Executive Summary

State law directs the Oregon Public Utility Commission to prepare an annual report on competition in Oregon's telecommunications industry. This is the fifth annual report.

To gather information for the report, the Commission surveyed all local exchange carriers. The Commission also surveyed Oregon cities, counties, school districts, community colleges, universities, and people's utility districts that own coaxial, digital subscriber lines, fiber optics cable and other advance telecommunication infrastructure.

The major findings of the report are:

- Incumbent carriers continue to serve the lion's share of wireline customers. However, competitors' share of the market has increased. At the end of 2002, Oregon's four largest incumbents – Qwest, Verizon, Century Tel, and Sprint – served nearly 83 percent of the wireline lines in Oregon. The other 30 incumbents served six percent of lines. Competitive carriers share of the total went from 8.8 percent at the end of 2001 to 11.3 percent at the end of 2002. Competitive carriers served about three percent of the residential market and 26.3 percent of the business market. Most of the competitive carriers' customers are in the Portland Metropolitan area. At the end of 2002, competitive carriers also served about 13 percent of local private lines (dedicated circuits between two or more locations).

- The number of competitive carriers operating in Oregon has increased. At the end of 2002, 101 competitive local exchange carriers operated in Oregon, 26 more than in 2001. Forty-eight (48) of those companies offered switched (dial tone) service.

- About half of the competitive carriers providing switched service resell wholesale services offered by incumbents. However, nearly 50 percent of the revenues collected by competitive carriers went for capital expenditures, indicating a move towards facility-based provision of service.

- Competitive carriers cited price, lack of facilities, and incumbents name familiarity as the greatest barriers to bigger market share.

- About a third of the public entities surveyed (136 out of 365) own some type of advanced telecommunication facility such as fiber optic, cable, and DSL.

- About six percent of the public entities responding to the survey offer high-speed telecommunication services to homes and businesses. Ten percent of the public entities responding to the survey reported they are willing to sell high-speed telecommunication service to local residents and businesses.
Other major events over the past year affecting competition in Oregon are the following:

- Competitive carriers have started offering telecommunication services over cable TV facilities in the Portland metropolitan area. The service requires substantial investment in two-way transmission technology to replace the original one-way transmission design for TV.

- On November 24, 2003 the Federal Communications Commission began allowing customers that stay at the same location, to keep their telephone numbers when they change from one local wireline service provider to another, or from one wireless provider to another. In early 2004, such local number portability will be available for customers switching from wireline to wireless. Competition for customers between wireline and wireless carriers is expected to increase as wireless service becomes a more attractive service option for a segment of the telecom market. Location Number Portability, which allows customers to keep their numbers no matter where they move, will not be implemented for several more years.

- The 2003 Oregon Legislature passed a bill allowing the Commission to opt in to the Federal Communications Commission enforcement program that deals with complaints about slamming. Slamming occurs when a consumer discovers that his or her telecom service provider has changed without his or her consent. The Commission began enforcing the Federal Communications Commission rules on January 1, 2004. The Commission continues to see increases in customer complaints regarding both "slamming" of long-distance services as well as "bill cramming" on local service. Cramming occurs when a customer is billed for unexpected and unauthorized charges or services.

- A convergence of technologies is bringing profound changes to the telecommunications industry and its regulation. Carriers have discovered that internet technology can be used to carry voice messages. In some cases, the internet is being used directly to carry voice traffic traditionally carried over the existing telecommunications network, known as the public switched network. In other cases, internet technology is being used in combination with the public switched network. The term "voice over internet protocol (VOIP)" is used to describe all variations of this new method of providing service. The increasing use of VOIP is threatening traditional regulatory approaches to assuring universal telecommunications service and the compensation of telecommunications carriers for use of their facilities by other carriers. The Federal Communications Commission (FCC) is considering whether traditional regulatory methods should be applied to VOIP. The FCC must decide whether VOIP applications are "telecommunications services" or "information services." FCC decisions concerning VOIP will likely determine the role the Oregon PUC will have in the regulation of VOIP, if any. In the meantime, a number of Oregon carriers are using VOIP. Qwest has announced that it will begin using VOIP soon.
The Commission currently has two investigations to deal with the Federal Communications Commission mandate to states to undertake reviews of market conditions and determine whether competitive carriers need access to certain "unbundled network elements" from incumbent carriers in order to stay in business and whether competitive carriers' to provide service without them would be impaired. The Federal Communications Commission 's Triennial Review order requires States to analyze markets and hold formal proceedings to make determinations concerning the Federal Communication Commission's "necessary" and "impair" standards. States are undertaking 90-day and nine-month proceedings, with follow-up proceedings needed on an ongoing basis as market conditions change. Many aspects of the Triennial Review order have been appealed by various parties to the federal court, perpetuating marketplace uncertainty. The Federal Communications Commission allowed CLECs continued access to UNE-P. Use of UNE-P allows CLECs to enter the local exchange market without having to invest in expensive equipment.

While Oregon's telecom marketplace continues to be dominated by ILEC's, technological changes are happening rapidly. These changes are driving down costs, increasing options for many customers (especially business users) and fostering changes in the national regulatory policy. It is difficult to speculate whether or when these changes will create benefits for Oregon customers. It may be timely for the 73rd Legislative Assembly will revisit Oregon telecom law and how it fits the evolving industry environment and needs of citizens.
FORWARD

The 1999 Oregon Legislature passed House Bill 2577 (HB 2577), which, "[d]irects the Public Utility Commission to report annually to Governor and Legislative Assembly or Emergency Board on status of competition and regulation in telecommunications industry" (emphasis in original). The purpose of this report, which is due on or before January 31 of each year, is to ensure consistency with the Federal Telecommunications Act of 1996, to enhance fair competition and to promote deregulation of the telecommunications industry. The 2003 Oregon Legislature amended HB 2577, requiring this report to include information on one additional topic (number 8 below). This report satisfies the requirements of HB 2577 by providing information on the eight topics listed in the Bill. The numbered tabs (1-8) in this report relate to the eight topics listed in HB 2577. The topics are:

(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.

(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.
In addition, ORS 759.050(9) requires the Commission to report annually to the Legislative Assembly regarding competition in the telecommunications industry in Oregon. A copy of that report is attached behind tab A-1.
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(1) The status of competition in the telecommunications industry

A. Commission Surveys of the Status of Telecommunications Competition in Oregon

Has the Commission conducted surveys to assess the level of competition in Oregon?

Yes. In January 2003, the staff of the Public Utility Commission of Oregon sent a survey to 244 local exchange carriers (LEC) for the purpose of assessing the state of local telephone competition in Oregon. The survey asked all of the local exchange carriers, both incumbent (ILEC) and competitor (CLEC), to provide information about their local services during December 2002. The staff received responses from all 341 ILECs and 186 out of 2102 CLECs, for a total response rate of 90 percent. This was the fifth annual survey conducted by the Commission.

In addition to the primary survey referenced above, another survey was sent to 535 public bodies in early November 2003. This new survey was needed after the 2003 Legislature made changes to the existing legislation that requires this report. The new survey asks about the existence and use of telecommunications facilities by public bodies.

A report, including detailed analysis of the results from both surveys, "Local Telecommunications Competition Survey," is attached at A-3.

What were the results of the surveys?

There were 101 CLECs operating in Oregon in December 2002, or 26 more than the previous year. The number of CLECs was 210, which is down from 216 last year. So while the number of CLECs decreased over the last year, more of the CLECs were actually conducting business in Oregon. Forty-eight of the 101 operating CLECs were competing in the local exchange switched services market.

Competitive entry in Oregon's local telecommunications market, based on market share, is still small, especially in the residential sector. Total CLEC market share was 11.3 percent (up from 8.9 percent) of local switched telephone lines.

1 The Survey treats CenturyTel of Oregon, Inc. and CenturyTel of Eastern Oregon, Inc. as two utilities.

2 The survey was sent to approximately 20 CLECs who may not have been certified to provide local exchange service at the time the survey was distributed.
However, CLECs had only 3 percent of the residential market. More competitive entry is occurring in the business sector where CLECs were supplying 26.3 percent of business customers' switched local exchange lines, up from 21.7 percent the prior year.

CLEC penetration of the local private line market was 13.2 percent measured by share of private line circuits.

The predominant form of CLEC competitive entry was resale. Twenty-five of the 48 CLECs providing local exchange service were ILEC-service-resellers.

The degree of competitive entry into Oregon's telecommunications market varies across different regions of the state. In Portland and the Willamette Valley, CLECs were providing 31.5 percent and 25.5 percent of business customers' switched local exchange lines respectively. Along the Coast and in Central Oregon, CLECs were providing 8.6 percent and 22.5 percent of business customers' switched local exchange lines, respectively. The following chart illustrates CLEC penetration into Oregon regional business and residential markets. CLECs had 5.8 percent of the residential market in Portland, and 2 percent or less in the others areas of the state.

What is the CLECs' share of the market by region?

While CLECs provide service to increasing shares of business customers' switched local exchange lines across the state, the bulk of the CLEC entry has been in the Portland metropolitan region. The following chart shows that of all business switched service lines provided by CLECs, 64.7 percent were in the Portland area.
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Where are the CLECs focusing their business sector activities?

The figure below shows CLEC market share growth for revenues, lines served, and customers. By 2002, CLEC revenues had nearly tripled compared to 1998, increasing from $45.3 million to $132.1 million. Annual increases for CLEC switched access lines in the last four years have ranged from 23 percent to 43 percent. The average annual increase was 33.5 percent.

How has CLEC market share changed over the last several years?

The figure below shows CLEC market share growth for revenues, lines served, and customers. By 2002, CLEC revenues had nearly tripled compared to 1998, increasing from $45.3 million to $132.1 million. Annual increases for CLEC switched access lines in the last four years have ranged from 23 percent to 43 percent. The average annual increase was 33.5 percent.
B. Commission Actions and Policies to Promote Competition

What state and federal laws encourage competition in the telecommunications industry?

In 1985, the Legislative Assembly adopted a goal for the State of Oregon "to secure and maintain high-quality universal telecommunications service at just and reasonable rates for all classes of customers and to encourage innovation within the industry by a balanced program of regulation and competition" (ORS 759.015). The federal Telecommunications Act of 1996 (Federal Act) is pro-competition as well. It gives the Federal Communications Commission (FCC) and each state utility Commission important roles in opening telecommunications markets to competition.

What is the Commission doing to promote greater telephone competition in Oregon?

Key actions by the Commission to promote competition are:

1. Granting certificates of authority to competitive carriers in an efficient manner. See Section (4) A for details.

2. Providing new pricing flexibility for incumbent carriers as competition develops in "competitive zones" See Section (5) A for details.

3. Requiring dialing parity so that long distance carriers gain equal access to all local telephone customers.

4. Arbitrating disputes between competitive and incumbent carriers regarding terms and conditions of interconnection.

5. Resolving complaints by competitive carriers against the incumbents.

6. Ensuring non-discriminatory access by competitive carriers to the incumbent carriers' networks (e.g., access to unbundled network elements such as local loops and switches).

7. Setting reasonable rates for unbundled network elements based on long-run incremental cost.

8. Exempting services from rate regulation if the Commission finds that competition exists. See Section (5) C for details.
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In the Telecommunications Industry

9. Exempting services from prior approval when the incumbent shows that the services are subject to competition or are non-essential. See Section (5) B for details.

10. Responding to Qwest Corporation's desire to provide long distance services in Oregon according to the market-opening requirements of the Federal Act (section 271). See Section (2) H for details.

11. Implementing the Oregon Universal Service Fund for areas of the state served by Qwest Corporation and Verizon Northwest in 2000, with implementation in the balance of the state occurring in 2003. See Section (6) B for details.

C. The Current Telecommunications Regulatory Landscape

What Commission regulations apply to incumbent carriers?

Oregon has 34 incumbent carriers. Eleven of these are telecommunications cooperatives. The remainder are telecommunications utilities. The law requires telecommunications utilities to provide adequate service at just and reasonable rates. Telecommunications utilities are subject to varying degrees of rate, profit, consumer protection, service quality, and price cap regulation. Further discussion of price cap regulation can be found after Tab A-2. Telecommunications cooperatives are subject to utility-like rate regulation only with respect to the rates that they charge the long distance carriers for exchange access.

Does the Commission have different regulations for different types of carriers?

Yes. Oregon and federal laws recognize two types of telecommunications carrier: (1) incumbent carriers, and (2) competitive carriers. The incumbent carriers were providing telecommunications services as regulated monopolies at the onset of competition. Competitive carriers are entering the telecommunications market. In Oregon, incumbent carriers, operating as telecommunications utilities or cooperatives, are regulated, due to their near total dominance in local telephone markets. Cooperatives, which are also classified as incumbent carriers, are subject to limited regulation, as described in the previous answer. Different forms of regulation are available to telecommunications utilities. (See Section (2)). New entrants are classified as competitive carriers since they compete with the incumbents and each other.
What flexibility is afforded to utilities and the Commission under current statutes?

While some aspects of the telecommunications industry are still regulated, the Commission allows regulation to be flexible so that utilities may respond to increased competition. Flexibility occurs in the following ways:

▪ Competitive Zones – If a service in a particular geographic area is subject to competition, the incumbent utility will be granted downward pricing flexibility for that service.

▪ Price Listing – If a service is non-essential or subject to competition, an incumbent utility may receive pricing flexibility but the revenues and costs from that service are still reviewed in a rate case.

▪ Service Deregulation – If competition exists, or certain other conditions are met, an incumbent utility may ask that a service be deregulated. If service deregulation is granted, the revenues and costs from that service are treated "below the line" and are not reviewed in a rate case.

▪ Price Cap regulation – An incumbent utility may ask for pricing and earnings flexibility under ORS 759.195. Qwest Corporation (Qwest), formerly known as US West Communications, Inc., was granted an alternative form of regulation (AFOR) under this statute from 1992 – 1996. Since December 30, 1999, Qwest has operated under a different form of price cap and floor regulation pursuant to ORS 759.410. To date Verizon Northwest, Inc. (Verizon), formerly known as GTE Northwest Incorporated, has not filed for price cap regulation under ORS 759.195, ORS 759.410, or another AFOR statute, ORS 759.255.

