Oregon coast, including most of Lincoln County and portions of a number of other counties. To facilitate their own internal communications and to enhance the reliability of the PUD’s electric power switching network, the PUD installed a fiber optic network along the Central Oregon Coast from Lincoln Beach to Reedsport, and from Newport to Toledo. Due to economies of scale, the PUD’s fiber network has significant amounts of excess capacity.

The Economic Development Alliance of Lincoln County (the Alliance) is a non-profit corporation existing for the purpose of promoting economic development and employment opportunities in Lincoln County. The Alliance became aware of the PUD’s excess fiber capacity, and realized the PUD’s network could provide significant opportunity for economic development and employment in Lincoln County.

For that reason, the Alliance and 38 other public and non-profit entities began a project known as CoastNet. After much discussion and analysis, the CoastNet group created a three-step plan: (1) Arrange to lease the PUD’s excess fiber capacity through an intergovernmental agreement with Lincoln County; (2) Purchase necessary equipment to enable the excess capacity to operate as a functioning network; and (3) Make that network available to attract new business for the purpose of facilitating growth in economic development and employment opportunities.

As for the first step, the PUD and Lincoln County entered into an intergovernmental agreement for lease of the PUD’s excess fiber capacity.

As for the second step, after considerable effort, the Alliance was able to obtain \$305,000 in economic development grants for the CoastNet project (utilizing the Lincoln County School District as the fiscal agent for receipt of funds).

The Alliance, the County, and the PUD have also been working with other entities to expand the reach of CoastNet through the use of other fiber networks and excess capacity. Most notable is the excess dark fiber capacity controlled by the Fiber South Consortium (a group of governmental entities in Coos, Lane, and Douglas Counties), which has acquired that capacity from Williams Communications, whose fiber lines carry traffic between the Willamette Valley and the AT&T trans-Pacific fiber line at Bandon. The Bonneville Power Administration (BPA) also has excess dark fiber capacity, some of which is now controlled by the Fiber South Consortium, and some of which is controlled by the Northwest Open Access Network (NoaNet), a nonprofit corporation formed to help provide high-speed telecommunications to the rural Northwest. Lincoln County joined the Fiber South Consortium, and in May of 2001, the Consortium selected PCI_{NW} (Preferred Connections, Inc, NW) of Lakeside, Oregon, as the vendor for its dark fiber capacity. PCINW is the private sector partner. CoastNet wholesales network capacity to PCINW and PCINW sells services to retail customers. In order to facilitate the interconnection and development of CoastNet with the rest of the telecommunications world, in January of 2002, the Alliance entered into a contract for the transfer of the marketing and distribution of CoastNet from Casco to PCI_{NW}. Since PCINW is also the private sector contractor for the FiberSouth Consortium, CoastNet plans to interconnect CoastNet and FiberSouth in Florence as soon as the FiberSouth fiber between Florence and Eugene is lit. That is scheduled to happen before the end of this year (2004). <http://www.co.lincoln.or.us/counsel/COASTNET.html>

Appendix 5 – Draft Legislation

Electronic Commerce Enterprise Zones (SB 12)

73rd OREGON LEGISLATIVE ASSEMBLY--2005 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1005

Senate Bill 12

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Joint Legislative Committee on Information Management and Technology for Oregon Telecommunications Coordinating Council)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Expands number of enterprise zones that may be designated for electronic commerce.

Takes effect on 91st day following adjournment sine die.

A BILL FOR AN ACT

Relating to economic development; amending ORS 285C.095; and prescribing an effective date.

Be It Enacted by the People of the State of Oregon:

SECTION 1. ORS 285C.095 is amended to read:

285C.095. (1) A sponsor of an existing enterprise zone may seek to have the zone designated for electronic commerce under this section.

(2) The sponsor shall file an application to have the zone designated for electronic commerce with the Economic and Community Development Department. The application shall be in the form and contain the information that the department by rule may require.

(3) The application shall be accompanied by a copy of a resolution, adopted by the governing body of the sponsor, requesting that the zone be designated for electronic commerce.

(4) The department shall review applications for electronic commerce designation and shall approve no more than { - four - } { + 10 + } zones for electronic commerce designation.

(5) The sponsor may by resolution revoke an electronic commerce designation made under this section. If an election is revoked, the sponsor may not subsequently seek reinstatement of electronic commerce designation.

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SECTION 2. { + This 2005 Act takes effect on the 91st day
after the date on which the regular session of the Seventy-third
Legislative Assembly adjourns sine die. + }

<http://www.leg.state.or.us/05reg/asures/sb0001.dir/sb0012.intro.html>

Advanced Telecommunications Facilities Incentives (SB 11)

73rd OREGON LEGISLATIVE ASSEMBLY--2005 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1004

Senate Bill 11

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Joint Legislative Committee on Information Management and Technology for Oregon Telecommunications Coordinating Council)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Increases annual cap on costs of telecommunications facilities that may be certified for advanced telecommunications facility income tax credit. Allows transfer of credit to other taxpayer. Increases percentage of certified cost allowable as credit. Extends period during which certifications may be issued. Takes effect on 91st day following adjournment sine die.

