

# Policy Initiatives to Increase the Availability of Advanced Telecommunications Services Throughout Washington State

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## Technology Alliance Study Group

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# PREFACE

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Telecommunications is a highly complex field and the public policy issues surrounding it are daunting for the initiated and uninitiated alike. This paper will explore some of the general issues and themes of the current telecommunications landscape from the point of view of consumers of high bandwidth telecommunications services. We have resisted the urge to make recommendations on exact costing, the specific methods of regulating collocation, or the details of dispute resolution. Rather, this paper attempts to provide some thoughtful commentary and make more general recommendations for policymakers and consumers.

Our committee, listed on the cover of this document, was asked to use its knowledge and background to represent the overall technology sector, and not any particular company or institution. Rather, this report is meant to serve as a fair representation of the collective thinking of a group of fairly sophisticated consumers of telecommunications services. We hope it helps to both inform public debate and inspire positive action.

## EXECUTIVE SUMMARY

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The Technology Alliance (TA) is a statewide consortium of technology-based businesses, their trade associations and research institutions dedicated to advancing a healthy technology-based economy in Washington state. In 1998, the Technology Alliance prepared and published a report describing the importance of “world class” telecommunications for the people and economy of Washington state. The Technology Alliance subsequently convened a study group of leaders drawn from business, state government, and academia. During the summer and fall of 1998, this group conducted extensive interviews with representatives of more than a dozen telecommunications companies. These companies covered the spectrum: incumbent and competitive; facilities-based and resale-based; long-haul and local; established and emerging. The study group also consulted with representatives of city, county, and state government. Approaching the issue from a customer’s perspective, the committee queried each group in an effort to determine which government policies supported new investment in broadband telecommunications services and which had a negative effect. The study group organized this input into the broad themes which are presented in this report and its recommendations.

**Objective** To identify policies and practices that will increase the availability of advanced telecommunications services throughout Washington state by making our state a more attractive place for telecommunications companies to invest and to market new services.

**Rationale** Widespread availability of broadband telecommunications services is essential to the vitality and competitiveness of our state. It has an impact on a wide variety of public and private sectors, including: education, commerce, transportation, entertainment, and health care – just as railroads, highways, and other means of transportation did in previous generations. Intelligent action taken now can improve the state’s ability to attract private investment in broadband services, which in turn can have a positive impact on the sectors mentioned above.

**Overview** Broadband services are enormously important to this state and it is in the best interest of the state to actively encourage investment and deployment of these technologies. The impetus for and basis of the 1996 Federal Telecommunications Act was to transition the telecommunications industry from one stifled by regulation to one disciplined by competition, offering a powerful vehicle for achieving innovation and competitive pricing. Both the 1996 Federal Telecommunications Act and the dramatic rise in data traffic, due significantly to new technologies, have led to rapid change in the telecommunications landscape. They have introduced some new hurdles, but also some new opportunities for Washington state.

There is a great deal of telecommunications competition in a few areas of Washington. In particular, the largest consumers of bandwidth (e.g. Boeing, Microsoft) have several fiber optic cables running past their facilities and can choose among a number of competitors for a wide range of services. However, outside this narrow competitive service area, it is both difficult and expensive to get the necessary services for high-technology companies to compete, and, unless some actions are taken, it does not appear that this situation will change significantly in the near term.

**Investment by Traditional Providers** At least one of the traditional service providers appears to have under-invested in telecommunications infrastructure in this state. This has led companies and individuals in Washington to be disadvantaged relative to their competitors in other states. Performance of incumbent providers is critical not only for the quality of the services they provide to consumers, but for the quality of the unbundled network elements that they sell to competitors under the provisions of the 1996 Telecommunications Act.

**Competition** The ability of new competitors to bring their services to the market is dependent on their ability to interconnect to an incumbent company's infrastructure. Nearly all the new competitors we interviewed stated that for a variety of reasons, interconnection has been a bigger problem in Washington than in some other states. The barriers repeatedly mentioned by new providers seeking entry into the market were the perceived intentional hurdles erected by the incumbent providers which created unduly long negotiation, arbitration, litigation and adjudication timelines, and therefore added uncertainty and increased costs. It is clear that there is not a climate of cooperation between the incumbent phone companies and the new entrants.

**Under-served Areas** The committee also found that rural areas and small cities and towns are significantly under-served, and that if they are to have the opportunity to improve their local economies, healthcare services, and education systems through the use of broadband services, more needs to be done. One crucial factor determining investment into rural areas, and in fact in urban and suburban areas as well, is access to public rights-of-way. Nearly every potential investor found the public policy in this area to be a hindrance to investment.

In response to these and many other findings, which will be detailed later in this report, the study group makes the recommendations set forth below: **It should be noted that the initiatives listed below should not be undertaken on a piecemeal basis, but rather implemented together to achieve a balanced transition.**

## **Summary Recommendations**

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Traditionally, the Washington Utilities and Transportation Commission (WUTC) has regulated telecommunications pursuant to a monopoly framework, where the state is responsible for protecting consumer interests when essential services are provided by monopoly service providers. While monopolies remain dominant in most areas of local service, market forces are beginning to enter into many areas of the network and these areas should be given more room to grow and attract investment. Currently monopoly powers can still be used by incumbents to deter, delay (or even block) new entrants and maintain market dominance. The legislature should encourage the continued evolution of the WUTC from regulating investment and rates to ensuring a robust competitive market. By giving the WUTC the directive and tools to combat misuse of monopoly powers, the WUTC can hasten the transition from being a regulator of investment to being a regulator of markets. It is the committee's belief that such a transition will ultimately benefit not only consumers and the new market entrants, but the incumbents as well, through the elimination of historical regulation that is no longer necessary.