The chart on the following page displays the level and type of regulation for the incumbent local exchange telecommunications carriers, as well as, competitive carriers. It is important to note that while a service may be listed as "regulated," there may be many options for pricing flexibility available to both the utility and the Commission.
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Chart 1: Telecommunications Regulatory Landscape – Today (January 1, 2004)

<table>
<thead>
<tr>
<th>Form of Regulation/Oversight</th>
<th>Incumbent Carriers</th>
<th>Competitive Carriers</th>
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<td>Qwest</td>
<td>Verizon</td>
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<td></td>
<td>CenturyTel</td>
<td>Sprint (Local Service)</td>
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<td>Small Independent Telecommunications Utilities</td>
<td>Cooperatives</td>
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<td>Long Distance Carriers</td>
<td>Local Facilities Based Carriers</td>
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<td></td>
<td>Resellers</td>
<td>Cable Companies as Telecommunications Providers</td>
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<tr>
<td></td>
<td></td>
<td>Government / Municipalities as Telecommunications Providers</td>
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<tr>
<td></td>
<td>Wireless Carriers</td>
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</tbody>
</table>

- Qwest
- Verizon
- CenturyTel
- Sprint (Local Service)
- Small Independent Telecommunications Utilities
- Cooperatives
- Long Distance Carriers
- Local Facilities Based Carriers
- Resellers
- Cable Companies as Telecommunications Providers
- Government / Municipalities as Telecommunications Providers
- Wireless Carriers

Under the Telecommunications Act of 1996, certain carriers have an exemption from these requirements. However, the PUC has the authority to revoke this exemption.

Small Independent Telecommunications Utilities are allowed to operate under a modified regulatory approach that can be revoked by the PUC.

Some form of regulation/oversight applies.

3 Carriers contribute to the PUC’s programs for low income & hearing impaired consumers and to federal programs for schools, libraries, and rural health care. Long Distance Carriers do not contribute to the PUC’s low income or hearing impaired program.

4 Regulation of a cooperative’s capital recovery applies only to access charges.

5 HB 2557 exempts telecommunications utilities with less than 50,000 access lines from minimum service quality standards related to the length of time it takes the utility to respond to questions from customers.

6 In a competitive zone, where calls are exchanged between an incumbent carrier and a competitive carrier, an incumbent carrier gains pricing flexibility for the types of services offered by the competitive provider.

7 Incumbent carriers can apply to the Commission for pricing flexibility, or elect pricing flexibility under Chapter 1093, OR Laws 1999 (i.e., SB622). Qwest elected the latter effective 12/30/99.

8 Wireless carriers do not contribute to the USF unless they elect to; they do contribute to OTAP and TDAP.
(2) Significant changes that have occurred in the telecommunications industry during the preceding 12 months

A. Legislative Changes

What recent legislation has had an impact on the telecommunications industry?

No bills were passed by the regular session during 2003 that have a significant impact on the telecommunications industry.

B. Competitive Activity

How many competitive local service providers are there in Oregon?

During 2003, there was a 5 percent increase in the number of providers authorized by the Commission to provide competitive local service. At the end of 2002, there were 191 competitive local service providers in Oregon. By the end of 2003, the number had increased to 200.

As of December 2003 the Commission had authorized 424 providers to provide competitive interexchange services, such as long distance and operator services. This is a slight decrease from last year's count of 427. The Commission grants about 90-100 new applications for interexchange authority per year.

The total number of competitive providers certified in Oregon is nearly the same as last year, with 442 at the end of 2003, compared to 445 at the end of 2002.

C. Technological Advances

What new technologies are being deployed in the telecommunications industry?

Digital Subscriber Line

Digital Subscriber Line (DSL) allows transmission at high data speeds (greater bandwidth) over ordinary voice grade loops between a telephone customer's premises and the telephone company central office. These transmissions are then routed through a specialized packet-switched network. Higher speeds make DSL service attractive for Internet access and telecommuting. DSL also diverts Internet bound traffic from the public switched network.
DSL has some technical limitations and mileage limits (about three miles from a central office). Initially, DSL services would only work on copper facilities and would not work on customer lines that are delivered on a mixture of fiber and copper. This is no longer the case. Various manufacturers are producing equipment that can be retrofitted into the existing network to provide DSL to many customers who could not previously be served by this technology.

On December 9, 1999, the FCC ordered incumbent local exchange carriers to unbundle the high frequency portion of a customer's local service line for use by competitive carriers to provide DSL. This is known as "line sharing". However, on appeal, a 2002 federal court decision required the FCC to further justify its line sharing decision. Instead of justifying its line sharing decision, the FCC eliminated the line sharing requirement in its August 21, 2003 Triennial Review Order, subject to a transition period. The order did require incumbent carriers to allow and facilitate "line splitting." Under a line splitting arrangement, one competitive carrier provides voice service using the low frequency portion of a line, while another competitive carrier uses the high frequency portion to offer DSL.

**Telephone Service over Cable**

Competitive carriers have started offering dial-up telecommunications services over cable TV facilities. At present, telephone service over cable is a reality only in parts of the Portland metropolitan area. The service requires substantial investment in two-way transmission technology to replace the original one-way transmission design for TV.

**Fiber Optics**

Fiber and optical transmission technology is developing very rapidly, and as a result capacity of systems is growing exponentially (even faster than computer power).

Transmission systems have gone from an OC-1 (672 channels) to OC-768 (516,096 channels). This is on one laser on one pair of fibers. The number of lasers on a fiber has grown to 80 and will continue to grow.

Twenty years ago, the first fiber networks could transmit 45 megabits of information per second. Now, using dense wavelength division multiplexing, a fiber strand can be split into 80 and soon 160 different colors, each capable of carrying its own data stream. The speed of transmission has increased from 2.5 gigabits two years ago to 10 gigabits currently. Technological improvements have boosted the capacity of a single fiber strand 18,000 fold over the past
20 years. Now a single fiber strand thinner than a human hair can carry every phone call, e-mail, and Web page used by every person in the world.

In order to route and switch optical signals, it has been necessary to convert optical information to electrical signals. With emerging technology, it will no longer be necessary to perform this conversion. Using tiny mirrors or magnetic bubbles, it is now possible to switch optical signals directly from one fiber to another. Optical switches will form the core of the emerging multi-service optical network comprising voice, video, and data services. Indeed, when voice and video are digitized, all services become data services and differ only in the priority of their delivery.

**Voice over Internet Protocol (VoIP)**

Certain carriers are increasingly using Internet technology to provide voice service. The specific technologies used by these carriers are not uniform, but their common thread is the use of Internet technology in conjunction with the networks of the traditional telecommunications carriers. Providers of VoIP do not pay traditional carriers for use of their networks, nor do they contribute to universal service funds. The ability of VoIP carriers to avoid these charges has generated great controversy. The FCC previously examined the subject of VoIP in 1998, but did not conclude that VoIP is a telephone service. The FCC is currently reexamining VoIP so that it can determine its regulatory status.

D. Mergers and Acquisitions

*What recent mergers or acquisitions have had an effect on the telecommunications industry in Oregon?*

Oregon statutes provide the Commission the authority to review electric, natural gas, and water utility mergers under ORS 757.511. However, the Commission does not have this kind of authority with regard to telecommunications mergers.

There were no significant mergers during 2003. Major bankruptcy filings by WorldCom and Global Crossing may lead to future merger and acquisition activity. During 2002, Advanced Telecom, Inc., a relatively large competitive local service provider in Oregon, filed for bankruptcy court protection. GE Business Productivity Solutions, a subsidiary of GE, tentatively acquired the company's Oregon assets, including customers. At the conclusion of the bankruptcy Advanced Telecom kept most of its customers, however, it did lose its customers
at all ten of its shared telecommunications service sites (apartment complexes) in Oregon.

E. Rates

*What major rate changes have occurred recently?*

On April 14, 2000, the Commission concluded its rate case investigation of Qwest by approving a settlement agreement between Qwest and the Commission's Staff. The Commission's order approved an annual rate reduction for Qwest of $64.2 million. Qwest implemented the rate reduction on September 22, 2000, in the form of temporary monthly bill credits.

On September 14, 2001, the Commission approved permanent rates to replace the monthly bill credits. The new permanent rates went into effect January 1, 2002. Qwest took several months to implement the changes on customer bills. The rate changes lower Qwest's charges for various services including toll calling, carrier access, extended area service, features such as call waiting, and business local services. Local service rates for residential customers did not change except in Qwest's higher cost exchanges. Residential local service rates in Qwest's higher cost exchanges increased by $1.00 or $2.00 per month depending on the rate group. Rates also increased for a number of private line (dedicated point-to-point) services to ensure that these rates cover costs. The revised rates establish new permanent price caps for Qwest's non-basic services under the company's price cap plan.

On September 11, 2003, the Commission voted to allow Sprint to reduce its rates. The annual Sprint revenue reduction was $585,000. This amount was determined through settlement discussions between the company and the Commission staff. The Commission-approved settlement included rate reductions for access charges, extended area service, direct inward dialing, long distance service, and certain high capacity services.

F. Local Number Portability

*What is the status of telephone number portability?*

If customers stay at the same location, local number portability allows them to keep their telephone numbers when they change from one local service provider to another. Local number portability, using the permanent database technology, was first deployed in the Portland area in September 1998. Since then, Qwest
has installed number portability capability for 99 percent of local telephone lines in its Oregon service territory. Verizon and United Telephone Company of the Northwest (dba Sprint) have deployed number portability throughout their Oregon service areas. Number portability, including the charges for it, is under the jurisdiction of the FCC with some authority delegated to the Commission.

The FCC ordered wireless (cellular) carriers to implement number portability in the 100 largest MSAs effective November 24, 2003, so customers can keep their cell phone numbers when changing from one wireless carrier to another. The Portland metropolitan region was affected by this change. The number portability requirement for all other areas will go into effect May 24, 2004. The FCC also ordered wireline (landline) telephone companies, including both incumbents and competitive providers, to implement wireline to wireless number portability so that customers can change service from wireline to cellular carriers and keep their wireline telephone numbers. This latter service will be available in early 2004. Reverse number portability, from wireless to wireline is not required and will not be available.

Location number portability, which allows customers to keep their numbers no matter where you move, will not be implemented for several more years.

G. Federal Activities

What federal activities have influenced Oregon markets?

The Telecommunications Act of 1996 (Telecommunications Act) is the subject of continued litigation. Seven years after its passage, the competitive marketplace continues to be affected by court decisions and changes in FCC rules pursuant to the Telecommunications Act. The resulting uncertainty has created financial problems for competitive carriers, including bankruptcies and difficulty in raising capital.

Unbundled Network Elements

On August 21, 2003, the Federal Communications Commission (FCC) released its order in the "Triennial Review" proceeding concerning issues related to Unbundled Network Elements (UNE). Competitive Local Exchange Carriers (CLEC) purchase UNEs from Incumbent Local Exchange Carriers (ILEC) in order to provide services to consumers. As discussed earlier in this report, (page 2-2), an option known as line sharing will be phased out. The loss of line sharing as a means of providing service to consumers has prompted CLECs that specialize in
broadband services to explore and form partnerships with CLECs that provide narrowband services. The FCC eliminated line sharing in an attempt to encourage ILECs to invest in broadband facilities, but there is concern that it will discourage competitors from trying to enter the marketplace and reduce broadband service competition.

The FCC allowed CLECs continued access to a bundle of unbundled network elements known as UNE-P. Use of UNE-P allows CLECs to enter the local exchange market without having to invest in expensive equipment. A possible FCC end to access to UNE-P had been a concern in last year's report. The Triennial Review order requires states to undertake reviews of market conditions and determine whether the CLECs need certain UNEs to stay in business and whether CLECs' ability to provide service without them would be impaired. States must analyze markets and hold formal proceedings to make determinations concerning the FCC's "necessary" and "impair" standards. States are undertaking 90-day and nine-month proceedings, with follow-up proceedings needed on an ongoing basis as market conditions change. The Commission currently has two open dockets, UM 1100 and UM 1110, to deal with the FCC's mandate to states. Many aspects of the Triennial Review order have been appealed to the federal court, perpetuating marketplace uncertainty.

**TELRIC (Total Element Long Run Incremental Cost)**

The courts have determined that, under the Telecommunications Act, the FCC has the authority to develop a pricing methodology that states must use to price unbundled network elements. The FCC's pricing methodology is a Total Element Long Run Incremental Cost model (TELRIC). States set prices using their own numerical inputs. The FCC has signaled its intent to change its TELRIC methodology. When the FCC amends its methodology, states will need to update their prices. There is considerable controversy over the current FCC methodology. Lack of certainty over pricing, which is driven to a large degree by federal policies, is a hindrance to competition.

**Intermodal Competition for Local Exchange Service – Wireless Telephony**

The FCC has held firm on its November 24, 2003, deadline for wireless local number portability (LNP). The deadline includes wireline to wireless portability. Concerns about small companies' ability to meet the technical requirements of wireline to wireless number portability led the Oregon Telecommunications Association to petition the Commission for a suspension of the rules. Improvements in wireless service quality and increased innovation in service
offerings are expected to result from implementation of LNP for wireless carriers, raising the possibility that more consumers will discontinue their use of wireline service. Competition for customers between wireline and wireless carriers is expected to increase as wireless service becomes a more attractive service option for a segment of the telecommunications market.

Universal Service

In June/July 2003, wireless carriers filed their first proposals to become Eligible Telecommunications Carriers (ETC), making them eligible to receive Universal Service Funds in Oregon. These filings came as a result of provisions in the Telecommunications Act. Federal court cases and FCC decisions concerning ETCs could affect Oregon decisions on these applications. There is a concern about how to calculate the amount of support that would be received by an eligible wireless telecommunications carrier. These carriers are not rate-regulated by the Commission. Their cost structures are unlikely to be identical to the cost structures of the ILECs. The computation of an appropriate subsidy to an ETC is an issue. A Universal Service subsidy that is too high or too low would have an adverse effect on competition.

The FCC is considering changes in its Universal Service programs. It has improved the offerings for rural health care providers. Assessments for the federal universal service program are expected to decline slightly in the short term, which will reduce the amount that Oregon consumers will pay. Because the Oregon Universal Service Fund (OUSF) is designed to complement the federal fund, changes in federal funding will have an impact on the OUSF's activities. If federal support to Oregon consumers increases, less state support would be needed and OUSF contributions could be reduced. Changes in state and federal Universal Service support would have to be considered in the computation of support available to ETCs.

Slamming

The 2003 Oregon Legislature passed a bill allowing the Commission to opt in to the FCC enforcement program that deals with complaints about slamming. Slamming occurs when a consumer discovers that his or her telecommunications service provider has changed without his or her consent. The Commission expects to begin enforcing the FCC rules on January 1, 2004. Increased attention to slamming complaints should help decrease the number of companies that use questionable practices to add to their customer base so that only those companies that compete according to the rules will remain. Resulting
improvement in consumer confidence in competitive carriers should improve their willingness to request service from them.

Broadband Services

Intermodal competition for broadband services is increasing. Competitors other than wireline ILECs and CLECs are providing more services to more consumers. The FCC has freed up more spectrum for wireless broadband services so they are becoming more widely deployed. Companies are increasingly considering wireless service options as a way to provide advanced telecommunications services in rural areas. Cable modem use is increasing. The FCC is also exploring provision of broadband services over power lines. The FCC could encourage development of this relatively untested mode of service if it is subject to only limited regulation as a "nascent" technology under FCC rules. FCC Commissioners have expressed interest in treating broadband services over power lines in this manner.