A BILL FOR AN ACT

Relating to telecommunications; creating new provisions; amending ORS 285C.530 and 315.511 and section 12, chapter 957, Oregon Laws 2001; and prescribing an effective date.

Be It Enacted by the People of the State of Oregon:

SECTION 1. ORS 285C.530 is amended to read:

285C.530. (1) As used in this section and ORS 285C.533:

(a) 'Advanced telecommunications facilities' means high-speed, dedicated or switched broadband telecommunications infrastructure or equipment that enables users to send or receive high quality voice, data or video telecommunications using any technology.

(b) 'Last mile connection' means a communications channel from the feed from a connecting bypassing intercity telecommunications carrier through a telecommunications switching center, or an individual message distribution point, to a user terminal.

(c) 'Local exchange carrier' means a person that holds a certificate of authority issued by the Public Utility Commission under ORS 759.020 to provide intrastate telecommunications service or local exchange telecommunications service within this state.

(d) 'Telecommunications carrier' means a provider of telecommunications services, but does not include an aggregator, as defined in 47 U.S.C. 226.

(2) A telecommunications carrier seeking a tax credit under ORS 315.511 for the installation of advanced telecommunications facilities { - , prior to incurring any costs associated with the installation, - } shall apply to the Economic and Community Development Department for certification of the facilities as advanced telecommunications facilities. { + A telecommunications carrier shall file the application with the department before placing the facilities into service. + }

(3) The application for certification shall be in the form and shall contain the information required by the department pursuant to rules adopted by the department for the administration of the tax credit certification under this section, including but not limited to:

(a) A complete description of the installation project and the customers to be served by the project;

(b) The expected costs for completing the project;

(c) The { - expected - } start date and the expected date on which the advanced telecommunications facilities are to be placed in service;

(d) The geographic area or areas in which the advanced telecommunications facilities are to be installed; and

(e) A description of how the facilities will be integrated into the operations of the intrastate telecommunications services provided by the telecommunications carrier.

(4) The application for certification shall be accompanied by technical documentation demonstrating that the facilities will meet or exceed applicable minimum performance standards established by the department under ORS 285C.533.

(5) The department may approve or deny an application for certification or may request changes to the application before issuing certification. Denial of an application may be appealed to the department in the manner of a contested case under ORS chapter 183.

(6) The department shall approve an application and certify the facilities as advanced telecommunications facilities if the facilities:

(a) Are to be located in an area in which current minimum bandwidth service is not available to a majority of customers;

(b) Improve access to advanced telecommunications services for a majority of all customers in unserved or underserved service areas; and

(c) Meet the minimum performance standards to comply with ORS 285C.533.

(7) Upon approval of an application, the department shall send to the applicant a written certification of the facilities as advanced telecommunications facilities. The certification shall state the date by which the facilities must be placed in service and the cost of the facilities that are being certified.

(8) Notwithstanding subsection (6) of this section, the department may not approve an application and certify a facility if the cost of the facility plus the certified costs of all other facilities that have been certified during the year exceeds { - \$10 million - } { + \$50 million + }.

(9) The department may establish by rule the amount of fees charged to applicants seeking certification of facilities as

advanced telecommunications facilities. Revenues from the fees shall be used to offset the costs incurred by the department in administering the tax credit certification under this section.

SECTION 2. { + The amendments to ORS 285C.530 by section 1 of this 2005 Act apply to applications for certification filed on or after the effective date of this 2005 Act. + }

SECTION 3. ORS 315.511 is amended to read:

315.511. (1) There shall be allowed a credit against the taxes otherwise due under ORS chapter 316 (or, if the taxpayer is a corporation, under ORS chapters 317 and 318) for advanced telecommunications facilities, as defined in ORS 285C.530, that have been certified by the Economic and Community Development Department.

(2) The amount of the credit shall equal { - 20 - } { + 50 + } percent of the certified cost of the facilities that was actually paid or incurred by the taxpayer, except that:

(a) The amount of the credit may not include facility costs that were paid using moneys withdrawn from the taxpayer's Telecommunications Infrastructure Account established pursuant to ORS 759.405; and

(b) Revenues forgone by the taxpayer upon the taxpayer's waiver of installation charges for advanced telecommunications facilities to schools, rural health clinics or libraries may be added to the amount of the credit.

(3) { - The credit may be claimed by the taxpayer - } { + A taxpayer may first claim the credit + } for the tax year in which the advanced telecommunications facilities are placed in service.

(4) The credit allowed under this section may not exceed the tax liability of the taxpayer { - and may not be carried forward to a succeeding tax year - } { + in any one tax year + }. { +

(5) Any tax credit otherwise allowable under this section that is not used by the taxpayer in a particular tax year may be carried forward and offset against the taxpayer's tax liability for the next succeeding tax year. Any credit remaining unused in the next succeeding tax year may be carried forward and used in the second succeeding tax year. Any credit remaining unused in the second succeeding tax year may be carried forward and used in the third succeeding tax year. Any credit remaining unused in the third succeeding tax year may be carried forward and used in the fourth succeeding tax year. Any credit remaining unused in the fourth succeeding tax year may be carried forward and used in the fifth succeeding tax year, but may not be used in any tax year thereafter. + }

{ - (5) - } { + (6) + } In the case of a credit allowed under this section:

(a) A nonresident shall be allowed the credit under this section in the proportion provided in ORS 316.117.