In order to convey electronic services, reliable transport from point to point is necessary. Increasingly, that transport is being laid along the public rights-of-way. The importance of public rights-of-way to future services and economies are analogous to the railroad rights-of-way of old. Owning rights-of-way may create some potential short term revenue sources for the public entities that own and manage them, but the prohibitive fees and regulations some of them have implemented are a significant deterrent to new investment. This is especially true for rural areas that can only be reached by one or two corridors. If the state wishes to bring in new services, and especially if it wishes to bring these services to rural areas, it must set a statewide standard covering access to public rights-of-way. This standard should allow local governments the ability to recover costs associated with regulating access to rights-of-way, but it should not allow local governments to charge burdensome fees for companies who need to pass through one community in order to provide service to an adjacent community. This practice limits investment by one community by essentially holding the investment hostage at the expense of its neighbors. At the state level, access to state and federal highways needs to be opened up to all willing providers in order to ensure that rural areas are not left behind. To these ends we suggest that the following policy initiatives be advanced as a comprehensive legislative package.

***(I) The regulatory framework should be modernized to ensure the growth of a healthy competitive market in telecommunication services and to increase access to new broadband services for small businesses and residential customers.***

1. Modernize regulatory focus from rate/investment regulation to one ensuring a competitive market by moving from a 'rate-of-return' model of regulation to 'price caps.' Establishment of "price cap" regulation for Incumbent Local Exchange Carriers (ILECs) needs to be connected with legally enforceable and measurable commitments by the ILECs as to levels of future investment and the rollout of specific broadband service offerings to a broad range of customers around Washington state. (Moving to a 'price cap' regulatory model without the accompanying pieces laid out in recommendations #2, #3 and #4 below would not be a desirable action.)
2. Provide regulators the directive and the resources to quickly and fairly adjudicate interconnection-related disputes, including collocation and the pricing of monopoly local loop elements, in an environment where speedy resolution is not inhibited by excessive discovery proceedings.
3. Provide regulators the directive and resources to impose meaningful sanctions to remedy anti-competitive practices against new competitors.
4. Simplify and streamline the process for classifying as 'competitive' new high-end telecommunications services offered by Incumbent Local Exchange Carriers (ILECs.)
5. Encourage local jurisdictions that regulate cable TV companies through franchises to promote open, competitive access to those networks for two-way data, telephony, and video communications in a manner similar to networks regulated by the WUTC.

***(II) The deployment of statewide fiber and other wireline backbones needs to be encouraged in order to increase infrastructure deployment in rural and non-urban areas, which will require easing onerous requirements for accessing the public rights-of-way. Other new technologies (e.g. wireless) should be granted similar access.***

- 1. Declare as a state policy that access to public right-of-way is viewed as a powerful incentive to infrastructure investment instead of as another source of general government revenues. Consider adopting procedures similar to what has been adopted in other states, whereby Washington would have a common set of right-of-way policies and procedures so that a company intending to put in new facilities will know both the cost and time-frame required to gain necessary approvals at the outset.**
- 2. Stop efforts by Washington State Department of Transportation(WSDOT) to restrict public access to public rights-of-way along state highways to a single monopoly provider and direct WSDOT to elevate the transportation of data via a telecommunications backbone to a level of equal importance with the transportation of other goods and services.**
- 3. Direct and empower the appropriate state agencies to create, publicly distribute and maintain a 'map' of the fiber backbones present in Washington. Establish benchmarks and annual reporting requirements of telecommunications and cable companies for annually measuring the pricing and availability of broad band telecommunications services throughout the state.**
- 4. Encourage programs by the state and other governmental entities to aggregate demand as has been done with the K-20 network.**
- 5. Continue to support broadband research and development efforts like the 'GigaPOP' and Internet 2.**
- 6. Establish "telecommunications enterprise zones," where a government-industry partnership causes sufficient demand aggregation to encourage broadband deployment.**

# **Policy Initiatives to Increase the Availability of Advanced Telecommunications Services Throughout Washington State**

## ***A Report of the Technology Alliance***

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### **I. Introduction**

The Technology Alliance (TA) and its partner organizations view broad and affordable access to high quality telecommunications as fundamental to our economic well-being and general welfare. This availability of broadband telecommunications services is essential to the vitality and competitiveness of our state, impacting education, commerce, transportation, entertainment, and health care – almost every imaginable aspect of our lives.

The TA is a statewide consortium of technology-based businesses, their trade associations and research institutions dedicated to advancing a healthy technology-based economy in Washington state. In 1998, the TA prepared and published a report describing the importance of “world class” telecommunications for the people and economy of Washington state. To pursue this vision of broad and affordable access to high quality telecommunications, the TA formed a study group of leaders in state government, academia and industry to research this issue and foster a constructive dialogue with important telecommunication providers, regulators, and policymakers. Our goal was simple: to discover the ways to expand high-bandwidth telecommunications capacity in Washington state. The group’s mission was to identify the policies and practices that will increase the availability of advanced telecommunications services throughout our state, by making our state a more attractive place for telecommunications companies to invest.

During the summer and fall of 1998, this study group conducted extensive interviews with representatives of more than a dozen telecommunications companies who were invited to participate by Governor Gary Locke, Senate Energy & Utilities Committee Chair Bill Finkbeiner, and Technology Alliance Chair William H. Gates. This committee, chaired by TA Vice President Tom Alberg, included legislative and executive branch leaders, key technology industry representatives, and members of the Technology Alliance and the Washington Software Alliance. The study group members were asked to use their knowledge and background to represent the overall technology sector and not the individual views or policies of their respective companies or institutions. The telecommunications companies interviewed covered the spectrum: incumbent and competitive; facilities-based and resale-based; long-haul and local; established and emerging. The focus of each interview with telecommunications companies was the same. We asked them to answer the following questions:

- ☎ What telecommunications services are you currently offering in Washington state?
- ☎ What are your plans for telecommunications expansion in Washington state?
- ☎ What are the barriers to your expanded investment in Washington state?
- ☎ Are there actions that other states have taken that make them a better place to invest than Washington state?
- ☎ What would incent you to expand or increase your investments?
- ☎ What technologies will your company deploy in the future? What are the potential barriers for this deployment?
- ☎ Specifically, how can you help us expand high bandwidth connectivity in rural areas in Washington state?