The FCC is discussing regulatory changes that could potentially affect both competition and state jurisdiction. The FCC could determine that certain advanced services should be regulated as information services rather than telecommunications services. As a result, such services would not come under state jurisdiction. Voice over Internet Protocol (VoIP) is one such service. It can be used to provide local as well as long distance voice telecommunications service so some state jurisdiction over local exchange service could be lost if VoIP is determined to be an information service. Qwest has announced its interest in providing service using VoIP. An FCC decision concerning the classification of cable modem services was partially affirmed and partially vacated and remanded by the 9th Circuit Court of Appeals. The Court said that cable modem service is partly a telecommunications service and partly an information service. It is not appropriate to classify cable modem service as cable service. The FCC is expected to appeal the decision. The issue of the regulatory classification of services is important to competitors and incumbents alike. Uncertainty in the marketplace over the outcome of litigation in this area plagues the competitive marketplace and has an adverse effect on competition in markets throughout the nation, including Oregon.

Reciprocal Compensation

The FCC still has not made a decision on reciprocal compensation. How to determine the amount that one carrier must pay to another for terminating
telecommunications traffic continues to be an uncertainty that adversely impacts the marketplace.

Section 271

In April 2003, Qwest obtained approval from the FCC for its section 271 application. Qwest is now able to provide long distance service to customers in Oregon, which will expand customers' service options and change the competitive landscape for long distance service in Oregon. Continued monitoring of Qwest's compliance with section 271 requirements will occur under the conditions of the application's approval. Much of this activity will relate to ensuring that Qwest's Operations Support Systems (OSS) continue to be available to its competitors with the level of quality that Qwest has agreed to. Continued availability of quality OSS services is critical to the ability of competitive carriers to provide quality service in a timely manner to their customers. The Commission has joined with other states to hire a consultant to help manage the ongoing oversight and compliance enforcement process related to Qwest's OSS.

H. Qwest Corporation's Entry into Long Distance

What is the status of Qwest's effort to become a long distance carrier?

In December 2002, the FCC approved Qwest's application to provide in-region long distance services in nine of the fourteen states where Qwest is a local service provider. In April 2003, the FCC approved Qwest's application to provide in-region long distance service in Oregon, and Qwest began providing such service in May 2003 through an affiliate, Qwest LD Corporation. In early 2003, the Commission had filed with the FCC an affirmative recommendation on Qwest’s application, and in November 2002 the Commission had granted Qwest LD Corporation authority to provide long distance service in Oregon.

The Commission conducted an extensive investigation to determine whether it should make an affirmative recommendation to the FCC. Section 271 of the Federal Act requires Qwest to comply with a 14-point checklist to show that it has opened its local markets to competitors. In a Final Recommendation Report issued August 19, 2002, the Commission concluded that Qwest met the Federal Act's requirements. In reaching this conclusion, the Commission benefited greatly from its participation in an extensive multi-state evaluation of the systems Qwest uses to communicate with and provide services to its local service competitors.
State Commissions that regulate Qwest participate in the Qwest Regional Oversight Committee (ROC). The ROC has developed procedures to coordinate oversight and updates of Qwest’s plan to comply, as much as possible, with requirements related to approval of its section 271 applications. The group will continue to coordinate its efforts with those of the FCC in this area.
(3) Statutes that inhibit or discourage competition in and deregulation of the telecommunications industry

None Identified.
The Status of Competition and Regulation
In 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

A. Streamlining Certificates of Authority

*How has the Commission reduced regulatory burden?*

In December 2001, the Commission adopted revisions to its administrative rules that speed up and simplify applications to transfer certificates of authority. The revised rules allow two providers to file a joint application to transfer authority in whole or in part. The procedure allows providers to coordinate merger and acquisition activity with issuance of Commission certificates.

In December 2002, the Commission modified its administrative rules governing competitive provider applications in order to incorporate electronic filings, and to speed up Commission procedures for granting authority. As a result, it is easier for applicants to file applications. In March 2003, the Commission began publishing notice of applications bi-weekly, instead of monthly. The changes allowed the Commission to handle applications more efficiently, and applicants for authority to provide competitive telecommunications service, or to transfer authority, now obtain approval approximately 5 weeks sooner than in prior years.

B. Memorandum of Understanding Signed by the Administrative Hearings Division, Utility Staff, and the Attorney General's Office

*How does this memorandum help the Commission to reduce regulatory burden?*

To help reduce the cost of regulation, the Commission has adopted processes to ensure orders are issued in a timely manner. Expediting the issuance of orders provides parties a quick response to their motions and applications.

The Commission entered into an internal memorandum of understanding which states, "The Administrative Hearings Division, Utility Staff, and the Attorney General's office agree to cooperate to expedite the issuance of Commission orders. In addition, the Administrative Hearings Division agrees to establish procedures for circulating orders to the Commission office not less than five working days before the order is to be signed, unless there are conditions beyond control that preclude meeting this deadline."
C. Regulatory Relief for Incumbent Carriers

*What actions can the Commission take to provide regulatory relief?*

The Commission has the following options for granting regulatory relief to incumbent telecommunications utilities:

1. The Commission may approve an incumbent's alternative regulation plan (e.g. price caps). Such a plan could include a provision that the Commission would no longer review the incumbent's profits.

2. When the Commission certifies new competitors and approves creating a competitive zone, the Commission provides the incumbent telecommunications utilities downward pricing flexibility.

3. Prior to Commission approval, incumbents may enter into customer-specific contracts for competitive reasons.

4. The Commission may exempt a service from regulation, including rate regulation, if the Commission finds that competition exists.

5. The Commission may exempt a service from prior approval procedures if the incumbent can show that the service is subject to competition or is non-essential.

*Can the Commission reclassify an incumbent telecommunications utility to a competitive carrier?*

Yes. Under Oregon law, if an incumbent telecommunications utility requests, the Commission can approve reclassification to a competitive carrier. For example, prior to 1990, the Commission regulated AT&T as an incumbent and exclusive long distance telecommunications utility. In 1990, AT&T petitioned to be reclassified as a competitive carrier by arguing it no longer dominated the long distance market. The Commission granted AT&T's request. An incumbent also may be classified as a telecommunications utility in one part of the state and as a competitive carrier in another part. For example, in 1998, the Commission granted Qwest Communication's application to be classified as a competitive carrier in territory served by another incumbent, Verizon.
Does the Commission closely regulate competitive carriers?

No. Competitive carriers are not subject to Commission rate or profit regulation. They may charge any rates they choose without any constraint on profits. Competitive carriers do not file tariffs. The Commission imposes consumer protection requirements on competitive carriers only as needed. For example, the Commission requires competitive local exchange carriers to provide their customers with access to emergency services through E-911. The Commission requires competitive carriers to meet certain service quality requirements in order to ensure that Oregon consumers have high quality services throughout the state.

Can an incumbent choose to be regulated through a price cap form of regulation?

Yes. ORS 759.405 allows regulated telecommunications utilities to elect, without prior approval by the Public Utility Commission of Oregon (Commission), a price cap form of regulation in exchange for a commitment to meet specific infrastructure investment requirements. The price cap plan is described in ORS 759.410. Qwest opted for price cap regulation effective December 30, 1999.

On September 14, 2001, the Commission approved new rates for Qwest as the culmination of the company's final rate case proceeding. ORS 759.415 allowed the Commission to order this one last rate revision. The new rates became effective January 1, 2002. The new rates establish price caps for Qwest's non-basic services for purposes of ORS 759.410. The Commission retains authority to set rates for basic services. Standard dial-up residential and business local services are basic services. The Commission may not consider Qwest's earnings when making future adjustments to the company's basic service rates.

Are there any other laws that allow the Commission to grant regulated telecommunications utilities the ability to elect alternative forms of regulation?

Yes. ORS 759.195 and 759.255 also allow for alternative forms of regulation. ORS 759.195 allows for price listing (see Section (5) B) and opportunities to earn higher returns. ORS 759.255 allows for prices to be set without regard to the return on investment of the utility.
D. HB 3241 of 1999. Revised Affiliated Interest Reporting Requirements

*How does HB 3241 reduce regulatory burden?*

HB 3241 was enacted in 1999 and reduced regulatory burden in two ways. First, local exchange regulated utilities are no longer required, for transactions totaling $100,000 or less, to seek Commission approval of contracts between the regulated local exchange telecommunications utilities and companies in which they have a financial interest—termed an affiliated interest. Second, HB 3241 streamlined affiliated interest annual reporting requirements. The regulated local exchange utility must now provide only the list of names of affiliates doing business with the utility, the dollar amounts of the contracts and the date of the contract execution. As expected, since 1999 the Commission has received fewer requests to approve affiliated interest contracts than in prior years.

*Has the Commission taken additional action to reduce regulatory burden with regard to affiliated interests?*

Yes. In June 2000, the Commission adopted an agreement between its staff and Qwest regarding the suspension of the filing requirements for affiliated interest contracts and related reports. With Qwest’s election to be regulated under price cap regulation, allowed by ORS 759.405, many affiliated interest filings and related reports are no longer necessary. Staff reserves the right to request Qwest to file affiliated interest contracts when the contract impacts a proceeding concerning Qwest’s basic telephone service, for which the Commission retains authority.

E. SB 931 of 1999. Revised Dollar Thresholds for Commission Approval

*What does this proposal do to reduce regulatory burden?*

SB 931 was enacted in 1999 and reduced regulatory burden for these utilities by eliminating the requirement that regulated electric, natural gas and telecommunications utilities obtain Commission approval before property, valued at $100,000 or less, could be sold. The previous dollar threshold limit was $10,000. As expected, since 1999 the Commission has received fewer requests to approve property sales than in prior years.
F. Expedited Complaint Procedure

*What does this proposal do to reduce regulatory burden?*

In April 2000, the Commission adopted rules that establish procedures for expediting complaints alleging that telecommunications utilities have engaged in prohibited acts under ORS 759.455. This law was part of SB 622, passed in the 1999 legislature. Complaints under ORS 759.455 often allege a breach of an interconnection agreement between a telecommunications utility and a competitive provider. The new rule establishes a more effective and efficient procedure for processing interconnection agreement complaints.

G. Simplified Extended Area Service (EAS) Approval Process

*How has the Commission modified its EAS process?*

In October 2000, the Commission completed a review of its procedures for approving requests for expanded EAS. EAS is a service that allows customers the ability to call nearby telephone exchanges without incurring long distance charges. The Commission approves new EAS routes when it determines there is sufficient community of interest between exchanges. Customers may request new EAS by submitting a petition to the Commission. The Commission then determines whether there is a community of interest, and if so, conducts a review of EAS rate proposals from rate regulated local service providers. Creation of a EAS can lead to significant local exchange rate increases depending on calling patterns.

In the past, the time from the request to actual implementation of a new EAS route has been as long as 18 months. Telecommunications providers and consumers complained that this was too long. After review, the Commission found that it could reduce the time from request to implementation to about 15 months, while maintaining current policy standards to ensure that EAS expansions are in the public interest.
(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

What laws currently allow for pricing flexibility or exemption from regulation?

The Commission has the authority to grant pricing flexibility or exempt services from regulation under ORS 759.050 and 759.030.

A. Competitive Zones (ORS 759.050)

When the Commission receives an application for authority to provide intraexchange (local exchange) service, the application is considered under the Competitive Zone law, ORS 759.050. This applies to private line (dedicated point-to-point) services and to switched (dial-tone) services. When the Commission grants an application to provide intraexchange service under ORS 759.050, the affected telephone exchanges are designated competitive zones for the services that the new competitor is authorized to provide. Therefore, the Commission may grant the incumbent utility downward pricing flexibility for those services.

How are competitive zones defined?

There are two facets to defining a competitive zone. The first identifies the geographic boundaries of the competitive zone. The second identifies the services that are subject to competition. Creation of competitive zones is triggered when a competitive provider applies for Commission certification to offer telecommunications services in specified areas. For example, the Commission might grant to a competitive provider a certificate of authority to provide private line service in the Medford exchange. Qwest is the incumbent utility that serves Medford. In this case, the Medford exchange becomes a competitive zone for private line services.

How many competitive zones has the Commission authorized?

There are 264 local telephone exchanges in Oregon. All 264 exchanges are now designated as competitive zones for switched (dial-tone) and private line (point-to-point) telecommunications services.
In how many of those competitive zones has the Commission granted the incumbent utility pricing flexibility?

All incumbent local service providers in Oregon, including Qwest and Verizon, have been granted downward pricing flexibility for private line service in all of their exchanges. As for switched services, Qwest has pricing flexibility in all 64 of its Oregon exchanges. Verizon has pricing flexibility for switched service in 40 of its 44 Oregon exchanges.

B. Price Listing (ORS 759.030(6))

When has the Commission granted pricing flexibility through price listing?

The Commission has granted pricing flexibility through price listing on ten occasions. In the parenthesis below that reference the order, the first two numbers following "Order No." provide the year that the order was issued. For example 98 refers to the year 1998.

Qwest has received authority to price list services on six occasions.

1. UD 3 (see Order No. 88-955), the company was granted authority to price list billing and collection (B&C) services. B&C services provide basic billing and bill rendering functions for local and toll services.

2. UD 6 (see Order No. 98-232), the company was granted authority to price list Real Deal, Call Manager Connection, and Custom Choice services. These services combine various toll services and custom calling services in business packages.

3. UD 7 (see Order No. 98-447), the company was granted authority to price list feature packages of business Custom Calling services. Custom Calling services include call waiting, call forwarding, and other user-defined services.

4. UD 9 (see Order No. 99-235), the company was granted authority to price list additional line feature packages. Additional line feature packages include add-ons to additional line service such as various Custom Calling services.

5. UD 10 (see Order No. 99-392), the company was granted authority to price list business CustomChoice service. Business CustomChoice service includes 17 features typical to business service such as call waiting and call forwarding.
6. UD 11 (see Order No. 99-493), the company was granted authority to price list SmartSet service. SmartSet services include features such as Caller ID and Call Waiting ID.

United Telephone has received authority to price list services on two occasions.

7. UD 5 (see Order No. 98-239), the company was granted authority to price list IntraLATA toll services. IntraLATA toll service is interexchange long-distance offered either only within the Portland LATA or only within the Eugene LATA.

8. UD 12 (see Order No. 99-662), the company was granted authority to price list Advantage, Call Manager, Sprint Essentials, Touch with Call Forwarding, and Sprint Elite. These packages represent various combinations of Caller ID, Call Waiting ID, Call Waiting, Call Forwarding, etc.

Verizon has received authority to price list a service on two occasions.

9. UD 4 (see Order No. 89-1117), the company was granted authority to price list CentraNet service. CentraNet service is a Centrex-type service with features such as direct inward dialing, direct outward dialing, intercom capabilities, and various Custom Calling enhancements.