(b) If a change in the status of a taxpayer from resident to nonresident or from nonresident to resident occurs, the credit allowed by this section shall be determined in a manner consistent with ORS 316.117.

(c) If a change in the taxable year of a taxpayer occurs as described in ORS 314.085, or if the Department of Revenue terminates the taxpayer's taxable year under ORS 314.440, the credit allowed under this section shall be prorated or computed in a manner consistent with ORS 314.085.

{ - (6) - } { + (7) + } The credit shall be claimed on a form prescribed by the Department of Revenue and containing any information as may be required by the department. The taxpayer shall attach a copy of the certification to the return for the tax year for which the credit is claimed.

{ + (8) Before the filing of the return for the first tax year for which a credit is claimed under this section, the person to whom certification was issued under ORS 285C.530 may transfer the certification to the taxpayer who will claim credit under this section. A certification may be transferred by:

(a) Physically delivering the certification issued under ORS 285C.530 to the taxpayer who will claim the credit;

(b) Filing a notice of credit transfer with the Department of Revenue on a form prescribed by the department; and

(c) Taking any other action required by the department under rules prescribed by the department. + }

SECTION 4. { + The amendments to ORS 315.511 by section 3 of this 2005 Act apply to tax years beginning on or after January 1, 2005. + }

SECTION 5. Section 12, chapter 957, Oregon Laws 2001, is amended to read:

{ + Sec. 12. + } The Economic and Community Development Department may issue certifications under { - section 10 of this 2001 Act - } { + ORS 285C.530 + } on or after January 1, 2002, and before { - December 31, 2005 - } { + January 1, 2010 + }.

SECTION 6. { + This 2005 Act takes effect on the 91st day after the date on which the regular session of the Seventy-third Legislative Assembly adjourns sine die. + }

<http://www.leg.state.or.us/05reg/asures/sb0001.dir/sb0011.intro.html>

Utility Regulation -- Additional Powers to Implement Broadband Goal (SB 16)

73rd OREGON LEGISLATIVE ASSEMBLY--2005 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1194

Senate Bill 16

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Joint Legislative Committee on Information Management and Technology for Oregon Telecommunications Coordinating Council)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Requires that Public Utility Commission administer laws relating to telecommunications in manner that is consistent with goal of promoting access to broadband services.

A BILL FOR AN ACT

Relating to broadband services; amending ORS 759.016.

Be It Enacted by the People of the State of Oregon:

SECTION 1. ORS 759.016 is amended to read:

759.016. { + (1) + } The Legislative Assembly finds and declares { - : - }

{ - (1) - } that it is the goal of this state to promote access to broadband services for all Oregonians in order to improve the economy in Oregon, improve the quality of life in Oregon communities and reduce the economic gap between Oregon communities that have access to broadband digital applications and services and those that do not, for both present and future generations { - ; and - } { + . + }

(2) { - That - } The goal set forth in subsection (1) of this section may be achieved by:

- (a) Expanding broadband and other telecommunications services;
- (b) Creating incentives to establish and expand broadband and other telecommunications services;
- (c) Undertaking telecommunications planning at the local, regional and state levels that includes participants from both the public and the private sectors;
- (d) Removing barriers to the full deployment of broadband

digital applications and services and providing incentives for the removal of those barriers; and

(e) Removing barriers to public-private partnerships in areas where the private sector cannot justify investments.

{ + (3) The Public Utility Commission shall implement the provisions of ORS chapter 759 in a manner that is consistent with the goal established by this section. + }

<http://www.leg.state.or.us/05reg/asures/sb0001.dir/sb0016.intro.html>

Utility Regulation -- Oregon Universal Service Fund (SB 14)

73rd OREGON LEGISLATIVE ASSEMBLY--2005 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1192

Senate Bill 14

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Joint Legislative Committee on Information Management and Technology for Oregon Telecommunications Coordinating Council)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Allows moneys generated by universal service surcharge to be used to ensure that broadband services are available at reasonable and affordable rate.

Declares emergency, effective on passage.

A BILL FOR AN ACT

Relating to broadband services; creating new provisions; amending ORS 759.425; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. ORS 759.425 is amended to read:

759.425. (1) The Public Utility Commission shall establish and implement a competitively neutral and nondiscriminatory universal service fund { + . Subject to subsection (6) of this section, the universal service fund shall be used by the commission + } to ensure basic telephone service is available at a reasonable and affordable rate. The universal service fund shall conform to section 254 of the federal Telecommunications Act of 1996 (Public Law 104-104). The commission may delay implementation for rural telecommunications carriers, as defined in the federal Act, for up to six months after the date the Federal Communications Commission adopts a cost methodology for rural carriers.