The basis for this report comes from these interviews and subsequent discussions within the group and with other industry members. Its purpose is to provide a brief background regarding the state of telecommunications industry in Washington state, and to convey some of the general themes which were sounded on more than one occasion and which resonated with the group. We have punctuated our findings with recommendations for specific courses of action. If these recommendations are followed, we believe it will make a significant improvement in increasing consumers' access to high bandwidth services.

## **II. Increasing Customer Demand**

The sharply rising demand for bandwidth is not being driven by more voice calls to grandma, but by the sharp upturn in the use of computers and applications running on them which need to exchange data. It is the exponential growth in Internet usage, the rapid growth of electronic commerce and the digital media industry, and the development of new applications which require the ability to move a great deal of data electronically and quickly which have driven the demand for bandwidth. From Boeing engineers sharing CAD blueprints online to streaming video presentations to rural classrooms, the appetite for data, which leads to the demand for high bandwidth telecommunications, has literally exploded in the last several years.

One participant in our interviews noted that their research indicates that while the mix of voice to data over telephone lines is about 60/40 today, it is projected to reach 20/80 by 2001. It was generally agreed that within a very short period of time the predominant use of many telephone lines will not be voice, but data, and that these new data applications will demand increasing shares of bandwidth. It was also noted that this demand for bandwidth is not confined to a single demographic or market, but ranged geographic boundaries and rose from all areas of our communities. Not surprisingly, most industry observers believe the bandwidth revolution has barely begun.

## **III. Current Availability of High Bandwidth Telecommunications**

High bandwidth telecommunications in our state are available through a variety of sources. There are several major providers of high-speed services from companies who have been traditionally thought of as "long distance companies." These companies, who own their national fiber networks and provide service into our state, include MCI, Sprint, and AT&T. Other companies, including US West and GTE, who have traditionally provided local service, now offer high speed-services in some locations. New entrants into the market including Qwest, GST and Electric Lightwave, own their own fiber and are

providing high-speed service to commercial customers in some areas of the state. Other new entrants, like COVAD and Nextlink, are beginning to compete in the local residential service market, in Seattle and Spokane respectively, and include high-speed services in their offerings. TCI is offering high-speed services through its cable television lines in Olympia, Mercer Island, and some areas of Seattle, and is expected to greatly expand its geographic coverage over the next few years. Other cable companies are planning to offer similar services in the future. These cable companies will become major competitive providers of high bandwidth service for residences and small business.

With this plethora of companies, at first glance it would appear that competition is alive and well in the telecommunications business, and that soon every business and residential customer in Washington will not only have broadband services, they will have a choice of providers. Unfortunately, this simply is not true. Many areas of our state have no broad bandwidth service, and other areas that have some sort of service have no choice of provider.

Where are high bandwidth services available currently? Actually, no one knows for certain since no comprehensive map of such services is available. It is generally known that several companies have fiber optic cables running parallel to the I-5 corridor, and many have fiber rings that circle Lake Washington. In particular, the largest consumers of bandwidth (e.g. Boeing, Microsoft) have several fiber optic cables running past their facilities and can choose among a number of competitors for a wide range of services. If a company or organization is located on one of these local routes, it too will have a choice of providers and a wide range of services. If not, then there may be a significant delay in obtaining broadband services, if they are available at all.

There is fiber optic cable going east/west through the Columbia River Basin but very little fiber running across the Cascades. Some fairly large communities, due to their geographic location, have no fiber going into their communities at all. For example, because Port Angeles and Port Townsend are at the end of a peninsula, and even though they have actively lobbied companies for it, they still have no fiber installed to their area. If a community wants bandwidth, it helps if it is strategically located between two large population centers. Even if fiber runs past a community, it is not correct to assume such an area currently has access to high speed communications. If the fiber simply goes by that town and there is no switching equipment installed at that location to capture the community's traffic, that community is literally "out of the loop." Many smaller communities along the I-5 corridor are currently in this situation. Because switching equipment is expensive, it is only installed by companies when and where they see a big enough potential market to justify new investment.

There are two major reasons that most telecommunications providers have focused on the population centers up and down the I-5 corridor and around Lake Washington. 1) Providers are going where they see the highest concentration of potential customers; and 2) Our state is more costly to serve because it is challenged by both its weather and its mountainous geography. Some companies are beginning to build out to smaller cities when they see sufficient demand. Other new entrants may decide that focusing on second and third tier population areas is a viable business plan because the denser urban parts of the Puget Sound Basin are getting saturated with competitors. Still, many areas of our state have no provider who plans to install fiber anywhere nearby anytime soon.

Alternatives, such as cellular and other newer wireless services, are expanding into rural areas and may serve as a data solution. Traditional cellular service has limited bandwidth, but other new wireless technologies can potentially carry large amounts of data. These technologies have a limited physical range, so are being initially deployed in and around communities with a more concentrated customer base, for example Walla Walla, and Prosser; they will not necessarily serve remote areas. During the next five years, satellite high bandwidth services, such as those being developed by Teledesic, will provide commercial high bandwidth solutions for low density, remote areas.

It is important to note that, except in cases where bandwidth is delivered through wireless services, bringing bandwidth into a specific area is only the first step. It must then be distributed through wires to the customers in that area - the "last mile" problem. Other than for the very largest customers, or for those receiving bandwidth via a television cable system, bandwidth is provided by the local phone company over its monopoly network infrastructure. This is only possible if (1) the customer is located sufficiently close to the local switching center, (2) the facilities (wires) are available and (3) these wires are of reasonably high quality. If any of these three conditions is not present, it is likely that the customer cannot gain ready access to the broadband services. Unfortunately, this is the case in many parts of Washington state including portions of its largest urban centers.

If customers meet the above criteria, then they can be connected in one of two ways: First, the local phone company can supply a high-speed data connection from its customer to whomever is providing the broadband telecommunications backbone. The simplest case is when the local phone company provides both the local and high-speed service (e.g. US West MegabitServices). Alternatively, a competitive provider can lease an "unbundled network element" (or UNE, a physical wire in the monopoly phone infrastructure without local phone company switching). This UNE connects the customer to the local phone company switching center, where the competitive provider provides its own switching or routing, connecting the customer to the competitive provider's network. Provision of these UNEs is a point of contention between the local monopoly providers and the new competitive market entrants; this issue is addressed in Section V of this report.