10. UD 13 (see Order No. 02-359), the company was granted authority to price list IntraLATA toll.

In addition to the price listing cited above, the Commission granted Qwest authority to price list as part of an alternative form of regulation (AFOR) plan under ORS 759.195. In exchange for a freeze on basic service access rates, the Commission granted Qwest a substantial degree of pricing flexibility on its non-basic services for a five-year period beginning in 1992. In return for this, the company agreed to share excess revenues above a certain benchmark that was adjusted on an annual basis.

C. Service Deregulation (ORS 759.030(3))

*How many petitions to deregulate a telecommunications service have been approved by the Commission?*

Twenty-seven petitions to deregulate a service or services have been filed with the Commission. Ten petitions have been approved. Twelve petitions have been dismissed or denied. Three petitions have been withdrawn. Two petitions were partially approved.
What services has the Commission deregulated?

Three petitions have centered on the deregulation of Customer Premise Equipment (CPE). CPE consists of two-way, voice-grade communications devices installed at customers' premises. The FCC preemptively deregulated CPE for Bell Operating Companies in the mid-1980's. Non-Bell companies, however, actively sought deregulation of CPE from local jurisdictions. The principal result of this change is that most customers now own their own telephones.

1. UX 5 (see Order No. 88-121) allowed CP National to receive authority to deregulate CPE.

2. UX 6 (see Order No. 88-119) allowed Continental Telephone of the Northwest to receive authority to deregulate CPE.

3. UX 7 (see Order No. 88-119) allowed Continental of the West to receive authority to deregulate CPE.

Three petitions dealt with the deregulation of Voice Messaging Service (VMS). VMS is a remote, central office-based call recording capability.

4. UX 15 (see Order No. 94-1556), United Telephone received authority to deregulate its MessageLine Service.

5. UX 17 (see Order No. 96-257), Verizon received authority to deregulate its Voice Messaging Service.

6. UX 18 (see Order No. 98-018), Qwest received authority to deregulate its Voice Message Service.

One petition dealt with the deregulation of Automated Information Service (AIS). AIS is a service that augments Voice Messaging Service. It creates information bulletin boards that send pre-recorded massages to users and provides other enhancements.

7. UX 19 (see Order No. 98-112), Verizon received authority to deregulate its Automated Information Service.

One petition has dealt with the deregulation of Advanced Fax Services. Advanced Fax Services provide technical enhancements to fax services.
8. UX 20 (see Order No. 98-209), Qwest received authority to deregulate its Advanced Fax Services.

One petition has dealt with the deregulation of DS 3 services. DS 3 is a 44.5 megabit per second (mbps) high-speed transport service.

9. UX 21 (see Order No. 00-003), Qwest received authority to deregulate its DS 3 service.

One petition dealt with the deregulation of Centrex service. Centrex is a multi-line communications service intended for large users.

10. UX 23 (see Order No. 00-228), Qwest received authority to deregulate its Centrex PRIME service.

In 2002 and 2003, one petition dealt with the deregulation of directory assistance and related services.

11. UX 27 (see Order 03-368), Qwest received authority to deregulate its Complete-a-Call service.

Also in 2002 and 2003, one petition dealt with the deregulation of interLATA toll, operator services and 800 ServiceLine Option.

12. UX 28 (see Order 03-609), Qwest received authority to deregulate its 800 ServiceLine and intraLATA toll services.
(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 technology neutral and that support telecommunications service for customers of telecommunications providers in high-cost locations

A. The Oregon Customer Access Plan

What is it?

The Oregon Customer Access Plan (OCAP) is a program begun in the early 1990's to establish a means to provide financial support to telecommunications utilities providing service in high-cost areas. OCAP is funded through "access" charges to long-distance providers.

How does OCAP help minimize implicit sources of support and keep rates low in high-cost locations?

The Oregon telecommunications carriers developed and the Commission approved the Oregon Customer Access Plan (OCAP) in 1994. Under the plan, Incumbent Local Exchange Carriers (ILECs) may pool their costs and develop average access charge rates. ILECs receive access charge revenues from long distance carriers for originating and terminating toll calls to the ILECs' customers.

What are the objectives of OCAP?

The OCAP helps foster a telecommunications climate in the state that provides, to both urban and rural consumers, a choice among competitive interexchange carriers and toll services at affordable prices through a balanced program of regulation and competition. The OCAP maintains a reasonable level of common access rates throughout the state, provides cost control incentives for the participating ILECs and stimulates network usage through price reductions and innovations. These common access rates also help to alleviate pressure for geographic de-averaging of toll rates in the state. As a result, rural and urban toll customers, making in-state calls, pay the same rate per mileage band.

Will OCAP eventually be phased out?

OCAP will likely be phased out eventually. The Commission began work in 1994 developing a new competitively neutral universal service program to ensure that
consumers throughout Oregon will have adequate and affordable basic telephone service. As discussed below, the Commission has created a new universal service program under ORS 759.425. The Commission transferred parts of OCAP to the new program in 2003. The current OCAP will remain in place as long as access charges exist. Their future is currently being considered by the industry and the FCC.

B. The Oregon Universal Service (OUS) Program

What competitively and technologically neutral actions are being taken by the Commission to support telecommunications services for customers in high cost locations?

In 1994, the Commission identified the need for a new competitively neutral universal service program to ensure that consumers throughout Oregon will have adequate and affordable basic telephone service. In particular, the Commission concluded that the new program should ensure that rural, generally high cost, parts of the state are well served at affordable rates even as competition develops in low cost, urban areas. A Commission order in 1995 laid out the key elements of the new universal service program, including a definition for basic service, and a design for funding, collection, and distribution mechanisms.


Following passage of the Telecommunications Act of 1996, the Oregon Commission issued several orders to reflect FCC decisions and to specify administration and other details of the new Oregon program. In November 1999, the Commission appointed a 10-member Oregon Universal Service Advisory Board. The Board assists the Commission in implementing the universal service program and provides continuing industry and consumer advice on the programs operation.

The 1999 Oregon Legislature passed ORS 759.425, which granted the Commission additional authority to set up and fund an Oregon Universal Service (OUS) Program. The Legislature also directed the Commission to establish and implement the new program by September 2000. The OUS fund is designed to provide support for basic telephone service in high-cost areas.
In June 2000, the Commission issued Order 00-312, which established the new OUS Program. The Order adopted a cost model, established input values to the model, established a benchmark for basic telephone service, set the size of the OUS fund, selected a mechanism for ascertaining high-cost areas, and resolved many other issues necessary to make the OUS program operational. In July 2000, the Commission approved a fund contribution rate of 2.3 percent for telecommunication providers and an end user surcharge of 2.35 percent. The rate went into effect September 1, 2000. In November 2000, the Commission increased the contribution rate effective January 1, 2001, to 3.14 percent for telecommunications providers and 3.24 percent for the end user surcharge. In August 2001, the Commission reduced the contribution rate to 2.91 percent and the end user surcharge to 3.00 percent.

The Commission concluded that under ORS 759.425, the OUS surcharge should apply to all retail sales of carriers certified in Oregon, whether interstate or intrastate. In December 2000, AT&T appealed the Commission’s decision in federal court. October 18, 2001, the U.S. District Court found in favor of AT&T, concluding that federal law pre-empted state law and that the OUS Program could rely only on intrastate revenues. As a result of the smaller revenue base, the Commission increased the contribution rate to 5.21 percent and the end user surcharge to 5.50 percent effective February 1, 2002.

On October 2, 2003, the Commission approved a 6.1 percent contribution rate and an end user surcharge of 6.5 percent, to be effective on January 1, 2004. The increase was largely due to a decision made earlier in 2003 to bring rural local exchange carriers under the fund.

Approximately $47 million was disbursed in 2002, to cover the higher cost rural areas of the state served by Qwest and Verizon. The decision to bring additional carriers under the fund is expected to increase annual fund disbursements by approximately $9.4 million.

How do Commission actions minimize implicit sources of support?

Funds distributed under the new OUS Program replace implicit sources of support. Carriers that receive universal service funds reduce rates, such as business local service rates, that provide implicit support.
How do Commission actions 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?

Funds distributed under the new OUS Program ensure that carriers providing local telephone service in high cost areas will be able to recover the difference between affordable rates and cost.
(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

None identified.
(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

What is the extent of telecommunications infrastructure in public bodies?

The Commission conducted a survey during the fall of 2003 to gather information on the existence and use of advanced telecommunications facilities in public bodies. Of the 349 respondents, 64 percent (223) do not own advanced telecommunications facilities, and 36 percent (126) of the respondents own some types of facilities. Ten percent (34) of respondents are willing to offer some type of high-speed telecommunications services, and six percent (21) of respondents currently offer high-speed telecommunications services.

Currently, the most widely used method for high-speed access on the market is Digital Subscriber Line (DSL) technology. However, 73 respondents own fiber optics, and 74 own copper cable, while only 10 respondents own DSL facilities. Seventeen respondents are willing to offer fiber optics, while four are willing to offer DSL. Nine respondents currently offer fiber optics, versus two currently offering DSL.
ORS 759.050(9) requires the Public Utility Commission (PUC) to report annually to the Legislative Assembly regarding competition in the telecommunications industry in Oregon. This memo provides information that can be used for that report.

As background, the following may be helpful. There are 33 incumbent local exchange carriers (i.e. LECs or telephone utilities) serving 2,115,892 lines in 264 exchanges in Oregon. The four largest each serve 82.7 percent of all lines in Oregon and are fully regulated utilities. They serve the following approximate percentages of lines in Oregon:

- Qwest Corporation (Qwest) 58.2% of lines (64 exchanges)
- Verizon Northwest Incorporated (Verizon) 19.4% " (44 " )
- CenturyTel 1.8% " (56 " )
- United Telephone of the Northwest (United) 3.2% " (30 " )

The other 29 incumbent carriers serve 6.0 percent of lines in Oregon, in 70 exchanges. Competitive local exchange carriers serve the remaining 11.3 percent of lines. Competitive local exchange carriers are often called CLECs. Small investor owned utilities, telephone cooperatives, and CLECs are exempt from many aspects of telecommunications regulation.

The PUC divides telecommunications services into two major groups. One group consists of private line services, also called non-switched or point-to-point or dedicated transmission services. These services may carry voice or data communications. They are offered in many bandwidths, or equivalent data speeds such as 56 kbps, 1.544 mbps, 10 mbps, 45 mbps, and 100 mbps. (kbps means thousand bits per second, mbps means million bits per second).

\footnote{Includes CenturyTel of Oregon, Inc. and CenturyTel of Eastern Oregon, Inc. as one utility}
The other major group consists of switched services, also called dial-tone services. Switched services include the basic transmission of voice or data, vertical services like Call Waiting or Caller ID, enhanced services such as Voice Mail, and ancillary services such as operator assistance, directory assistance and directory listings. Basic residential service and basic business service reflect price differences for the same voice transmission service.

Private line service and switched service can be either intraexchange or interexchange service. Intraexchange telecommunications services are within a local exchange, in that communication originates and terminates within the exchange. Local exchanges are geographic areas defined by maps filed with and approved by the Commission. Interexchange telecommunications services are between local telephone exchanges. Interexchange voice service is also called long distance or toll service. Oregon law provides for different regulation of competition in the interexchange (long distance) market compared to regulatory procedures for competition in the intraexchange (local exchange) market.

PUC procedures differ between interexchange and intraexchange applications for certificates of authority. Applications for authority to provide interexchange (long distance) telecommunications service, both private line and switched service, are considered under ORS 759.020. Applications for authority to provide Shared Telecommunications Service (STS) to residential and business buildings or complexes of buildings are also considered under ORS 759.020. Competitive zones are not involved.

When the PUC receives an application for authority to provide intraexchange (local exchange) service, then those applications are considered under the Competitive Zone law, ORS 759.050. This applies to private line service and to switched (dial-tone) service. When the Commission grants an application to provide intraexchange service under ORS 759.050, the affected telephone exchanges are designated competitive zones for services authorized for the new competitor. Also, the PUC may grant the incumbent LEC pricing flexibility for those services.

There are two facets to a competitive zone. One is geographic, represented by local exchange boundaries. The other is the type of service, basically private line or switched. For example, suppose an applicant asks for a certificate of authority to provide private line service in the Medford exchange and the Commission grants the request. Qwest is the incumbent LEC that serves Medford. The PUC may grant Qwest
pricing flexibility for private line services in the Medford exchange. The competitive zone is the Medford exchange for private line services. In this example, the Medford exchange is not a competitive zone for switched (dial-tone) services. Neither are other exchanges, such as Jacksonville, competitive zones for private line or switched services. Each exchange is a separate competitive zone.

**PUC Response to ORS 759.050(9) (a) - (d):**

ORS 759.020 and 759.050 Number of competitive providers:

No competitive zones are created under ORS 759.020. Competitive zones are created pursuant to ORS 759.050. Many CLECs have authority to provide interexchange service and a few have authority to provide STS service to specific buildings. Therefore, the sum of the three kinds of authorization, shown below, is greater than the total number of competitive providers. The numbers have gone down since 2000 because the PUC is actively canceling certificates of companies not paying PUC fees as required by OARs 860-011-0020, 860-011-0023, and 860-032-095; and for not paying Oregon Universal Service (OUS) assessments as required by ORS 759.425, or not filing annual reports as required by OAR 860-032-0060.

- **442:** Total number of competitive telecommunications providers with certificates of authority to provide service in Oregon.
- **424:** Authorized to provide interexchange toll, interexchange private line, alternate operator services (AOS), and inmate pay telephones.
- **18:** Authorized to provide Shared Telecommunications Service (STS) to residential and business buildings and complexes of buildings.
- **200:** CLECs authorized to provide intraexchange (local exchange) dial-tone service and private line service. Pursuant to ORS 759.050, competitive zones are created when these providers receive certificates of authority.

ORS 759.050 Number of Competitive zones:

A competitive zone is created when a certificate of authority to provide telecommunications is issued for a particular exchange. It means that telecommunications competition is permitted in that area. In 2000, the first certificates were issued for statewide intraexchange competitive telecommunications service. There are now 264 competitive zones for switched telecommunications service (dial-tone) and private line service. These competitive zones are in all telephone
exchanges of every incumbent telephone provider in Oregon. This includes the small utilities and the cooperative corporations, as well as the four large incumbent providers.

Qwest, Verizon, CenturyTel, and United have pricing flexibility for private line service in all of their exchanges. Pricing flexibility for switched service occurs when there is an actual exchange of traffic between an incumbent telecommunications provider and a competitive local exchange telecommunications provider. The incumbent notifies the Commission when the exchange of traffic occurs and then the Commission grants pricing flexibility. Qwest has pricing flexibility for switched service in 64 exchanges. Verizon has pricing flexibility for switched service in 40 exchanges. The small utilities and cooperative corporations already have pricing flexibility because of their regulatory status.