(2)(a) The Public Utility Commission shall establish the price a telecommunications utility may charge its customers for basic telephone service. The commission in its discretion shall periodically review and evaluate the status of telecommunications services in the state and designate the services included in basic telephone service. The commission in its discretion shall

periodically review and adjust as necessary the price a telecommunications utility may charge for basic telephone service.

(b) The provisions of this subsection do not apply to the basic telephone service provided by a telecommunications utility described in ORS 759.040.

(3)(a) The Public Utility Commission shall establish a benchmark for basic telephone service as necessary for the administration and distribution of the universal service fund. The universal service fund shall provide explicit support to an eligible telecommunications carrier that is equal to the difference between the cost of providing basic telephone service and the benchmark, less any explicit compensation received by the carrier from federal sources specifically targeted to recovery of local loop costs and less any explicit support received by the carrier from a federal universal service program.

(b) The commission in its discretion shall periodically review the benchmark and adjust it as necessary to reflect:

- (A) Changes in competition in the telecommunications industry;
- (B) Changes in federal universal service support; and
- (C) Other relevant factors as determined by the commission.

(c) Except for a telecommunications utility described in ORS 759.040, the commission shall seek to limit the difference between the price a telecommunications utility may charge for basic telephone service and the benchmark.

(4) Except as provided in subsections { - (6) and - } (7) { + and (8) + } of this section, there is imposed on the sale of all retail telecommunications services sold in this state a universal service surcharge. The surcharge shall be established by the commission as a uniform percentage of the sale of retail telecommunications services in an amount sufficient to support the purpose of the universal service fund. The surcharge may be shown as a separate line item by all telecommunications carriers using language prescribed by the commission. A telecommunications carrier shall deposit amounts collected into the universal service fund according to a schedule adopted by the commission.

(5) The { - commission is authorized to establish a - } universal service fund { - , - } { + is + } separate and distinct from the General Fund. The fund { - shall consist - } { + consists + } of all universal service surcharge moneys collected by telecommunications carriers and paid into the fund. The fund { - shall - } { + may + } be used only for the { - purpose - } { + purposes + } described in this section, and for payment of expenses incurred by the commission or a third party appointed by the commission to administer this section. All moneys in the fund are continuously appropriated to the commission to carry out the provisions of this section. Interest on moneys deposited in the fund shall accrue to the fund.

{ + (6) In addition to the purpose specified in subsection (1) of this section, moneys in the universal service fund may be used by the commission to ensure that broadband services are available at a reasonable and affordable rate. + }

{ - (6) - } { + (7) + } For purposes of this section, 'retail telecommunications service' does not include radio communications service, radio paging service, commercial mobile radio service, personal communications service or cellular communications service.

{ - (7)(a) - } { + (8)(a) + } Notwithstanding subsection

{ - (6) - } { + (7) + } of this section, a person who primarily provides radio communications service, radio paging service, commercial mobile radio service, personal communications service { + , broadband services + } or cellular communications service may request designation as an eligible telecommunications carrier by the Public Utility Commission for purposes of participation in the universal service fund.

(b) In the event a person who primarily provides radio communications service, radio paging service, commercial mobile radio service, personal communications service { + , broadband services + } or cellular communications service seeks designation as an eligible telecommunications carrier for purposes of participation in the universal service fund, the person shall provide written notice to the Public Utility Commission requesting designation as an eligible telecommunications carrier within 60 days of the date the commission establishes the fund. Upon receiving notice, the commission may designate the person as an eligible telecommunications carrier for purposes of participation in the fund.

(c) A person who primarily provides radio communications service, radio paging service, commercial mobile radio service, personal communications service { + , broadband services + } or cellular communications service who fails to request designation as an eligible telecommunications carrier within 60 days of the date the universal service fund is established by the Public Utility Commission may not be designated as an eligible telecommunications carrier unless the person has contributed to the fund for at least one year immediately prior to requesting designation.

{ - (8) - } { + (9) + } A pay telephone provider may apply to the Public Utility Commission, on a form developed by the commission, for a refund of the universal service surcharge imposed on the provider under subsection (4) of this section for the provision of pay telephone service.

SECTION 2. { + The amendments to ORS 759.425 by section 1 of this 2005 Act apply to all moneys in the universal service fund, whether deposited before, on or after the effective date of this 2005 Act. + }

SECTION 3. { + This 2005 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2005 Act takes effect on its passage. + }

<http://www.leg.state.or.us/05reg/asures/sb0001.dir/sb0014.intro.html>

Utility Regulation – Reporting (SB 13)

73rd OREGON LEGISLATIVE ASSEMBLY--2005 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1006

Senate Bill 13

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Joint Legislative Committee on Information Management and Technology for Oregon Telecommunications Coordinating Council)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Extends sunset on law requiring annual report by Public Utility Commission to Governor and Legislative Assembly on various matters relating to telecommunications industry.

Declares emergency, effective on passage.

A BILL FOR AN ACT

Relating to telecommunications industry; creating new provisions; amending sections 2 and 3, chapter 589, Oregon Laws 1999; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Section 3, chapter 589, Oregon Laws 1999, is amended to read:

{ + Sec. 3. + } { - This 1999 Act is - } { + Sections 1 and 2, chapter 589, Oregon Laws 1999, are + } repealed { - June 30, 2005 - } { + January 2, 2008 + }.