#### **IV. Market in Transition**

Because the market is expanding and there is a high demand for these services, it is reasonable to assume that smart companies who provide good products and prompt service to customers at a reasonable price should be able to succeed. Most of the companies we talked to told us it just isn't that easy, but there are plenty of them willing to enter the "brave new world" of competitive telecommunications. These companies describe their industry as dynamic, with great opportunity for those who can weather the disruptions and adapt to new business paradigms.

Unfortunately, while several companies are interested in serving this exploding customer demand, there are still more customers in the market for high bandwidth telecommunications services than there are providers in most parts of our state. There are many reasons for this, but probably the most important one is this: while the telecommunications industry is rapidly becoming more competitive, due to the current situation of some companies still being the regulated providers of "universal"

telecommunications service, the industry still has one foot planted solidly in its historical practice of highly regulated offerings and guaranteed rates of return.

Universal telecommunications service is the public policy of providing access to the telephone network to everyone at a reasonable price. In areas where the cost of service is very high, it is provided at a price to the customer that is below cost. Customers in low-cost locations pay above-cost prices so that every citizen has access to the network. (The current estimated actual monthly cost to provide service in Washington varies from a low of \$15.90 to a high of \$476.21 for non-rural companies, according to the WUTC.) Universal service has been the policy in the nation and our state for more than 60 years. However, universal service policies today are based on a monopoly service environment that is incompatible with competition. The WUTC has just released a comprehensive report and set of recommendations that will attempt to overhaul universal service rules and bring the system more up-to-date. New provisions take into account new technologies, while at the same time preserving the essential commitment of providing basic telephone service to all citizens, which has traditionally meant a basic dial tone and access to emergency (911) services.

Because of all the new possibilities in services, a debate has arisen as to what the appropriate definition of "basic" service should be. Many people are making the case that access to the Internet should be considered part of basic service. Clearly, as new technologies emerge and costs for them come down, the definition of basic service will need to change to keep pace with changing expectations and changing environments. As broadband applications proliferate, the gap between the information "haves" and "have nots" will be increasingly unacceptable politically, socially and economically. The challenge, and the opportunity, in this changing world is no longer how to provide basic telephony but how to provide access to real-time broadband services to areas of moderate or low user density.

While a transition to a competitive market has begun, it is by no means complete, and during this transition it is probably not reasonable to expect that market forces will necessarily be able to overcome all the existing barriers to meet the exploding demand for bandwidth. Competition in the small business and residential market is a big area of concern. However, cable TV companies are positioned, as they rebuild their networks, to become major competitors in the market for broadband services. Currently they offer these services in very limited areas, but most companies plan for significant expansion. In many cases, and for the foreseeable future, they may be the only competitors to incumbent telephone companies for high bandwidth services to both residences and small business.

The 1996 Federal Telecommunications Act is a major factor in the current market transition. This act was designed to promote competition and bring new entrants and new services to consumers. Up until recently, there was only one local telephone company (also known as the 'Incumbent Local Exchange Carrier' or 'ILEC') in each service territory, and that company, while enjoying a monopoly, was the universal service provider for that area and had its rates set by the WUTC. (In Washington there are a total of 22 ILECs, but the majority of the services are provided by US West and GTE.)

Since the Federal Telecommunications Act passed in 1996, these ILECs have been required by law to allow competitors to be able to interconnect to their network. Usually

described as “collocation,” this situation occurs when a carrier (usually a new competitor) places its network connection equipment inside the central office of another carrier (usually the ILEC). This federal requirement was made in order to facilitate competition by allowing competitors access to the market without requiring them to completely duplicate the enormous investment which had been made with a guaranteed return by the ILECs. Congress believed that by allowing competitors this ‘toehold’ in the market, competitors would more quickly make the investments both in improving the overall network and in building new networks. The core thrust of the act was that greater access to the public network on the part of competitors would improve the quality of the network and improve customers’ access to higher bandwidth services. While these new entrants are coming into the market, the ILECs are still required to continue to provide service to all customers in their agreed upon regions (i.e. universal service) at the regulated price.

## **V. Frustrations with Interconnection**

Not surprisingly, this new model has not delivered perfect results for all customers. While large customers in dense urban areas are finding a greater array of providers and more access to high bandwidth services, by and large the promise of competition, and with it the promise of market forces encouraging heavy investment, has been more of a dream than a reality for most consumers. The ILECs claim that widespread competition is being stymied by the competitive providers myopic focus on only the highest margin (mostly large, mostly urban) customers. The competitors counter that the ILECs have made it difficult, if not impossible, to reliably serve any but the most lucrative customers because the ILECs continue to exercise monopolistic control over their networks. They claim that the ILECs use this control to stifle network interconnection, thereby thwarting their efforts to serve more customers with more services. The result of all this is that increasing consumer and community demand is not being met with the rapid roll-out of new and better high bandwidth services --and the corresponding investment-- which would be expected if this were a truly competitive market. The convergence of these factors led most providers to describe the current climate as confusing for customers and frustrating for the providers.

The WUTC retains jurisdiction to adjudicate interconnection disputes between new entrants and ILECs pursuant to the 1996 Telecommunication Act. The commission, which has traditionally been concerned with rate-of-return and accounting arguments, has been increasingly thrust into a “King Solomon” type role. Unfortunately, while they have been given some directive to step into this fray, they have not been given either the resources or the full compliment of tools that they need to address this new challenge. Interconnection disputes have been drawn out over several years in complex legal maneuvering on the parts of both the ILECs and the competitors, costing the WUTC resources, and creating unacceptable delays in the provision of local competition, while at the same time causing the ILECs to not increase investment either.