759.050(9) (c) Number of competitive services:

The PUC divides telecommunications service into two major groupings, private line service and switched service. Applicants specify private line and/or switched service on their applications, without giving more specifics. The PUC uses general descriptions so competitors, both incumbent LECs and competitive providers (CLECs), can respond to market demands and innovate or add new services without having to amend their certificates of authority. Private line services include all bandwidths, or equivalent data speeds from very slow (16 kbps) to voice grade (56 kbps) to very high speeds (100 mbps). Private lines may be analog or digital service. The transmission medium may be copper wire, coaxial cable, microwave, or fiber optic.

Switched service includes basic voice transmission service and a host of associated services (literally dozens of services). Switched service includes vertical services such as Call Forwarding, Call Waiting, Caller ID, Automatic Call Rejection, and Call Trace, and enhanced services such as Voice Mail, and ancillary services such as operator services, collect calling, directory assistance, and directory listings. The Commission requires all local exchange carriers to provide access to E9-1-1 as part of switched local exchange service.

759.050(9) (d) Consumer Comments:

Competitive interexchange (long distance) carriers and Shared Telecommunications Service (STS) providers have been authorized in Oregon for over fourteen years. Competitive local exchange carriers (CLECs) have been authorized to provide private
line service for many years. CLECs that offer switched (dial-tone) service have been authorized since January 1996.

The PUC received a number of contacts in 2003, as indicated below. 2000, 2001, and 2002 figures are shown for comparison. Contacts include: (a) Inquiries which may or may not have an element of a complaint behind them, (b) Informal complaints, and (c) Registered complaints. Very few of the complaints progress to the formal, docketed complaint stage.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive telecommunications providers (507)</td>
<td>1,581</td>
<td>590</td>
<td>695</td>
<td>628</td>
</tr>
<tr>
<td>Fully regulated telecommunication utilities (4)</td>
<td>3,533</td>
<td>6,337</td>
<td>5,496</td>
<td>4,181</td>
</tr>
<tr>
<td>Partially regulated utilities (18)</td>
<td>220</td>
<td>35</td>
<td>69</td>
<td>60</td>
</tr>
<tr>
<td>Other telecom (cooperatives (11), radio common carriers, wireless)</td>
<td>1,588</td>
<td>1,513</td>
<td>150</td>
<td></td>
</tr>
</tbody>
</table>

In January of 2002, the Consumer Services Division changed the way customer contacts were recorded. Contacts that were taken in the past but not recorded are now being recorded. These include informational, non-jurisdictional, and medical certificate contacts. This accounts for the jump in the "other telecom" category.

The 2003 calls have been led by service, billing and sales practices. Calls continue to increase for wireless telecommunications carriers, over which the Commission has no jurisdiction.

Competitive providers include interexchange carriers, STS providers, competitive local exchange carriers (CLECs). The inquiries and complaints cover many issues, such as:

(a) Rates  
(b) Customer service  
(c) Slamming (unauthorized change of carrier)  
(d) Cramming (unauthorized services provided and added to bill)  
(e) Quality of service  
(f) Disconnect  
(g) Competitive options  
(h) Payphones

10 Cooperatives are now included in the "other" category due to regulation changes.
With expanding competition in traditionally monopoly markets, the issues are becoming far more complex and solutions are less definite. Telecommunications complaints now often involve multiple providers instead of just one utility.

The Federal Communications Commission deregulated pay telephone service, including payphone service provided by incumbent telephone utilities. The FCC preempted the states on the payphone issue, and the Oregon PUC has no jurisdiction over pay telephone rates. Also, pursuant to state law, the PUC does not have jurisdiction over radio common carriers, such as wireless companies.
SB 622. Price Cap Regulation (Since codified as ORS 759.400 through ORS 759.455)

What were the key provisions of the Bill?

i. An incumbent telecommunications utility may elect, without prior approval by the Public Utility Commission of Oregon (Commission), to adopt a price cap form of regulation in exchange for a commitment to meet specific infrastructure investment requirements.

ii. An incumbent telecommunications utility, that elects to adopt price cap regulation, is subject to Commission determined maximum and minimum price constraints for non-basic services. New services are not subject to a price cap. An electing utility may offer packages of services. Also, the utility becomes subject to a special set of service quality standards. This set of service quality standards, ORS 759.450 Note: Section 30, is repealed January 1, 2004. If the electing utility violates these standards, the Commission may directly assess penalties. The Commission has the authority to define and establish prices for basic telephone service. The 2001 Legislative Assembly modified SB 622 by creating an exception to price caps. HB 2659 granted the Commission additional authority to approve increases to Extended Area Service (EAS) rates in order to recover the cost of new EAS routes. Under SB 622, EAS is subject to a price cap as a non-basic service. EAS is non-basic as a matter of law. Under SB 622, only a local exchange telecommunications service may be classified as basic. EAS is interexchange, not local exchange service.

iii. An incumbent telecommunications utility, that elects price cap regulation, must establish a "Telecommunications Infrastructure Account." The utility must, over a four-year period, set aside in this "Telecommunications Infrastructure Account" monies equal to 20 percent of the utility's "gross regulated intrastate revenues" for the calendar year that immediately precedes the date when the utility elected price cap regulation. The utility must transfer to the Connecting Oregon Communities Fund a specific portion of funds in its infrastructure account. The Connecting Oregon Communities Fund is established in the State Treasury. The bill distributes money in the Fund to various agencies and programs. Money remaining in the electing utility's infrastructure account must be spent in accordance with plans approved by the Oregon Economic Development Commission. The 2001 Legislative Assembly added another source of revenue for the Connecting Oregon Communities Fund. HB 2659 designated the Connecting Oregon Communities Fund as the state account to which Qwest Corporation will make payments if required to do so under a performance assurance plan. The company is
expected to voluntarily enter into a performance assurance plan as part of its effort to gain authority to provide interLATA services. The subject of Qwest's interLATA authority is discussed in more detail in Section (2) H.

e. The Commission was directed to establish a universal service fund that is competitively neutral and nondiscriminatory. The purpose of the fund is to ensure that basic telephone service throughout Oregon is available at reasonable and affordable rates. The Commission established and implemented this fund in September 2000, 12 months after the effective date of SB 622. Revenue for the universal service fund is derived from a surcharge placed on customers' bills. The surcharge is a uniform percentage of the sale of retail telecommunications services. Money in the fund will be based on the difference between a Commission determined benchmark price of basic telephone service and the cost of providing such service. The 2001 Legislative Assembly introduced special consideration for pay telephone providers. HB 2659 allows pay telephone providers to apply to the Commission for a refund of universal service surcharge payments beginning July 1, 2003.

v. In order to ensure safe and adequate service, the Commission is directed to establish minimum service quality standards for retail telecommunications services. These retail standards apply to all providers of retail telecommunications services, both incumbent utilities and competitive providers. However, the 2001 Legislative Assembly created an exemption for small telecommunications utilities. HB 2557 exempts telecommunications utilities with less than 50,000 access lines from minimum service quality standards related to the length of time it takes the utility to respond to questions from customers. The Commission also has the authority to establish minimum service quality standards for wholesale services. The Commission must pursue penalties for violations of its service standards in the state courts.

vi. Telecommunications utilities, unless exempt under federal law, are prohibited from engaging in a list of anti-competitive acts. Alleged violations are subject to an expedited complaint process before the Commission. The Commission must pursue penalties for violation in the state courts.

vii. The Economic Development Department is directed to conduct an assessment of telecommunications infrastructure and community telecommunications needs.
LOCAL TELECOMMUNICATIONS
COMPETITION SURVEY

YEAR 2003 REPORT

Economic Research and
Financial Analysis Division

Public Utility Commission of Oregon

December 2003
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Executive Summary

In January 2003, the staff of the Public Utility Commission of Oregon sent a survey to the 244 certified local exchange carriers (LEC) in Oregon for the purpose of assessing the status of local telephone competition in Oregon. The survey asked all carriers, both incumbent local exchange carriers (ILECs) and competitive local exchange carriers (CLECs), to provide information about the local services they provided during December 2002. Survey responses were received from all 34 ILECs and 186 out of 210 CLECs, for a total response rate of 90 percent.

HIGHLIGHTS

Total Oregon Local Exchange Service Revenue 2002................. $863 Million
ILEC Revenue - $Millions / Share .............................................. $722 / 84%
CLEC Revenue - $Millions / Share............................................ $141 / 16%
Total Switched Lines at Year-end 2002................................. 2,386,386
ILEC Switched Lines / Market Share........................................ 2,115,892 / 89%
CLEC Switched Lines / Market Share........................................ 270,494 / 11%
Total Residential Switched Lines at Year-end 2002................... 1,475,809
ILEC Residential Switched Lines / Market Share....................... 1,431,598 / 97%
CLEC Residential Switched Line / Market Share....................... 44,211 / 3%
Total Business Switched Lines at Year-end 2002...................... 860,137
ILEC Business Switched Lines / Market Share............................ 633,855 / 74%
CLEC Business Switched Line / Market Share............................ 226,282 / 26%
Change from prior Year - Total Switched Lines / % Change........... -72,245 / -3%
Change from prior Year - ILEC Switched Lines / % Change........... -122,748 / -5%
Change from prior Year - CLEC Switched Lines / % Change........... 50,503 / 23%
Unbundled Network Elements Platform, Lines......................... 58,241
CLECs Having Certificates ................................................. 210
CLECs Doing Business / % of Total CLECs............................... 101 / 48%
Total Number of Private Line Circuits.................................... 58,610
Lower Capacity Circuits / % of Total..................................... 45,269 / 77%
Higher Capacity Circuits / % of Total................................. 13,341 / 23%
All LEC Capital Expenditures-$Millions / % of Revenue …………………$188 / 21.8%
CLEC Capital Expenditures-$Millions / % of Revenue………………….$70 / 49.5%
ILEC Capital Expenditures-$Millions / % of Revenue…………………….$118 / 16.4%

Oregon continues to experience growth in the number of operating competitive local exchange providers. In the last five years, the number of certified CLECs increased from 101 to 210, while the numbers of CLECs actually providing services in Oregon increased from 22 to 101.

According to the survey responses, competitive entry in Oregon's telecommunications market is gradually increasing, but it is still small in the residential segment. As of December 2002, 101 CLECs out of 210 (48 percent, up from 35 percent in 2001) reported that they were in the business of providing local exchange services. By using a widely recognized measure of market share, percentage of local switched telephone lines, CLEC market share was 11.3 percent (up from 9 percent in 2001). In year 2002, CLECs had a 3 percent (up from 2 percent in 2001) share of the Oregon residential market. Most competitive entry is in the business segment. CLECs were supplying 26 percent (up from 22 percent in 2001) of business customers' switched local exchange lines statewide.

The number of total Oregon LEC switched local exchange lines dropped 3 percent, from 2.46 million in 2001 to 2.39 million in 2002. The following table summarizes the switched lines serviced in Oregon.
Competitive entry into the telecommunications market varies across different regions in Oregon. In Portland, the Willamette Valley, Central, and Southwest, CLECs were providing between 16.9 percent and 31.5 percent of business customers’ switched local exchange lines. While on the Coast and in Eastern Oregon CLECs were providing 8.6 percent and 9.2 percent switched lines to business customers respectively.

Of 2.4 million switched access lines served by all local exchange carriers, 62 percent were residential lines; CLECs served 3 percent of the 62 percent, slightly higher than the prior year. Forty-six percent of all residential lines were in the Portland area. CLECs serve 5.8 percent of residential lines in the Portland area, but less than 2 percent elsewhere in the state. The following chart illustrates the distribution of CLEC provided lines in Oregon.

### Distribution of Switched Access Lines Provided by CLEC

<table>
<thead>
<tr>
<th></th>
<th>Residential</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland</td>
<td>88.2%</td>
<td>64.7%</td>
</tr>
<tr>
<td>Willamette</td>
<td>2.0%</td>
<td>20.8%</td>
</tr>
<tr>
<td>SW</td>
<td>2.5%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Coast</td>
<td>1%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Central</td>
<td>2.7%</td>
<td>6.4%</td>
</tr>
<tr>
<td>East</td>
<td>3.4%</td>
<td>13%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Residential</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILECs</td>
<td>2,116,000</td>
<td>1,432,000</td>
<td>634,000</td>
</tr>
<tr>
<td>CLECs</td>
<td>270,000</td>
<td>44,000</td>
<td>226,000</td>
</tr>
<tr>
<td>All-LECs</td>
<td>2,386,000</td>
<td>1,476,000</td>
<td>860,000</td>
</tr>
<tr>
<td>ILECs</td>
<td>88.7%</td>
<td>97.0%</td>
<td>73.7%</td>
</tr>
<tr>
<td>CLECs</td>
<td>11.3%</td>
<td>3.0%</td>
<td>26.3%</td>
</tr>
<tr>
<td>All-LECs</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Number of Lines Served by CLECs Increased by 23 Percent in 2002

The share of switched access lines served by CLECs at the end of 2002 represented 11.3 percent of total access lines in Oregon, compared to a CLEC share of 13 percent across the entire country\(^{11}\).

The number of CLEC lines increased by 23 percent in 2002, from 219,990 to 270,494. By comparison, total ILEC lines decreased by 5.5 percent during the preceding year, from 2,238,640 to 2,115,892. In 2002, the total number of switched access lines did not change much, indicating that the size of the market did not change in Oregon, while the share served by competitive providers has increased somewhat.

\(^{11}\) Source: June 2003 FCC news release.
I. Purpose of the Survey

The purpose of the survey is to collect information from incumbent and competitive local exchange carriers to determine the status of competition for local exchange services in Oregon. This study is a key component of the 1999 Oregon legislation requiring the OPUC to report on telecommunications issues.

II. Survey Participants and Responses

In January 2003, the Commission staff sent a survey to all 244 carriers currently holding a certificate issued by the Commission to provide local services in Oregon. Of the 244 certified local exchange carriers (LECs), 34 are incumbent local exchange carriers (ILECs), and 210 are competitive local exchange carriers (CLECs). The ILECs consist of 23 telecommunications utilities and 11 cooperatives. These are the traditional local telephone service providers in the state. CLECs compete with the traditional carriers. The survey asked all LECs to provide information regarding their operations during December 2002.

All 34 ILECs responded to the survey. 186 out of 210 (88.6 percent) competitive providers responded. The overall response rate among all LECs was 90.2 percent (Table 1). 55.3 percent (43.6 percent last year) of all certified carriers were actually providing services in December 2002, 100 percent of ILECs and 48.1 percent (34.7 percent last year) of CLECs (101 out of 210). For purposes of this analysis, we assume that all non-responding CLECs were not providing local service in Oregon.