SECTION 2. { + If this 2005 Act does not become effective until after June 30, 2005, the amendments to section 3, chapter 589, Oregon Laws 1999, by section 1 of this 2005 Act revive section 2, chapter 589, Oregon Laws 1999. If this 2005 Act does not become effective until after June 30, 2005, section 1 of this 2005 Act operates retroactively to that date, and the operation and effect of section 2, chapter 589, Oregon Laws 1999, continues unaffected from June 30, 2005, to the effective date of this 2005 Act and thereafter. + }

SECTION 3. Section 2, chapter 589, Oregon Laws 1999, is amended to read:

{ + Sec. 2. + } In order to ensure consistency with the

federal Telecommunications Act of 1996 (P.L. 104-104), to enhance fair competition and to promote deregulation of the telecommunications industry, the Public Utility Commission annually shall submit a report to the Governor and the Legislative Assembly or the Emergency Board on or before January 31 each year. The report shall include information on:

(1) The status of competition in the telecommunications industry;

(2) Significant changes that have occurred in the telecommunications industry during the preceding 12 months;

(3) Statutes that inhibit or discourage competition in and deregulation of the telecommunications industry;

(4) Specific actions taken by the commission to reduce the regulatory burden imposed on the telecommunications industry, including telecommunications utilities and competitive telecommunications providers;

(5) Specific actions taken by the commission to maximize the opportunities for telecommunications utilities and competitive telecommunications providers to achieve pricing flexibility, including rate rebalancing, exemption from regulation and streamlined regulations;

(6) Specific actions taken by the commission to:

(a) Minimize implicit sources of support; and

(b) Maximize explicit sources of support that are specific, sufficient, competitively neutral and technologically neutral and that support telecommunications services for customers of telecommunications providers in high-cost locations;

(7) Statutes that should be enacted, amended or repealed to enhance and respond to the competitive telecommunications environment or promote the orderly deregulation of the telecommunications industry; { - and - }

(8) The number of public bodies, as defined by ORS 174.109, providing basic telecommunications infrastructure so that private entities may use that infrastructure to provide advanced information and communications services { - . - } { + ; and

(9) Analysis and planning for advanced telecommunications services, including the availability and cost of broadband services, the demand for and usage of broadband services, and the extent to which backbone network route redundancy exists. + }

SECTION 4. { + This 2005 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2005 Act takes effect on its passage. + }

<http://www.leg.state.or.us/05reg/asures/sb0001.dir/sb0013.intro.html>

Oregon Telecommunications Council Continuation (SB 15)

73rd OREGON LEGISLATIVE ASSEMBLY--2005 Regular Session

NOTE: Matter within { + braces and plus signs + } in an amended section is new. Matter within { - braces and minus signs - } is existing law to be omitted. New sections are within { + braces and plus signs + } .

LC 1193

Senate Bill 15

Printed pursuant to Senate Interim Rule 213.28 by order of the President of the Senate in conformance with pre-session filing rules, indicating neither advocacy nor opposition on the part of the President (at the request of Joint Legislative Committee on Information Management and Technology for Oregon Telecommunications Coordinating Council)

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Extends sunset on Oregon Telecommunications Coordinating Council to January 2, 2010. Authorizes payment of expenses of members of council from contributions. Requires reports to Legislative Assembly.

Declares emergency, effective on passage.

A BILL FOR AN ACT

Relating to Oregon Telecommunications Coordinating Council; creating new provisions; amending sections 1 and 2, chapter 699, Oregon Laws 2001; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

SECTION 1. Section 1, chapter 699, Oregon Laws 2001, as amended by section 3, chapter 775, Oregon Laws 2003, is amended to read:

{ + Sec. 1. + } (1) There is established the Oregon Telecommunications Coordinating Council consisting of 20 members.

(2) The Governor shall appoint one member to represent each of the following entities, and in making the appointments under this subsection shall give consideration to recommendations made by the entity the member is to represent:

- (a) The Central Oregon Telecommunications Task Force.
- (b) CoastNet.
- (c) The Eastern Oregon Telecommunications Consortium.
- (d) The Fiber South Consortium.
- (e) Frontier Telenet.
- (f) The Gorge Teleconsortium.
- (g) The Regional Fiber Consortium (Lane and Klamath Counties).
- (h) The North Coast Telecommunications Consortium.