Even in the cases where the WUTC does find fault and chooses to discipline one party or the other, they lack the authority to enact penalties of meaningful measure. While in most cases the parties they have found at fault are the ILECs, both competitors and ILECs are quick to point out that adjudicating these disputes is not a simple task. Many competitors did note that they found Washington state a particularly difficult state to do business in because of the difficulty they had in achieving prompt interconnection at reasonable prices. Many competitors pointed to other states where more specific legislative direction

and authority had been given to the local utility commission regarding the settlement of these disputes and stated that this resulted in greater rates of investment in these states to meet consumer demand.

Our interviews with telecommunications providers revealed that the price for an “unbundled loop” (the connection between a user's premises and the local exchange) varies dramatically among states, far more than their varying geography and costs would appear to justify. Several new entrants complained about the costs being charged for collocation and unbundled elements in Washington, which they regard as exorbitant. Clearly, the costs of such unbundled elements are a key factor on whether new entrants can offer competitive services over the last mile. The pricing of unbundled loops in Washington state needs further study, and continued close monitoring and supervision by the WUTC.

Furthermore, a key concern on the part of new entrants around collocation is regarding the length of time it takes for dispute resolution. In telecommunications, as in most businesses, time is money, and while a company is waiting for resolution of a dispute, it cannot initiate service and recoup its investment. Unfortunately, speedy resolution of disputes is not usually in the interest of the ILEC with whom the new entrant is trying to collocate. The longer the dispute remains unresolved, the longer the ILEC may enjoy a monopoly. Collocation is complex and expensive, and even though it is required by law, the ILECs will naturally tend to deal with their own customers' needs firsts, and their competitors' needs later.

While further investigation by the committee of these comparisons to other states tended to support “the grass is greener” scenario, there are definitely cases where other states have managed collocation more quickly than here. The complaints about collocation have centered on the perceived stonewalling by the incumbents, and not particularly on bottlenecks caused by either the WUTC or court calendars. On an optimistic front, the WUTC has just enacted new rules for speedier dispute resolution and we are hopeful they will improve the current situation, which is clearly frustrating for everyone. Competitors especially felt that improvements in the WUTC's ability to quickly and forcefully ensure fair and reasonable interconnection agreements would go a long way towards making the case for their increased investment.

## **VI. Lack of Access to Rights-of-Way**

One issue which was brought up by nearly all the telecommunications companies we met with as a serious impediment to delivery of high bandwidth services, especially in rural areas, was lack of access to public rights-of-way. Whether a company is contemplating a local fiber optic ring to serve a particular business district or neighborhood, or considering laying a long haul backbone across the state or to a rural community, it is obvious that the rights-of-way for the trench or the pole connection are crucial. Unfortunately, some public entities have begun to see their authority over the public right-of-way not as something which can be fairly and equitably applied to encourage investment in their communities, but rather as a revenue source which can be auctioned off to the highest bidder. While this strategy may generate some short-term revenues or help the public entity exact some trade for services, in the long term it is likely to deter providers from delivering services. Cities note that getting “fair and reasonable compensation” is authorized by the Federal Telecommunications Act; our hope is that the state will clarify that this compensation

should be limited to recovery of actual expenses directly related to managing the public rights-of-way.

If local jurisdictions discourage investment by adding new fees or taxes for telecommunications companies laying cable through their area, they can effectively cut off new service to the next jurisdiction down the line. A few companies complained of one jurisdiction essentially holding them hostage because they could not complete a loop without going through their territory.

Telecommunications companies complain that cities require telecommunications companies to pave the whole street when they dig up one side of it to install cable. Municipalities argue that these tear-ups shorten the life of the street, paid for by taxpayers, and the telecommunications companies need to pay for the real impacts of their activity. The local regulators have a legitimate concern over the incurred costs and over their responsibility to preserve for the health and safety of the communities they serve. Opening up public rights-of-way to any provider with a backhoe would obviously create some very real costs which no one agrees are reasonable to ask local municipalities to bear. The general consensus among providers is that continued regulation over the 'time, place, and manner' of access to rights-of-way is appropriate and fair.

A recommendation that does not require any change in legislation was proposed by one municipality: Create a state-managed website where local governments could post their calendar of street work slated for the coming year. That way, telecommunication companies could use this information when planning their build-outs, saving everyone time, money and aggravation.

The more contentious issues emerge when government entities begin to seek specific advantages for themselves, either increased revenue (above taxes already levied) or specific services rendered, in return for access to rights-of-way. In many ways the added costs levied by these types of initiatives can be viewed as being passed on directly to the end consumer of the bandwidth, whether that consumer be a small business, a family, a school, or even other government entities. Furthermore, in many cases this activity may actually tip the balance against investment and block any access to high bandwidth services for consumers.

One of the most egregious examples of poor public policy in this area is the Washington State Department of Transportation (WSDOT) which is currently pursuing a policy which would allow only a single provider access to its rights-of-way. Essentially auctioning off the public right-of-way to create a monopoly, this type of policy goes against the grain of nearly all telecommunications policymakers who believe that a vibrant competitive market is the best way to ensure delivery of needed services to all classes of consumers. WSDOT and other government entities should be encouraged to view the telecommunications backbone as an important adjunct to transportation infrastructure and as an important contributor, through telecommuting and teleconferencing, to the problems of meeting future transportation needs. Telecommunications companies we spoke with mentioned that open access to these types of trans-state rights-of-way at a reasonable cost would make the case for serving rural areas much stronger than it is today. Conversely, they mentioned that locking up these same rights-of-ways to a single

provider would be a serious hurdle to investment and service to all corners of Washington state.

Other government agencies, including Seattle City Light, public utility districts and others, have cross-state rights-of-way. These entities should be encouraged to make use of these rights-of-way for the state's telecommunications backbone.

Companies cited right-of-way issues as real impediments to investment. In some states – California, Colorado, and Hawaii being three cases in point – the state has the right to preempt right-of-way in local jurisdictions. Telecommunications companies are uniformly in favor of this because it increases the speed at which they can install new services and it cuts down on the number of agreements they have to negotiate with local jurisdictions. Not surprisingly, local jurisdictions tend to be adamantly opposed to state preemption of right-of-way.