Table 1. Survey Response Rates and Service Operation Rates

<table>
<thead>
<tr>
<th>Dec. 2002</th>
<th>Survey Sent</th>
<th>Responded</th>
<th>Response Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total LECs</td>
<td>244</td>
<td>220</td>
<td>90.2%</td>
</tr>
<tr>
<td>ILECs</td>
<td>34</td>
<td>34</td>
<td>100.0%</td>
</tr>
<tr>
<td>CLECs</td>
<td>210</td>
<td>186</td>
<td>88.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Provided in December 2002</th>
<th>Survey Sent</th>
<th>Service Provided</th>
<th>% Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total LECs</td>
<td>244</td>
<td>135</td>
<td>55.3%</td>
</tr>
<tr>
<td>ILECs</td>
<td>34</td>
<td>34</td>
<td>100.0%</td>
</tr>
<tr>
<td>CLECs</td>
<td>210</td>
<td>101</td>
<td>48.1%</td>
</tr>
</tbody>
</table>
III. Service Types

1. ILEC Service Types

All 34 ILECs provided local exchange switched service to retail customers. Local switched services include dial tone, local (toll-free) calling, directory listings, and various features such as call waiting and caller ID. Local exchange private line (i.e., dedicated, point-to-point) services also include DSL (Digital Subscriber Lines) services. ILEC service types and the percentage providing each type are shown in Table 2 and Figure 1.

Table 2. Market Coverage for General Services – ILECs

<table>
<thead>
<tr>
<th>Service Types</th>
<th># of ILECs Providing Service</th>
<th>% of ILECs Providing Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Exchange Switched Service</td>
<td>34</td>
<td>100.0%</td>
</tr>
<tr>
<td>Local Exchange Private Line Service:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Capacity</td>
<td>26</td>
<td>76.5%</td>
</tr>
<tr>
<td>Higher Capacity</td>
<td>25</td>
<td>73.5%</td>
</tr>
<tr>
<td>Lower Capacity</td>
<td>14</td>
<td>41.2%</td>
</tr>
<tr>
<td>Long Distance Service</td>
<td>10</td>
<td>29.4%</td>
</tr>
<tr>
<td>Inter-exchange Private Line Service:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Capacity</td>
<td>24</td>
<td>70.6%</td>
</tr>
<tr>
<td>Higher Capacity</td>
<td>23</td>
<td>67.6%</td>
</tr>
<tr>
<td>Access Service</td>
<td>21</td>
<td>61.8%</td>
</tr>
<tr>
<td>Operator Service</td>
<td>29</td>
<td>85.3%</td>
</tr>
<tr>
<td>Directory Assistance Service</td>
<td>8</td>
<td>23.5%</td>
</tr>
</tbody>
</table>

Figure 1. Service Types and Distributions – ILECs
2. CLEC Service Types

As of December 2002, of the 210 certified CLECs, 101 (48.1 percent) were providing some kind of telecommunications service in Oregon (up from 34.9 percent in 2001). We assume that only those CLECs that responded to our survey were providing services in Oregon. Of the 101 CLECs that were providing services, 48 were providing local exchange service (up from 38 in 2001). Fifty CLECs were providing long distance service (up from 37 in 2001), and 25 were providing inter-exchange private line services. The CLECs service types and distributions are shown in Table 3 and Figure 2.

Table 3. Market Coverage by General Services – CLECs

<table>
<thead>
<tr>
<th>CLEC Service Types</th>
<th># of CLECs Providing Service</th>
<th>% of CLECs Providing This Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating CLECs</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td>Local Exchange Switched Service</td>
<td>48</td>
<td>47.5%</td>
</tr>
<tr>
<td>Local Exchange Private Line Service:</td>
<td>26</td>
<td>25.7%</td>
</tr>
<tr>
<td>Lower Capacity</td>
<td>18</td>
<td>17.8%</td>
</tr>
<tr>
<td>Higher Capacity</td>
<td>21</td>
<td>20.8%</td>
</tr>
<tr>
<td>Long Distance Service</td>
<td>50</td>
<td>49.5%</td>
</tr>
<tr>
<td>Inter-exchange Private Line Service:</td>
<td>25</td>
<td>24.8%</td>
</tr>
<tr>
<td>Lower Capacity</td>
<td>14</td>
<td>13.9%</td>
</tr>
<tr>
<td>Higher Capacity</td>
<td>21</td>
<td>20.8%</td>
</tr>
<tr>
<td>Access Service</td>
<td>20</td>
<td>19.8%</td>
</tr>
<tr>
<td>Operator Service</td>
<td>21</td>
<td>20.8%</td>
</tr>
<tr>
<td>Directory Assistance Service</td>
<td>17</td>
<td>16.8%</td>
</tr>
</tbody>
</table>

Figure 2. Service Types and Distributions – CLECs
IV. Switched Services – Market Size and Share Analysis

1. Market Size and Shares

The market share of ILECs has fallen in the local market as CLEC services have expanded. In 2002, there were 101 CLECs competing in the local telecommunication services market. The CLECs as a group had a market share ranging between 4.0 percent and 15.9 percent, depending on how market share is measured. In this report, market share is measured in three ways: (1) customers, (2) lines, and (3) revenues.

Table 4. Oregon Switched Service Market Shares – 2002

<table>
<thead>
<tr>
<th></th>
<th>Customers</th>
<th>Lines</th>
<th>Revenue-$millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILEC</td>
<td>1,547,877</td>
<td>2,115,892</td>
<td>698.1</td>
</tr>
<tr>
<td>CLEC</td>
<td>64,018</td>
<td>270,494</td>
<td>132.1</td>
</tr>
<tr>
<td>Total</td>
<td>1,611,895</td>
<td>2,386,386</td>
<td>830.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>% Customers</th>
<th>% Lines</th>
<th>% Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILEC</td>
<td>96.0%</td>
<td>88.7%</td>
<td>84.1%</td>
</tr>
<tr>
<td>CLEC</td>
<td>4.0%</td>
<td>11.3%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(1) The CLEC share of retail customers\(^{12}\) was 4.0 percent. Few customers obtained local exchange switched services from anyone other than their traditional supplier, the ILEC. According to the survey responses, Oregon LECs were providing local exchange switched services to 1,611,895 Oregon customers. ILECs served 1,547,877 (96.0 percent) of the total, while CLECs served 64,018 (4.0 percent) customers (Table 4). While still a small percentage of the total, CLEC switched access customers increased by 19.4 percent during 2002, from 53,602 to 64,018.

(2) The CLEC share of retail lines\(^{13}\) was 11.3 percent in 2002. All Oregon LECs were supplying 2,386,386 local switched telephone lines to retail customers. Of that total, the ILECs were supplying 88.7 percent (2,115,892) of all lines (Figure 3), leaving the CLECs with the remaining 270,494 (11.3 percent). The CLECs were supplying an

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\(^{12}\) The survey defined "customer" as "any person or entity that has a physical location within Oregon, and has applied for, been accepted, and receives service for a price. Included are residential and business end users (i.e., retail customers), as well as other telecommunications carriers (i.e. wholesale customers)."

\(^{13}\) The survey defined "local exchange lines" as "voice level transmission paths (64kbps digital or <4kHz analog) that link an end user location with the switching center that provides dial tone. For ISDN, each B channel was counted as one line. For Centrex, each station line was counted as one line."
average of 4.2 lines per customer, while ILECs were supplying an average of 1.4 lines per customer. Total CLEC switched access lines increased by 23 percent during the year of 2002, from 219,991 to 270,494 lines.

(3) The CLEC share of retail revenues\textsuperscript{14} was 15.9 percent (Figure 3), the same as in 2001. In 2002, retail revenues from local exchange services in Oregon were an estimated $830 million annually\textsuperscript{15} (down from $858 million in 2001). Of the total, ILECs received $698.1 million (down from $722.5 million in 2001 and $783.9 million in 2000), that was 84.1 percent of total switched revenue, and CLECs captured the remaining $132.1 million (down from $135.4 million in 2001), 15.9 percent of total switched revenue. CLEC revenues decreased by 2.4 percent in the year of 2002, from $135.4 million to $132.1 million. This is not surprising given Oregon's economic recession in 2002.

**Figure 3. Market Shares for Switched Service**

The CLECs achieved a higher share of revenues than lines, and a significantly higher share of revenues than customers. This is because the CLECs have concentrated on providing service to business customers. The ILECs' average annual business switched service revenue per line was $422. For CLECs, the annual switched service business revenue per line was $516 (see Table 5).

\textsuperscript{14} The survey defined "revenues" as the amount billed "for switched local exchange services, whether billed in advance or arrears. Include regulated and non-regulated, federal and state charges. Include charges for switched lines, local usage, extended area service (EAS), repair and maintenance services, directory listing services, and add-on features such as call waiting, voice messaging, and caller ID. Exclude taxes that your firm billed to customers."

\textsuperscript{15} Annual revenues are calculated as revenues reported for December 2002 times twelve.
Table 5. Average Switched Service
Customers, Lines and Revenues – 2002

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>CLECs</th>
<th>ILECs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lines / Customer</td>
<td></td>
<td>4.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Business Revenue / Line / Year</td>
<td>$516</td>
<td>$422</td>
<td></td>
</tr>
<tr>
<td>Revenue / Customer / Year</td>
<td>$2,063</td>
<td>$451</td>
<td></td>
</tr>
<tr>
<td>Revenue / Line / Year</td>
<td>$488</td>
<td>$330</td>
<td></td>
</tr>
</tbody>
</table>

The 34 ILECs providing local exchange switched service had 96.0 percent of customers, (down from 96.7 percent in 2001), 88.7 percent of switched access lines (down from 84.2 percent) and 84.1 percent of switched service revenues (down from 90 percent) (see Table 6). Within the ILECs, the Big Four (CENTURYTEL, QWEST, SPRINT and VERIZON) incumbent operators had the major market share of local exchange switched service in Oregon. In 2002, the Big Four had 88.6 percent of total customers (down from 89.9 percent in 2001), 82.7 percent of total exchange lines (down from 85.1 percent in 2001), and 77.9 percent of total switched service revenues (down from 79.1 percent in 2001).

Table 6. Market Shares of ILECs, CLECs and Big 4 ILECs – 2002

<table>
<thead>
<tr>
<th></th>
<th>ILECs/Total</th>
<th>CLECs/Total</th>
<th>Big-4 ILECs/Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTOMERS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>97.3%</td>
<td>2.7%</td>
<td>89.7%</td>
</tr>
<tr>
<td>Business</td>
<td>90.1%</td>
<td>9.9%</td>
<td>83.2%</td>
</tr>
<tr>
<td>Carriers</td>
<td>100.0%</td>
<td>0.0%</td>
<td>99.9%</td>
</tr>
<tr>
<td>Total Customers</td>
<td>96.0%</td>
<td>4.0%</td>
<td>88.6%</td>
</tr>
<tr>
<td>SWITCHED LINES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>97.0%</td>
<td>3.0%</td>
<td>89.6%</td>
</tr>
<tr>
<td>Business</td>
<td>73.7%</td>
<td>26.3%</td>
<td>69.8%</td>
</tr>
<tr>
<td>Carriers</td>
<td>100.0%</td>
<td>0.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total Lines</td>
<td>88.7%</td>
<td>11.3%</td>
<td>82.7%</td>
</tr>
<tr>
<td>REVENUES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>96.5%</td>
<td>3.5%</td>
<td>88.5%</td>
</tr>
<tr>
<td>Business</td>
<td>69.6%</td>
<td>30.4%</td>
<td>66.0%</td>
</tr>
<tr>
<td>Carriers</td>
<td>99.9%</td>
<td>0.1%</td>
<td>77.7%</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>84.1%</td>
<td>15.9%</td>
<td>77.9%</td>
</tr>
</tbody>
</table>
A. Business Market Share

CLECs were supplying service to 9.9 percent of business customers, compared to 4.0 percent of all customers. CLECs supplied 26.3 percent (21.7 percent in 2001) of business switched access lines (see Figure 4). This is substantially greater than the 11.3 percent CLEC share of Oregon total lines. Similarly, CLECs had a 30.4 percent (28.5 percent in 2001) share of business local exchange switched service revenues, compared to a 15.9 percent (15.8 percent in 2001) share of Oregon total revenues.

Figure 4. Business Market Share, Measured by Line Numbers

The CLEC share of business revenues was higher than their share of business lines. For CLECs, in 2002, the annual revenue per business line was $516 ($43 per month). For ILECs, the average was $422 ($35 per month) per line (see Table 5). CLECs’ market share of business access lines has increased steadily during the past four years; the share was 9.6 percent in 1999, 14.2 percent in 2000, 21.7 percent in 2001, and 26.3 percent in 2002 (see Figure 5).
B. Residential Market Share

Table 7. Switched Service RESIDENTIAL Market Shares, 2002

<table>
<thead>
<tr>
<th>Resilient Service RESIDENTIAL Market Shares</th>
<th>Residential</th>
<th>Customers</th>
<th>Lines</th>
<th>Revenues $millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILECs</td>
<td>1,294,155</td>
<td>1,431,598</td>
<td></td>
<td>415.2</td>
</tr>
<tr>
<td>CLECs</td>
<td>36,563</td>
<td>44,211</td>
<td></td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>1,330,718</td>
<td>1,475,809</td>
<td></td>
<td>430.4</td>
</tr>
<tr>
<td>ILECs/Total</td>
<td>97.3%</td>
<td>97.0%</td>
<td></td>
<td>96.5%</td>
</tr>
<tr>
<td>CLECs/Total</td>
<td>2.7%</td>
<td>3.0%</td>
<td></td>
<td>3.5%</td>
</tr>
</tbody>
</table>

(1) The CLEC share of residential customers was 2.7 percent in 2002 (see Table 7), compared to 2.0 percent a year earlier. According to the survey, Oregon LECs were providing local exchange switched services to 1,330,718 Oregon residential customers. ILECs served 1,294,155 (97.3 percent) of the total, while 36,563 customers (2.7 percent) were served by CLECs.

(2) The CLEC share of residential exchange lines was 3.0 percent in 2002, compared to 2.0 percent a year earlier. Oregon LECs were supplying a total of 1,475,809 local switched telephone lines to residential customers. ILECs were supplying 97 percent or 1,431,598 lines, and the CLECs provided 44,211 residential lines.

In 2002, ILECs served 97 percent of the residential market, compared to 98 percent a year earlier. The Big-4 ILECs served 89.6 percent of residential market lines, compared to 91 percent a year earlier. Most consumers still have only one option for local phone service. On average, typical residential local phone service is less profitable than typical business service because it costs more on a per line basis to wire an individual home than it does to wire typically more tightly clustered business buildings. Only 16 percent of CLEC lines serve residential customers, while 68 percent of ILEC lines serve residential customers. A greater percentage of CLEC operations focus on the more profitable business sector.