- (i) The South Coast Telecommunications Consortium.
- (j) The Southern Oregon Telecommunications and Technology Council.
- (3) The Governor shall appoint two members of the Oregon Telecommunications Coordinating Council to represent the counties of this state. The Governor shall give consideration to recommendations made by the Association of Oregon Counties in making the appointments under this subsection.
- (4) The Governor shall appoint two members of the Oregon Telecommunications Coordinating Council to represent the cities of this state. The Governor shall give consideration to recommendations made by the League of Oregon Cities in making the appointments under this subsection.
- (5) The Governor shall appoint two members of the Oregon Telecommunications Coordinating Council to represent telecommunication utilities and Internet service providers in this state. The Governor shall give consideration to recommendations made by the Oregon Telecommunications Association in making the appointments under this subsection.
- (6) The Governor shall appoint one member of the Oregon Telecommunications Coordinating Council to represent Oregon tribes. The Governor shall give consideration to recommendations made by the Commission on Indian Services in making the appointment under this subsection.
- (7) The Governor shall appoint one member of the Oregon Telecommunications Coordinating Council to represent elementary and secondary schools. The Governor shall give consideration to recommendations made by the Oregon School Boards Association in making the appointment under this subsection.
- (8) The Governor shall appoint one member of the Oregon Telecommunications Coordinating Council to represent community colleges. The Governor shall give consideration to recommendations made by the Oregon Community College Association in making the appointment under this subsection.
- (9) The Governor shall appoint one member of the Oregon Telecommunications Coordinating Council to represent the Oregon University System. The Governor shall give consideration to recommendations made by the Chancellor of the Oregon University System in making the appointment under this subsection.
- (10) The Oregon Telecommunications Coordinating Council may by a majority vote of the council add members to the council to represent telecommunication consortia coming into existence after January 1, 2003, or to represent citizen groups recognized by the council.
- (11) If no additional funds are required, the Economic and Community Development Department, the Oregon Department of Administrative Services, the League of Oregon Cities and the Association of Oregon Counties may provide staff to the Oregon Telecommunications Coordinating Council.
- (12) Members of the Oregon Telecommunications Coordinating Council are not entitled to compensation { - and expenses and shall serve on the council on a volunteer basis - } { + , but may be paid expenses if funding is available from contributions under subsection (15) of this section + }.
- (13) The Oregon Telecommunications Coordinating Council shall study alternative approaches to providing coordinated statewide, regional and local telecommunication services, including

providing services to unserved or underserved areas of the state. In addition, the council shall study the manner in which telecommunication investments can be coordinated to facilitate partnerships between the public sector and the private sector and between state and local governments. The council shall report its findings and recommendations to the Governor and to the Joint Legislative Committee on Information Management and Technology before each legislative session.

(14) All agencies of state government, as defined in ORS 174.111, are directed to assist the Oregon Telecommunications Coordinating Council in the performance of its functions and, to the extent permitted by laws relating to confidentiality, to furnish such information and advice as the members of the council consider necessary to perform their functions.

(15) The Oregon Telecommunications Coordinating Council may accept contributions of funds and assistance from the United States or its agencies or from any other source, public or private, and agree to conditions thereon not inconsistent with the purposes of the council. All such funds are to aid in financing the functions of the council and may be deposited in the General Fund of the State Treasury to the credit of separate accounts for the council to disburse for the purpose for which contributed in the same manner as funds appropriated for the council.

(16) Official action by the Oregon Telecommunications Coordinating Council requires the approval of a majority of the members. The council may recommend legislation, and all legislation recommended by the council must indicate that it is introduced at the request of the council. Legislation recommended by the council must be submitted to the Joint Legislative Committee on Information Management and Technology. The legislation shall be prepared in time for pre-session filing at regular sessions of the Legislative Assembly.

(17) The Oregon Telecommunications Coordinating Council shall:

(a) Encourage the work of regional telecommunications consortia that have emerged throughout the state.

(b) Encourage state agencies to utilize telecommunications.

(c) Encourage efforts to provide cost-effective, quality workforce development training using telecommunications infrastructure and facilities to access distance learning opportunities.

(d) Encourage schools, education service districts and local education agencies in unserved areas to promote broadband access for the surrounding community.

(e) Encourage public and private entities to seek opportunities for partnership with educational institutions that will stimulate the use of broadband technologies through community projects and public education.

(f) Recommend ways for the State of Oregon to support innovative efforts that build effective and cost-efficient delivery of distance education supported by telecommunications.

(g) Encourage the Oregon Telehealth Alliance to continue the work of the council's Telehealth Committee.

(h) Facilitate public and private organizations working together in partnership to promote the use of telecommunications infrastructure and new technology.

SECTION 2. Section 2, chapter 699, Oregon Laws 2001, as amended by section 6, chapter 775, Oregon Laws 2003, is amended to read:

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{ + Sec. 2. + } Section 1, chapter 699, Oregon Laws 2001, is repealed on January 2, { - 2006 - } { + 2010 + }.

SECTION 3. { + (1) The Oregon Telecommunications Coordinating Council shall report to the Seventy-fourth Legislative Assembly, in the manner provided by ORS 192.245, no later than February 1, 2007. The report shall include information on the implementation of the plan described in section 4, chapter 775, Oregon Laws 2003. + }