## **VII. Price Cap**

Historically, in Washington State, at least one of the traditional service providers appears to have under-invested in telecommunications infrastructure. As we move from monopoly services to competitive conditions, freeing traditional monopoly providers from rigid rate-of-return regulation may incent higher levels of investment. However, because the monopoly “last mile” infrastructure is used by all carriers, such a change should only be implemented as one component of a carefully designed and balanced approach to a telecommunications transition.

A suggestion made by US West that they say would serve as an incentive for them to invest more in Washington state is if rate regulation is changed from one based on their rate-of-return or “ROR” to one commonly referred to as “price cap.” Under this strategy, which has been used successfully in several other states, the legislature or the WUTC would cap residential and small business rates at current levels through a specified time frame (i.e. until 2003). In exchange, the carrier would have flexibility to move rates for non-basic services in response to market conditions. Its earnings, or ROR, would no longer be subject to WUTC review and it could deploy its broad band services in a deregulated climate. This has the advantage of providing low cost basic services to customers while it frees up the companies to compete in other areas that are potentially extremely profitable. It will also streamline the regulatory process, allowing the resources to be used for some of the other recommendations in this report. This particularly makes sense as monopoly service conditions in the telecommunications industry are replaced by competition among multiple providers.

Both US West and GTE, the largest ILECs in Washington state, currently operate under ROR regulations. They, along with any other ILEC, currently have the freedom to request “price cap” and the WUTC has the power to authorize it. However, neither US West nor GTE has formally requested a “pricing cap” structure from the WUTC. In some states where price cap has been approved, the actual amount of the “price cap” is set by the legislature, not the state commission. The WUTC is concerned that this is not the best way to determine rates; their view is that it should be done through hearings and research, in a deliberative way, generally removed from partisan politics.

We tend to believe that movement to price cap regulation may be accelerated by providing general legislative direction and authorization to the WUTC to initiate such a proceeding, perhaps subject to some guidelines set by legislation. Note once again that price cap and the competitive freedom that provides needs to be coupled with at least two other components: 1) an enforceable commitment by the affected ILEC to make significant investments in the state for the rollout of broadband services throughout their service territories, and 2) improved enforcement of interconnection agreements with regulators having the directive and resources to impose meaningful sanctions to remedy anti-competitive practices against new competitors. The legislature and the commission will need to work with the ILECs, the CLECs and customers to develop plans for meaningful investment with strong accountability measures to ensure an integrated approach.

## **VIII. Smart Investments**

In the fast moving world of the Internet and other wide-area network initiatives, the state has a track record of smart investments that have been leveraged to provide higher bandwidth services to all consumers. Dating back to the original pre-Internet point-of-presence (POP) at the University of Washington, this state has invested in bandwidth as a part of maintaining university-based research and development efforts. These efforts do more than provide a lab allowing students and faculty access to the latest in data networking developments; they also pay for themselves many times over in leveraged investment. These efforts can be thought of as today's vision of yesterday's railroad infrastructure. Each termination point becomes a focus for continued investment and fertile ground for the companies and organizations on the digital frontier.

Specifically, recent investments in efforts like the 'GigaPOP' and the 'Internet2' initiatives have already leveraged significant investment in fiber by private companies who otherwise might not have chosen to serve our state. These companies are providing the crucial super-high bandwidth backbone that is an essential component for any local initiatives.

At the same time Washington has invested to draw super-high capacity transports to our state, it has also invested to bring these benefits within our state to all of our schools and communities, even in our most rural areas. The 'K-20' initiative has leveraged state dollars to bring high bandwidth transports to many communities which might never have been served otherwise. By offering up the initial customers (schools) the state gave private companies the incentive to get over the initial hurdle of increased costs to serve these areas and significantly lowered marginal costs to serve future customers. By creating an 'anchor tenant' the state has leveraged this initial K-20 investment into greater availability of bandwidth in rural areas.

## **IX. Aggregating Demand as a Development Strategy**

Smaller cities and rural areas that organize themselves in a way that makes it easier for companies to identify a reasonably-sized customer base in a concentrated enough geographic location are more likely to get bandwidth sooner. For example, the Wenatchee area developed a consortium that created a big enough customer base that GTE was willing to build over 100 miles of high speed fiber in 1998 alone to create a

network that includes Wenatchee, Quincy, Entiat, and Brewster. Customers include five school districts, the Brewster Earth Station, and others, and plans are underway to link in libraries, hospitals and other customers as service demand expands. This effort was helped along mightily by a \$3.5M Department of Education challenge grant the school districts received to work cooperatively to aggregate demand for bandwidth. This notion of “demand aggregation” is the best hope regions outside the I-5 corridor have for getting bandwidth in the near term. The state and its agencies should explore whether or not there are opportunities for strategic grants to local communities that might assist in bringing the fiber network to such areas.

Washington has a large number of publicly-run electrical utilities, and it is natural, especially in under-served areas, that these organizations would be interested in providing high bandwidth services to their constituents. This has already happened in Tacoma, and may happen in other areas. We generally do not think that it is wise public policy for public entities to compete directly against private companies in a competitive market. However, to the extent that the public utility could, for the foreseeable future, be the provider of last resort, it would seem to make no sense to prohibit their entry. The study group recommends that this issue be explored further by policymakers and regulators in an effort to find a balanced solution which maximizes benefits for rural areas.

One proposal worthy of consideration is for certain areas, primarily small towns and rural areas, to be selected as “communications enterprise zones,” where a government-industry partnership causes sufficient demand aggregation to encourage broadband deployment. These zones might receive certain tax incentives for a period of time. The state could serve as a nucleus for such development by locating a facility that requires a sufficient base of bandwidth demand for others to benefit from the fiber deployed to serve that need. Locating a communications intensive business outside a major population center (like the call center being located in Grays Harbor) makes excellent sense as an economic development strategy for an economically depressed area.