(3) Overall residential revenues from local exchange switched service in Oregon in 2002 were an estimated $430 million, it was about $439 million in 2001. Residential monthly average revenue was $28.8 per line for CLECs, $24.2 per line for ILECs.
2. CLEC Provisioning

In December 2002, 25 of the 48 CLECs (52 percent) providing local switched service were ILEC-service-resellers, compared to 60 percent a year earlier. A CLEC reseller buys complete retail services from ILECs, and then resells those services under the CLEC's own name to consumers.

Also, about 52 percent (25/48) of CLEC switched access services are facility based providers. The facility based CLECs provided 159,349 switched access lines, which was 72.2 percent (49.5 percent in 2001) of total CLECs' lines, and 8.2 percent (4.4 percent in 2001) of all LECs' switched access lines.

In 2001 there were 13 facilities-based CLECs. By the end of 2002, that number had nearly doubled to 25. In addition, the total revenues from CLEC facilities-based provision jumped from $53.2 million in 2001 to $108.3 million in 2002 — a remarkable 103 percent increase.

Nineteen CLECs reported providing switched access lines or private line services by purchasing unbundled network elements (UNEs) from ILECs. Fourteen CLECs leased the unbundled network element platform (UNE-P) (a UNE-P is a combination of UNEs). The UNE-P number was 58,241 lines in December 2002.

Forty-eight CLECs provided local exchange switched service, 26 of them, at least in part, by reselling the exchange lines of incumbent carriers. Over 43 percent of resold ILEC service occurred in the Portland area. Twenty-two percent of resold CLEC service occurred in the Willamette Area (see Figure 6).

![Figure 6. Market Concentration – CLEC Resells ILEC's Lines in 2002](image)

Fifty-eight percent of the CLECs paid wholesale prices to ILECs, 12 percent paid full retail prices, and 30 percent paid both wholesale and retail prices.

CLECs reported 270,494 (or 11.3 percent of all LECs) of 2,386,386 statewide local switched access lines in service at the end of 2002, compared to 219,990 in December 2001. This represents a 23 percent growth in CLEC switched lines during 2002. By comparison, ILEC lines decreased by 5.5 percent during the preceding year, from 2,238,640 to 2,115,892 lines.

Figure 7. Change of ILEC Market Share in Switched Services, 1998 to 2002

Figure 7 shows the market share of ILEC switched service is on a downward trend. ILEC number of customers, number of switched lines, and total revenue have all gone down during the past 5 years.

CLEC annual retail revenue from the RESIDENTIAL market was $15.3 million in 2002 compared to $20.1 million in 2001. ILEC residential revenue was $415 million, slightly down from $419 million in 2001. CLEC retail revenue from the BUSINESS market increased 1.6 percent to $116.8 million from $115 million. Driving CLEC growth is business demand for additional telecommunications services. ILEC business revenue dropped 7.3 percent to $267 million from $288 million, which indicates ILECs lost business market share.

<table>
<thead>
<tr>
<th>Date</th>
<th>ILEC Lines</th>
<th>CLEC Lines</th>
<th>Total</th>
<th>CLEC Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec-98</td>
<td>2,116,322</td>
<td>85,146</td>
<td>2,201,468</td>
<td>3.9%</td>
</tr>
<tr>
<td>Dec-99</td>
<td>2,078,678</td>
<td>121,277</td>
<td>2,199,955</td>
<td>5.5%</td>
</tr>
<tr>
<td>Dec-00</td>
<td>2,257,594</td>
<td>153,578</td>
<td>2,411,172</td>
<td>6.4%</td>
</tr>
<tr>
<td>Dec-01</td>
<td>2,238,640</td>
<td>219,990</td>
<td>2,458,630</td>
<td>8.9%</td>
</tr>
<tr>
<td>Dec-02</td>
<td>2,115,892</td>
<td>270,494</td>
<td>2,386,386</td>
<td>11.3%</td>
</tr>
</tbody>
</table>

Figure 8. Competitive Growth, CLEC Switched Lines

Table 8 and Figure 8 show CLEC switched access lines increased steadily during the past five years. CLEC switched lines had an annual average increase of 33.5 percent. ILEC switched access lines remained a flat trend; ILECs had 2.1 million lines, which is approximately the same as 5 years ago.

Figure 9 shows market growth for CLECs. The market share of CLECs switched service revenue has increased to 15.9 percent in 2002 from 5 percent in 1998. In the same period, CLEC switched line market share increased to 11.3 percent from 3.9 percent. CLEC switched customers increased to 4.0 percent from 1.0 percent. The annual increase for CLEC switched access lines in the last five years has ranged from 23 percent to 43 percent. The average annual increase was 33.5 percent.
Figure 9. CLEC Growth in Switched Access Services – 1998 to 2002

CLECs' share of Residential switched service revenue increased to 3 percent in 2002 from 1 percent in 1998. Over the same period, CLEC residential lines for switched service market share increased to 3.0 percent from 0.7 percent, CLECs' share of residential for switched service customers increased to 2.7 percent from 0.7 percent (Figure 10).

Figure 10. CLEC Residential Market Share for Switched Service, 1998 to 2002

CLECs' share of Business switched service revenue increased to 30.4 percent in 2002 from 8.9 percent in 1998. In the same period, CLEC business lines for switched service market share increased to 26.3 percent from 11.1 percent, CLECs' share of business customers increased to 9.9 percent from 2.8 percent. (See Figure 11)
Figure 11. CLEC Business Market Share for Switched Service, 1998-2002
V. Private Line & Data Market - Market Size and Share Analysis

1. Market Size and Share

Local exchange private lines are dedicated circuits that customers use to transmit information between two or more pre-selected locations within a telephone exchange. Local private line services vary in capacity. The survey distinguished between lower capacity circuits (speeds less than 1.544 Mbps) and higher capacity circuits (speeds at 1.544 Mbps or greater).

Total revenue from local private line services made up 3.8 percent of total service revenues, and switched services provided the other 96.2 percent.

Twenty-six CLECs reported they provide local exchange private line services. These CLECs share of the retail market ranged from 8.2 percent to 30.1 percent (see Table 9). The percentage depends on how market share is measured and whether the focus is on lower or higher capacity private line circuits. The survey measured CLEC market share in three ways: (1) customers, (2) circuits, and (3) revenues.

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>All LECs</th>
<th>CLECs</th>
<th>ILECs</th>
<th>CLECs %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers</td>
<td>15,426</td>
<td>1,830</td>
<td>13,596</td>
<td></td>
<td>11.9%</td>
</tr>
<tr>
<td>Total Circuits</td>
<td>58,610</td>
<td>7,711</td>
<td>50,899</td>
<td></td>
<td>13.2%</td>
</tr>
<tr>
<td>Lower Capacity</td>
<td>45,269</td>
<td>3,697</td>
<td>41,572</td>
<td></td>
<td>8.2%</td>
</tr>
<tr>
<td>Higher Capacity</td>
<td>13,341</td>
<td>4,014</td>
<td>9,327</td>
<td></td>
<td>30.1%</td>
</tr>
<tr>
<td>Revenues Year - $000</td>
<td>32,711</td>
<td>$9,091</td>
<td>$23,620</td>
<td></td>
<td>27.8%</td>
</tr>
<tr>
<td>Revenue $ / Circuit / Year</td>
<td>$558</td>
<td>$1,179</td>
<td>$464</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) The CLEC market share of local private line customers\(^{16}\) was 11.9 percent. According to the survey, there were a total of 15,426 local exchange private line retail customers.\(^{17}\) The ILECs provided service to 13,596 (88.1 percent) of the total.

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\(^{16}\) The survey defined private line "customers" as "persons or entities that had applied for, been accepted, and were receiving local exchange private line services for a price during the month. Customers include end users (i.e., retail customers) and other telecommunications carriers (i.e., wholesale customers)."

\(^{17}\) Note that survey results may overstate the CLECs’ share of local private line customers, since local private line customers may buy private line services from more than one carrier at a time. As a result, a CLEC and an ILEC may report the same customer.
(2) The CLEC market share of all private line circuits\textsuperscript{18} was 13.2 percent. The CLEC market share of lower capacity circuits was 8.2 percent, while the CLEC market share for higher capacity circuits was 30.1 percent.

Total private line circuits, including lower and higher capacity circuits, increased by 6.3 percent during the year 2002, from 54,730 to 58,160 circuits. The increase was all in higher capacity lines, which were up 38.2 percent (from 9,652 to 13,341).

Table 10. Private Line Revenues, 2002

<table>
<thead>
<tr>
<th>2002</th>
<th>Total</th>
<th>ILECs</th>
<th>CLECs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares</td>
<td>100.0%</td>
<td>72.2%</td>
<td>27.8%</td>
</tr>
<tr>
<td>$ Million/year</td>
<td>$32.7</td>
<td>$23.6</td>
<td>$9.1</td>
</tr>
</tbody>
</table>

(3) The CLECs' share of total local private line service revenues\textsuperscript{19} was 27.8 percent (compared to 17.5 percent in 2001) (see Table. 10). Retail revenues from private line services were an estimated $32.7 million annually\textsuperscript{20}. Of the total estimated annual revenues, ILECs received $23.6 million (72.2 percent), and CLECs the remaining $9.1 million (compared to $5.2 million in 2001). The CLECs' share of revenues was greater than the CLECs' share of circuits and customers. CLECs have focused on higher capacity private line services.

2. CLEC Provisioning

25 facilities-based providers supplied 5,729 (74 percent) of the 7,711 CLECs local exchange private line circuits identified in the survey. However, this does not mean that all of these circuits were provisioned using facilities the CLECs own and operate. Often, a facilities-based carrier owns and operates some telecommunications equipment, but also provides service by resale.

\textsuperscript{18} The survey defined “circuits” as circuit terminations a firm provides and bills to its customers. If a firm provides a circuit that connects two customer locations, and bills the customer for both ends of the circuit, two terminations were counted. The capacity of a circuit is determined by the capacity your firm delivers to the customer at the point of termination, even though the customer may further subdivide that capacity using its own multiplexing or other equipment.

\textsuperscript{19} The survey defined private line “revenues” as the amount a firm billed in December 2002 for local exchange private line services, whether billed in advance or arrears. This included regulated and non-regulated, federal and state charges. Exclude taxes that your firm billed to customers.

\textsuperscript{20} Annual revenues are calculated as revenues reported for December 2002 times 12.
Sixteen CLECs provided private line services by reselling ILEC services. Four CLECs provided private line service by reselling other CLEC services. Most of this resale was to business customers, and all of this resale was in the Portland metropolitan area.

3. Market Trends in Local Private Line Services

Technological change is the driving force in the telecommunications industry. Many different technologies and types of networks can provide voice telephone service, with new ones arriving seemingly every year. The relatively narrow bandwidth of traditional modems is being replaced by much faster alternatives such as cable modems, digital subscriber lines (DSL), T-1 lines, satellites, fixed or mobile wireless, and fiber optic cable.

DSL service was included as a private line service in the survey. In 2002, ILECs’ private line service revenue was $23.6 million, a drop of 3.9 percent compared to a year before. In contrast, CLECs’ revenue continued to increase, reaching $9.1 million from $5.2 million. The combined impact resulted in a total private line service REVENUE increase of 9.8 percent, from $29.8 million, to $32.7 million. If market growth is measured by number of circuits, the private line market increased by 7.1 percent compared with the year before.
VI. Market Segments by Region and Type of Service

The survey identified six geographic regions within Oregon. The regions are based on clusters of ILEC local exchange serving areas (see Figure 12). The regions are:

1. Portland Metropolitan,
2. Willamette Valley,
3. Southwest Interior,
4. Coast,
5. Central, and

21 "Portland Metropolitan" region consists of the following exchanges: Aurora, Beavercreek, Beaverton, Burlington, Canby, Carlton, Charbonneau, Colton, Corbett, Estacada, Forest Grove, Gresham, Hillsboro, Hoodland, Lake Oswego, Molalla, Newberg, North Plains, Oak Grove/Milwaukie, Oregon City, Portland, Redland, Sandy, Scappoose, Scholls, Sherwood, Stafford, Sunnyside, Tigard, Vernonia, Woodburn/Hubbard, Yamhill.


23 "Southwest Interior" region consists of the following exchanges: Ashland, Azalea, Butte Falls, Camas Valley, Canyonville, Cave Junction, Central Point, Crater Lake, Days Creek, Diamond Lake, Elkton, Fish Lake, Glendale, Glide, Gold Hill, Grants Pass, Jacksonville, Medford, Myrtle Creek, North Umpqua, Oakland/Sutherlin, O'Brien, Phoenix/Talent, Prospect, Riddle, Selma, Shady Cove, Rogue River, Roseburg, White City, Wolf Creek, Yoncalla.

24 "Coast" region consists of the following exchanges: Ash Valley, Astoria, Bandon, Bay City, Beaver, Brookings, Cannon Beach, Chitwood, Cloverdale, Coos Bay/North Bend, Coquille, Depoe Bay, Florence, Garibaldi, Gleneden Beach, Gold Beach, Jewell, Knappa, Lakeside, Langlois, Lincoln City, Mapleton, Myrtle Point, Nehalem, Newport, Pacific City, Port Orford, Powers, Reedsport, Rockaway, Scottsburg, Seaside, Siletz, South Beach, Tidewater, Tillamook, Toledo, Waldport, Warrenton, Westport, Yachts.

25 "Central" region consists of the following exchanges: Antelope, Arlington, Bend, Bonanza, Camp Sherman, Cascade Locks, Chemult, Chiloquin, Condon, Culver, Dufur, Fort Klamath, Fossil, Gilchrist, Grass Valley, Hood River, Klamath Falls, Lakeview, La Pine, Madras, Malin, Maupin, Merrill, Mitchell, Moro, Mosier, Mt. Hood Meadows, Odell, Paisley, Parkdale, Paulina, Pine Grove, Prineville, Redmond, Rocky Point, Rufus, Silver Lake, Sprague River, Sisters, The Dalles, Tygh Valley, Wamic, Wasco.