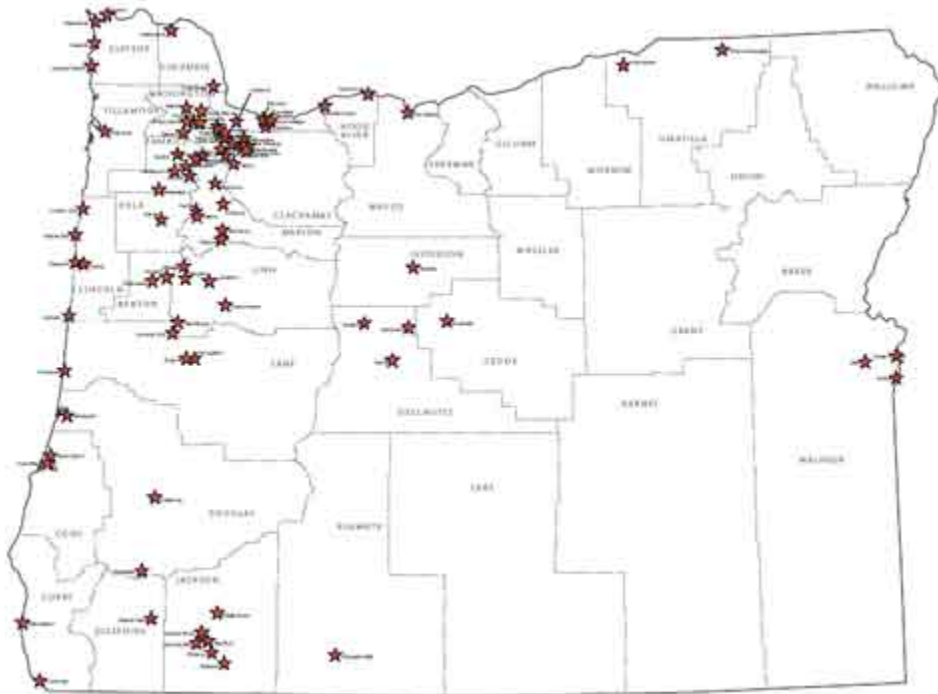
{ + (2) The Oregon Telecommunications Coordinating Council shall report to the Seventy-fifth Legislative Assembly, in the manner provided by ORS 192.245, no later than February 1, 2009. The report shall include information on the implementation of the plan described in section 4, chapter 775, Oregon Laws 2003. + }

SECTION 4. { + This 2005 Act being necessary for the immediate preservation of the public peace, health and safety, an emergency is declared to exist, and this 2005 Act takes effect on its passage. + }

<http://www.leg.state.or.us/05reg/asures/sb0001.dir/sb0015.intro.html>

Appendix 6 – Maps and Charts

Oregon Cities with High Speed Data Services – Cable modem



8/15/2004

Oregon Broadband Wireless Providers

OregonFAST.Net
1735 Kingwood St. Suite A,
Florence, OR 97439
541 574-1642
www.oregonfast.net

FireServe, LLC
900 Main Street, Suite B
Klamath Falls, OR 97601
541 273-4808
www.fireserve.net

CVC Internet
2250 So 6th St.
Klamath Falls, OR 97601
541-884-5488
www.cvcwireless.net

Gooselake Internet Services
102 North E Street
Lakeview, OR 97630
541 947-4513
www.gooselake.com/goose

WebEnet
Wireless Broadband to the City of Coquille
118 West Central
Coquille, OR
541 396-3911
www.webenet.net

UNICOM-La Grande
1019 Adams Avenue
La Grande, OR 97850
541-663-9114
www.uci.net

SandyNet Wireless
39250 Pioneer Blvd
Sandy, OR 97055
503-668-5533
www.sandynet.org

SawNet

1104 NW 15th Suite 310
Portland, OR 97209
503 972-1651

Moro, Wasco, Rufus, Centerville, Goldendale, Lyle, Mosier, The Dalles, Camas, Troutdale,
Gresham, North Bonneville, Skamania, Washougal, Stabler, Hemlock, and Stevenson

www.saw.net

Gorge Net

Hood River, Te Dalles, Odell, Upper Hood River Valley, Mosier

www.gorge.net

Coast WiFi

Tillamook County

www.coastwifi.com

National Broadband

Eugene and Klamath Falls

www.nationalbroadband.com

Douglas Fast Net

Roseburg

www.douglasfast.net

VeriLAN, Inc.

107 SE Washington Street # D14

Portland, OR 97214

Portland

www.verilan.com

Eastern Oregon Network, Inc. (EONI)

La Grande, Enterprise, Joseph

www.eoni.net

Pelican Bay Telecommunications

Port of Brookings

PCI Northwest, Inc.

Florence, Klamath Falls, Oakridge

www.pcinw.com

EZ Wireless

505 East Main Street

Hermiston, OR 97838

(541) 567-0252

www.ezwireless.us

Whiz to Coho, Inc.
12800 NW Bishop Road
Hillsboro, OR 97124
503 647-5957
<http://whiz.to/wireless.php>

Oregon Wireless Internet Service Provider (OWISP)
Newberg, Dundee, Lafayette, Dayton, McMinnville, Yamhill
503-799-6517 or 503-348-8898
www.owisp.com

Harborside Internet
Brookings, Port Orford, Bandon, and Coos Bay.
800 680-8855
www.harborside.com

Pocket iNet
Milton Freewater
509 526-5026
www.pocketinet.com

Cyber Wireless
3964 Center St, Suite "C"
Salem, Oregon 97301
(503) 362-0005
www.cyberwireless.net

Ash Creek Wireless
Eastern Polk County and the Salem area
503-606-0744
www.ashcreekwireless.com