## **X. Telecommunications as a Transportation Alternative**

We would like to be able to conclude that if we only install enough high-speed fiber lines, we will no longer have any traffic jams in the Puget Sound Basin. Unfortunately, that would not be true. However, it is true that as we transition to a knowledge-based economy, more and more jobs can be accomplished from home if the worker has access to phone, email, and office files via the Internet. When traffic is bad due to weather, an accident, or just plain congestion, workers with flexible employers are delaying trips until the traffic clears out by simply working from home part or all of that day. They can do this because they have the communication tools they need to do their jobs at home. Likewise, telecommunications will to some extent provide a substitute for in-person meetings, retail commerce and provision of governmental educational and social services. With ubiquitous access to bandwidth, we could make a measurable dent, but probably not completely solve, our traffic congestion problems, because we would all make fewer trips, and we would have the freedom to plan many of our trips during off-peak hours. More and more businesses have realized that workers can be very productive from home, but a major cultural shift cannot occur without highly reliable telecommunications infrastructure.

## XI. Conclusion

We are clearly in the early stages of what will be an explosion of demand for high bandwidth services in this state. We believe that this demand will come from all regions and from all customer classes. We also believe that by taking steps *now* Washington policymakers and regulators can expand and improve on the current data services being offered and help solve several thorny policy issues previously thought to be unrelated to telecommunications, including issues in education, transportation, and rural economic development.

Failing to act will jeopardize our state's ability to successfully compete in the 21<sup>st</sup> century economy and will leave our citizens disadvantaged.

We offer the following set of specific policy recommendations for consideration:

### Recommendations

**(I) The regulatory framework should be modernized to ensure the growth of a healthy competitive market in telecommunication services and to increase access to new broadband services for small businesses and residential customers. Specifically:**

**1. Modernize regulatory focus from rate/investment regulation to one ensuring a competitive market by moving from a 'rate-of-return' model of regulation to 'price caps.' Establishment of "price cap" regulation for ILECs needs to be connected with legally enforceable and measurable, commitments by the ILECs as to levels of future investment and the rollout of specific broadband service offerings to a broad range of customers around Washington state. (Moving to a 'price cap' regulatory model without the accompanying pieces laid out in recommendations #2, #3, and #4 below would not be a desirable action.)**

The UTC's traditional responsibility has been to ensure that consumers receive quality services at reasonable rates. It has done this by regulating the investment decisions, products, services, and rates of monopoly service providers, ensuring them a fair "rate-of-return" on their endeavors while protecting customers in the absence of market forces. But rate based, rate-of-return regulation is a cumbersome regulatory model not at all well-suited to a rapidly changing industry such as telecommunications. Today as competition is beginning to emerge, rate-of-return regulation is not able to respond quickly to new technologies and creates unfairly disparate regulatory treatment amongst competitors, many of whom are subject to little or no regulation at all.

Our suggestion is to move the WUTC out of the ILEC's books and into the ILEC's competitive practices. This can be accomplished by moving to a 'price cap' model of regulation that gives both customers and the ILECs greater certainty: customers receive greater certainty regarding prices since rates are "capped" at reasonable amounts and ILECs receive greater certainty and flexibility for justifying substantial new investments. We recommend that the commission be encouraged to move toward price cap regulation, and be empowered as necessary to accomplish that goal. The role of the WUTC as

protector of consumers need not be diminished, but the means of achieving it should be shifted from regulating companies to regulating markets.

An integral part of any transition to less regulation must include a credible commitment on the part of an incumbent to guarantee significant network infrastructure and service deployment investments in this state. A credible commitment must include measurable financial investments and the roll out of specific service offerings to a broad range of customers around the state. Without this type of commitment in exchange for new regulatory freedom, we face the significant risk that much or all of the earnings generated from Washington consumers will flow solely to corporate shareholders or to out-of-state investments rather than being reinvested into necessary facilities or service upgrades here. Early experiments in this state and others with this type of regulatory flexibility bear out the need to be vigilant on this issue. We therefore recommend that the legislature and the commission work with the ILECs to develop plans for meaningful investment with strong accountability measures to ensure they are fulfilled.

**2. Provide regulators the directive and the resources to quickly and fairly adjudicate interconnection-related disputes, including collocation and the pricing of monopoly local loop elements in an environment where speedy resolution is not inhibited by excessive discovery proceedings.**

Until a healthy, robust competitive market is in place—and probably even after—there will be a role for the WUTC to “police” the marketplace and resolve disputes among competitors. It is no easy task to adjudicate disputes amongst competitors, and the WUTC cannot play this role without clearer direction and new authority granted by the legislature. The WUTC has recently instituted new rules intended to create a much more expedited dispute resolution process. Additional rules are needed to ensure service quality standards between ILECs and the carriers seeking to interconnect with them. Such standards can serve as a fair and objective mechanism through which competing carriers can monitor incumbent carriers’ compliance with federal, state, and negotiated interconnection requirements and incumbent carriers can demonstrate their compliance if accused of violations. Carrier-to-carrier service quality standards will create an important incentive for compliance, reduce the need for regulatory oversight by encouraging self-policing, and provide necessary information to facilitate timely and fair resolution of complaints when regulatory intervention is required.

**3. Provide regulators the directive and resources to impose meaningful sanctions to remedy anti-competitive practices against new competitors.**

The WUTC should also be given the direction and authority to punish severely significant drops in service quality to retail and wholesale customers. ILECs should not be able to use their monopoly power to impose sub-standard service to Washington citizens or to other carriers. The commission’s ability to ensure customers remain protected during the transition from monopoly service to free market must be preserved. Moreover, current remedies available through administrative proceedings at the WUTC to competitors harmed by anti-competitive conduct are insufficient to deter the abuses or to “make whole” the aggrieved companies. Additional remedies, including the ability to award actual damages and meaningful penalties, would be helpful in encouraging fair competition.