Meritel Group
Mid-Willamette valley from west Salem to Sublimity
1025 Main St.
Aumsville, OR 97325
503.749.1646
www.meritel.com

September 2004

Appendix 7 – Acknowledgements of Contributions to the Council

Acknowledgements of Contributions to the Council

Staff support

Deborah Bryant, State Enterprise IT Policy and Planning Manager, Oregon Department of Administrative Services

Bill Penhollow, Assistant Executive Director, Association of Oregon Counties

Christopher Tamarin, Telecommunications Coordinator, Oregon Economic and Community Development Department

Videoconference contributions

Department of Administrative Services
Public Service Building
255 Capitol St NE
Salem

Samaritan North Lincoln Hospital
Lincoln City

Oregon Institute of Technology
Klamath Falls

Southwestern Oregon Community College
Coos Bay

Clatsop ESD
Astoria

Portland State University
Portland

Union Baker ESD
La Grande

Blue Mountain Community College
Pendleton

Eastern Oregon University
La Grande

Oregon Health Sciences University
Portland

Oregon State University Cascades Campus

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Bend

Port of Morrow
Boardman

Southern Oregon ESD
Medford

Teleconference in kind contributions

Association of Counties
Telehealth Association of Oregon

Website

City of Eugene, \$2,000 a year

Report development

ORTCC:

John Irwin, Chair, principle author
Link Shadley, Vice-chair, editorial assistance
Ed Parker, editorial assistance
Pam Berrian, editorial assistance

Staff:

Bill Pennhollow, editorial assistance, in particular on the legislative drafts
Chris Tamarin, editorial assistance

In kind contributions

Council members generally did not submit hour or expense reports. Yet two categories of in kind donations need to be recognized, both as substantial.

Hours:

Council members and staff volunteered many hours in support of the work effort. A very conservative estimate of hours contributed in 2004 comes in at 1,400 hours, not including staff support. Several Council members contributed considerable amounts of time participating in research, analysis, and committee work. Other Council members only attended the Council sessions.

Expenses:

Many of the Council did not receive re-imburement for their travel and lodging expenses to attend Council or Council committee meetings. Some received support from not for profit organizations or other entities. Given the distance that a number of members drove to the meetings, this contribution both of time and dollars was substantial.

A very conservative total estimate of the in kind contributions to this unfounded legislative council is in the range of at least \$100,000 to \$150,000!!

Revised: January 15, 2005 to include official OR Legislative Assembly 2005 Regular Session Measures

Appendix 8 – References

References

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- ¹ HB 2577, Section 3 (13), <http://www.leg.state.or.us/03reg/measure/hb2500.dir/hb2577.en.html>
- ² ORS 759.016 Legislative Findings on Broadband Services, <http://www.leg.state.or.us/ors/759.html>
- ³ The Economic and Social Benefits of Broadband Deployment,” <http://www.tiaonline.org/policy/broadband/Broadbandpaperoct03.pdf>, Telecommunications Industry Association, October 2003, page 6
- ⁴ “Children, The Digital Divide, And Federal Policy,” <http://www.kff.org/entmedia/7090.cfm>, The Kaiser Family Foundation, September 16, 2004
- ⁵ “Benefits of Telemedicine,” <http://www.ortcc.org/reports/>, white paper for the Telehealth Association of Oregon, John Irwin, et al, January 16, 2004
- ⁶ “E-government - The Next American Revolution,” www.excelgov.org, The Council for Excellence in Government, December, 2002
- ⁷ Project MESA, <http://www.projectmesa.org/>
- ⁸ Consumers elsewhere get great prices for revolutionary speeds. Why, then, is the FCC still collecting data about 200 kbps service and calling it broadband? Our dated definition of broadband speed should have been dropped by the wayside long ago. We also claim that broadband is available to everyone in a zip code if it is offered to only one person in that zip code. This half-hearted effort at analyzing availability should be scrapped.” “Availability of Advanced Telecommunications Capability in the United States,” www.fcc.gov, Fourth Report to Congress, September 9, 2004, page 5
- ⁹ “Availability of Advanced Telecommunications Capability in the United States,” page 8
- ¹⁰ “Federal Communications Commission Releases Data on High-Speed Data Services,” http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd0604.pdf, Federal Communications Commission, June 8, 2004
- ¹¹ “Availability of Advanced Telecommunications Capability in the United States,” page 3
- ¹² “We also claim that broadband is available to everyone in a zip code if it is offered to only one person in that zip code. This half-hearted effort at analyzing availability should be scrapped.” Copps, Ibid, page 5
- ¹³ “73 Percent of U.S. Adults Online, 44 Percent With Broadband,” <http://www.centerdigitalgov.com/international/story.php?docid=91485>, News Story, September 2004
- ¹⁴ “Fertile Ground - OPASTCO Survey Examines Rural Services,” <http://www.xchangemag.com/articles/491window3.html>, Josh Long
- ¹⁵ “US Market Internet Penetration,” www.clickz.com/stats/markets/professional/article.php/2222631, ClickZ Stats staff, June 16, 2003
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