**4. Simplify and streamline the process for classifying as ‘competitive’ new high-end telecommunications services offered by Incumbent Local Exchange Carriers(ILECs.)**

Current law provides a process by which ILECs can have their services classified as “competitive” upon a showing that the service is subject to effective competition. Once classified as competitive, incumbents are afforded greater flexibility in pricing and marketing those services. The competitive classification process does not distinguish between customer classes (e.g., business vs. residential) or distinct markets within a company’s service area (e.g., urban vs. suburban vs. rural). This makes it an all-or-nothing proposition where an incumbent must show that competition exists for all customers throughout its entire service area before being granted the flexibility to respond to competition within specific customer classes or distinct market areas. Since the growth of telecommunications competition is clearly an incremental process, the regulatory process for competitive classifications needs to be an incremental one as well. We recommend that flexibility be granted once effective competition has developed within a relevant geographic or product market or a specific customer class. Emerging high bandwidth services such as xDSL present excellent candidates for competitive classification.

**5. Encourage local jurisdictions that regulate cable TV companies through franchises to promote open, competitive access to those networks for two-way data, telephony, and video communications in a manner similar to networks regulated by the WUTC.**

Cable TV companies, through the rebuild of their networks, will become major competitors in the market for broadband services. In many cases, and for the foreseeable future, they may be the only competitors to incumbent carriers for residences and small business. As these networks are created it is important that they be open on a non-discriminatory basis for competitors to provide services to customers through resale and interconnection in the same way that traditional telephone networks are required to be open under the Federal Telecommunications Act of 1996. At the present time, cable companies are attempting to create a major competitive advantage for themselves by not unbundling their networks. Recently, some local authorities have begun to require that cable networks become open networks by unbundling their services (e.g., Hood River). We support this approach as a fair and competitively neutral way to promote the rapid deployment of advanced telecommunications services.

***(II) The deployment of statewide fiber and other wireline backbones needs to be encouraged in order to increase infrastructure deployment in rural and non-urban areas, which will require easing onerous requirements for accessing the public rights-of-way. Other new technologies (e.g. wireless) should be granted similar access.***

**1. Declare as a state policy that access to public right-of-way is viewed as a powerful incentive to infrastructure investment instead of as another source of general government revenues. Consider adopting procedures similar to what has been adopted in other states, whereby Washington would have a common set of right-of-way policies and procedures so that a company intending to put in new**

**facilities will know both the cost and time-frame required to gain necessary approvals at the outset.**

To eliminate the patchwork, state legislative policy should identify those right-of-way issues appropriately handled centrally rather than repeatedly in each local jurisdiction—and set out uniform rules. Most important, the legislature needs to make clear that the "fair and reasonable compensation" local jurisdictions are entitled to under the Federal Telecommunications Act is limited to recovery of actual expenses directly related to managing the public rights-of-way. It should clarify the basis upon which local governments may calculate and recover actual expenses. Permit and license fees should recover only the actual administrative expenses incurred by local governments in receiving, considering, and issuing applications, inspecting work, and maintaining the necessary systems and records to safely and effectively manage the use of the rights-of-way. Telecommunications franchises should not be a means of raising general revenue.

**2. Stop efforts by Washington State Department of Transportation (WSDOT) to restrict public access to public rights-of-way along state highways to a single monopoly provider and direct WSDOT to elevate the transportation of data via a telecommunications backbone to a level of equal importance with the transportation of other goods and services.**

The most significant rights-of-way in Washington are owned by the state along our state highway system and managed by WSDOT. These rights-of-ways are valuable corridors which could and should be used to transport services from bandwidth rich urban areas to bandwidth poor rural areas. Instead, WSDOT is attempting to exert its control over these areas to leverage services and revenue for the department's other missions. The legislature should recognize the short sightedness of these efforts and direct WSDOT to open up rights-of-ways to multiple providers at a cost that does not exceed the direct costs incurred by WSDOT. The transportation of data via the "information superhighway" needs to be elevated to the same level of importance within our economic policy as the transportation of cars, trucks, and traditional freight, and that attitudinal shift must be promoted among state legislators and transportation officials.

**3. Direct and empower the appropriate state agencies to create, publicly distribute and maintain a 'map' of the fiber backbones present in Washington. Establish benchmarks and annual reporting requirements of telecommunications and cable companies for annually measuring the pricing and availability of broad band telecommunications services throughout the state.**

One finding which surprised our group was the lack of any single 'fiber map' of Washington. A publicly-available map would help policymakers and community leaders identify under-served areas and take steps to rectify the problems facing them. It would also serve as a valuable rural economic development tool to be able to show interested companies locations near a fiber terminus. While some telecommunications companies view this network information as proprietary, we are confident that it can be collected and illustrated in such a way as to protect confidential or proprietary business information. Companies operating in the state should also report the broadband services they are offering, so we can, as a state, accurately track the deployment of these services. This information can be used by local economic development agencies as they recruit

businesses to their areas, by the legislature and others who need to know our competitive position in this arena.

**4. Encourage programs by the state and other governmental entities to aggregate demand as has been done with the K-20 network.**

Washington's investment in the K-20 network will pay dividends for several years to come. Not only has it opened up the world of distance learning, it has become the 'anchor tenant' in rural areas. This decreased the marginal costs of adding additional customers to the point where the market can now deliver high bandwidth services to areas it would not have been able to otherwise serve. The state needs to continue its ongoing commitment to the K-20 network, as it seeks other ways of aggregating demand to better serve outlying areas.

**5. Continue to support research and development efforts like the 'GigaPOP' and Internet2.**

Research and development efforts, like the GigaPOP and Internet2, have been leveraged to bring super-high bandwidth backbone providers to Washington state and have leveraged private matching dollars to a great effect. Continued support for this effort and others like it will continue to keep Washington on the forefront and continue to expand options for consumers.

**6. Establish "telecommunications enterprise zones," where a government-industry partnership causes sufficient demand aggregation to encourage broadband deployment.**

These communication enterprise zones, situated in small towns and rural areas, might receive certain tax incentives for a period of time. The state could serve as a nucleus for such development by locating a facility that requires a sufficient base of bandwidth demand for others to benefit from the fiber deployed to serve that need.