Figure 12. Local Exchange Carriers Market Segments and Shares

MARKET SEGMENT ANALYSIS

2002

$862,907,261 Year
$71,908,938 Month

Total Service Revenue ($) in 2002

Private Line & Data Services
$32,710,800
3.79%

Switched Service
$830,196,461
96.21%

Switched Lines 2,386,386

Lower Capacity Circuits 58,610

Higher Total Circuits Residential Business Carriers (Total)
45,269 13,341 58,610 1,475,809 860,137 50,440 2,386,386

77.2% 22.8% 100.0% 61.8% 36.0% 2.1% 100.0%

All LECs CLECs All LECs CLECs All LECs CLECs All LECs CLECs All LECs CLECs All LECs CLECs All LECs CLECs All LECs CLECs

Portland 43.3% 2.7% 64.8% 14.3% 48.2% 5.4% 45.7% 2.6% 54.1% 17.0% 30.8% 0.0% 48.4% 7.8%

Willamette 27.6% 3.8% 23.0% 14.8% 26.6% 6.3% 24.7% 0.1% 21.4% 5.5% 34.7% 0.0% 23.7% 2.0%

S.W. 8.8% 1.0% 2.6% 0.6% 7.4% 0.9% 9.9% 0.1% 7.9% 1.3% 8.4% 0.0% 9.1% 0.5%

Coast 6.7% 0.0% 4.1% 0.0% 6.1% 0.0% 7.3% 0.0% 5.3% 0.5% 8.4% 0.0% 6.6% 0.2%

Central 6.6% 0.7% 2.3% 0.3% 5.6% 0.6% 7.3% 0.1% 7.5% 1.7% 8.8% 0.0% 7.4% 0.7%

East 7.0% 0.0% 3.3% 0.1% 6.2% 0.0% 5.2% 0.1% 3.8% 0.4% 8.9% 0.0% 4.8% 0.2%

Total 100.0% 8.2% 100.0% 30.1% 100.0% 13.2% 100.0% 3.0% 100.0% 26.3% 100.0% 0.0% 100.0% 11.3%

1. Market Segments by Regions

A. Switched Services by Region

The survey asked each LEC to report how many switched local exchange lines it was supplying to customers in each region. The largest regional market as of December 2002 was the Portland Metropolitan Region. It accounted for 48.4 percent (see Figure 13) of all retail local exchange switched lines in the state. Second was the Willamette Valley Region, with 23.7 percent of the lines. The other four regions accounted for less than a third of the state's lines: Southwest Interior (9.1 percent), Central (7.4 percent), Coast (6.6 percent), and East (4.8 percent).

27 The survey also asked each LEC to report how many local private line circuits it was supplying to customers in each region during December 2002. Some LECs did not provide usable responses to this question. As a result, it is not possible to conduct a reliable analysis of regional differences for local private line services. Staff is attempting to obtain better information.
Survey responses indicate that CLECs were providing competitive local switched service in all six regions of the state. Competitive entry was highest in the Portland Metropolitan Region – the most populous area. Statewide, CLECs had an 11.3 percent share of switched local exchange lines. 68.6 percent of the CLECs’ lines are in the Portland Metropolitan Region, followed by the Willamette Valley with 17.7 percent, then Central (5.8 percent), Southwest Interior (4.7 percent), East (1.7 percent) and the Coast (1.6 percent).

Considering the business sector separately, CLECs have a 26.3 percent (up from 21.7 percent in 2001) share of business lines in the State. While 64.7 percent of CLEC business lines are in the Portland Metro Region, CLECs have nearly the same level of market share of business lines in the Willamette Region (see Figure 14).
Statewide, the CLEC share of RESIDENTIAL lines was 3.0 percent. By region, 88.2 percent of the CLECs' residential lines are in the Portland Metropolitan Region.

B. Private Line Service by Region

The Portland Metropolitan Region was the largest regional private line market, with 48.2 percent (see Figure 15) of all retail private line circuits in the state. The second largest was the Willamette Valley, with 26.6 percent of circuits. The other four regions together accounted for about 25 percent of the state's circuits: Coast (6.1 percent), Southwest Interior (7.4 percent), Central (5.6 percent), and East (6.2 percent).

**Figure 15. Oregon Private Line Service by Region - Dec. 2002**

![Private Line Service by Region](image)

**Lower Capacity Circuits:** Of the state’s 58,610 local exchange private line circuits, most (77 percent) were in the lower capacity category. The Portland Metropolitan Region was the largest market for lower capacity circuits, with 43.3 percent (see Figure 16) of the lower capacity circuits in the state. The second largest market was the Willamette Valley, with 27.6 percent of lower capacity circuits, followed by Southwest Interior (8.8 percent), East (7.0 percent), Central (6.6 percent), and Coast (6.7 percent).
Figure 16. Oregon Lower Capacity Circuits Distribution by Regions - Dec. 2002

The CLECs' share of lower capacity circuits was 8.2 percent statewide. Of the CLEC lower capacity circuits, 47 percent are located in the Willamette Valley Region.

Higher capacity circuits accounted for 22.8 percent of the state's total private line circuits. In December 2002, the market for higher capacity circuits was concentrated in the Portland Metropolitan Region, with 64.8 percent (see Figure 17). The second largest regional market was the Willamette Valley, with 23.0 percent, followed by the Coast (4.1 percent), East (3.3 percent), Southwest Interior (2.6 percent), and Central (2.3 percent).

Figure 17. Oregon Higher Capacity Circuits Distribution by Regions - Dec. 2002

CLECs' share of higher capacity circuits was 30.1 percent statewide. The Willamette Valley Region has the largest portion of the CLEC share at about 49 percent.
The regional distribution of private lines has not changed much over the last several years, as indicated in Figure 18.

**Figure 18. Private Line Circuits Distribution, 1999 to 2002**

<table>
<thead>
<tr>
<th>Year</th>
<th>Portland</th>
<th>Willamette</th>
<th>S.W.</th>
<th>Coast</th>
<th>Central</th>
<th>East</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>40%</td>
<td>27.2%</td>
<td>9.4%</td>
<td>6.6%</td>
<td>8.9%</td>
<td>7.0%</td>
</tr>
<tr>
<td>2000</td>
<td>47.2%</td>
<td>23.1%</td>
<td>9.2%</td>
<td>9.3%</td>
<td>6.1%</td>
<td>5.0%</td>
</tr>
<tr>
<td>2001</td>
<td>47.6%</td>
<td>24.3%</td>
<td>7.8%</td>
<td>7.2%</td>
<td>7.2%</td>
<td>6.0%</td>
</tr>
<tr>
<td>2002</td>
<td>48.2%</td>
<td>26.6%</td>
<td>7.4%</td>
<td>6.1%</td>
<td>5.6%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

2. Market Segments by Types

A. Switched Services

The survey grouped customers into three segments: Business, residential, and carrier. 62 percent of switched service revenues were from residential services, 36 percent were from business, and 2 percent were from carriers (see Figure 19).

**Figure 19. Oregon Switched Service Lines by Types**
B. Private Line

A private line is a dedicated, non-switched link from one or more customer-specified locations to one or more customer-specified locations. A circuit is a complete electrical path providing one- or two-way communication between two points comprised of associated send and receive channels. Capacity is determined by the highest data transmission rate in either direction. Figure 20 shows that 77 percent of private line circuits were lower capacity, and that 23 percent were higher capacity.

Figure 20. Oregon Private Line Circuits by Types
VII. Business Plans and Competition

1. Capital Expenditures

Capital Expenditure is the money spent to acquire or upgrade physical assets such as switches and fiber optic cable. The survey asked for information on investment in capital assets (plant and equipment). Capital expenditures for local exchange service allocated to Oregon was estimated at $188 million, which was 21.8 percent of total revenue ($863 million). (See Table 11)

Of the 210 certified CLECs, 93 reported some level of capital expenditures in 2002, with 80 percent having made capital outlays of less than $10,000. Estimated total CLEC capital expenditures were $70 million. CLECs' capital investment represented 49.5 percent of CLECs' revenue ($141.1 million).

Of the 34 Certified ILECs, 33 reported having made some capital expenditures in 2002, with 73 percent having capital spending ranging from $100,000 to $10 million. Estimated total ILEC capital expenditures were $118 million. ILECs' capital investment represented 16.4 percent of ILECs' revenue ($721.8 million).

Table 11. Capital Expenditures for Local Exchange Service in 2002

<table>
<thead>
<tr>
<th>Capital Expenditures</th>
<th>ILECs</th>
<th>CLECs</th>
<th>All LECs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $10,000</td>
<td>1</td>
<td>74</td>
<td>75</td>
</tr>
<tr>
<td>$10,000-50,000</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>$50,001-100,000</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>$100,001-1,000,000</td>
<td>15</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>$1,000,001-10,000,000</td>
<td>9</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>More than $10,000,000</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td># of LECs had Capital Expenses</td>
<td>33</td>
<td>93</td>
<td>126</td>
</tr>
<tr>
<td>Estimated Expenses ($million)</td>
<td>$118</td>
<td>$70</td>
<td>$188</td>
</tr>
<tr>
<td>Revenues ($million)</td>
<td>$722</td>
<td>$141</td>
<td>$863</td>
</tr>
<tr>
<td>Investment / Revenue (%)</td>
<td>16.4%</td>
<td>49.5%</td>
<td>21.8%</td>
</tr>
</tbody>
</table>

2. Competition for Residential Market

The survey asked all local exchange carriers "what do you believe are the reasons that you do not have a bigger share of Oregon's residential market (check all that apply)"
Out of 34 ILECs, 12 companies noted that cell phone usage has decreased the demand for wireline and second-line services (see Table 12), and 10 ILECs were restrained by geographical location, which made residential competition difficult or expensive.

Out of 186 responding CLECs, 16 thought they could not compete on price; 14 thought they could not compete on facilities; 19 believed that the incumbent local exchange carrier has name familiarity. Since CLECs operations focus principally on business customers, only 7 companies responded that cell phone usage has decreased the demand for residential wire line and second-line services; and 19 CLECs considered that geographic location made residential competition difficult or expensive.

### Table 12. Residential Market Competition

<table>
<thead>
<tr>
<th>Reasons</th>
<th># of ILECs</th>
<th># of CLECs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannot compete on price</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Cannot compete on facilities</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>ILEC has name familiarity</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Do not have enough capacity</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Cell phone decreased the wireline demand</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Hard to compete due to location</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Other (explain):</td>
<td>4</td>
<td>40</td>
</tr>
</tbody>
</table>

Of the 40 CLECs who checked the option "other", most focused their service on business customers or did not provide local exchange service in 2002. However, nine of these 40 CLECs who checked the "other" option, provided reasons why they did not have a bigger share of Oregon's residential market. The respondents' comments are as follows:

- The rates for UNE-P elements are too high.
- UNE-P rate does not work in certain areas.
- Incumbent providers are entrenched.
- Compared to other states, Oregon is more difficult to do business in because of cumbersome, labor-intensive state regulations, reports, etc.
- ILEC Monopolized Power
- Qwest/Verizon wholesale rates are too high, compared to residential market retail rates.
- A 5 percent discount from Qwest does not cover billing expenses. Cutover charges take too long to recover. Would love to do more residential, but too expensive when considering discount.
- The respondent has found the ILEC Interconnect/Exchange Agreement difficult to work with, causing delays and expensive options.
- Not enough margin to make residential profitable under resale or UNE-P pricing from ILECs to CLECs.
VIII. Conclusion

In 2002, Oregon's local telecommunications market was an $863 million industry, comprised of 2,386,386 switched line and 58,610 private line circuits. Industry wide revenues\textsuperscript{28} decreased $25 million from 2001. For switched lines, revenues decreased by 3 percent, the number of lines served also decreased by 3 percent. For private lines, circuits served increased 7 percent, and revenue increased by 10 percent, compared to a year ago.

The revenue decrease can be attributed to Oregon's weak economy and the continuing market penetration from wireless competition.

The local telecom markets remain dominated by the incumbent providers, with competitors accounting for 11.3 percent of local exchange switched phone lines (up from 8.9 percent in 2001). CLECs' share of exchange lines for the residential category was 3 percent in 2002, about 1 percent higher than 2001. There does not appear to be sufficient incentives for CLECs to compete with ILECs on a broad scale in the local residential market. CLECs had captured 26 percent (up from 22 percent) of the business lines by the end of 2002, indicating the larger margins available in that segment.

A small number of people in Oregon have high-speed digital access, with about 5.0 percent of Oregon consumers (residential and business) having any type of speedy Internet hookup. Oregon's 5.0 percent revenue for high-speed access services consists of 3.8 percent private line services (including DSL- Digital Subscriber Line) and 1.2 percent cable TV network in switched services.

Despite the recent economic recession that has slowed momentum and investor enthusiasm, investment in telecommunications facilities continues to take place. The capital expenditures for local exchange service allocated to Oregon in 2002 were estimated at $188 million, which was 21.8 percent of total revenue ($863 million). Capital investment by CLECs represented 49.5 percent of revenue, while ILECs spent 16.4 percent of revenue on capital investment. This indicates the focus of CLECs to become increasingly facilities-based providers of local exchange services.

For the residential local exchange market, 16 CLECs said they could not compete on price; 14 thought they could not compete on facilities; 19 believed that the incumbent local exchange carrier has name familiarity; 7 responded that cell phone usage has decreased the demand for residential wire line and second-line services; and 19 considered that the geographic location made residential competition difficult or expensive. In addition, nine CLECs provided reasons why they did not have a bigger

\textsuperscript{28} Qwest's revenue for 2002 was not available, its 2002 revenue for this report was estimated by using (1) $/line in 2001 multiplied by number of lines in 2002, for switched service; (2) $/circuits in 2001 multiplied by number of circuits 2002, for private line service.
share of Oregon’s residential market. They found the ILEC Interconnect or Exchange Agreement was difficult to work with, causing delays and expensive options. CLEC also believed that there is not enough margin to make the residential market segment profitable under resale or UNE-P pricing from ILECs to CLECs.

Out of 34 ILECs, 12 companies noted that cell phone usage has decreased the demand for wire line and second-line services, and 10 ILECs were restrained by the geographical location, which made residential competition difficult or expensive.

**Figure 12. Local Exchange Carriers Market Segments and Shares**

While the CLECs had a small percentage of the overall market, they achieved a significant presence in specific market segments. CLECs provided 26.3 percent (up from 21.7 percent in 2001) of switched business lines. The predominant form of CLEC competitive entry was resale. Highest CLEC market concentration as of December 2002 was in the Portland Metropolitan Region.
For switched services CLEC revenue from the Business market increased 1 percent from 2001 to 2002, from $115.1 to $116.8 million. CLECs have been actively pursuing business customers. ILEC business revenue continued to drop in 2002, by 7.3 percent, after a drop of 11.4 percent in 2001.

About 34 percent (92,871 of 270,494) of CLEC switched access lines were provided by means of UNEs leased from ILECs.

In Private Line Services, total LEC revenue increased by 9.8 percent in 2002 to $32.7 million.
Among the amendments to HB 2577 enacted in 2003, is the requirement for the OPUC to include in its annual report to the Legislature on local telecommunications, information on "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."

According to ORS 285B.486, "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.

During fall 2003, the OPUC staff identified and surveyed public bodies in Oregon to gather information on the existence and use of advanced telecommunications facilities.

**Summary of Survey Results:**

The survey was sent to 535 public entities in Oregon of which 365 were completed and returned for a response rate of 68 percent.

Of the 365 respondents, 63 percent (229) do not own advanced telecommunications facilities, 37 percent (136) of the respondents own some types of facilities. Ten percent (36) of respondents are willing to offer some type of high-speed telecommunications services. Six percent (22) of respondents currently offer high-speed telecommunications services.

Currently, the most widely used method for high-speed access on the market is Digital Subscriber Line (DSL) technology. However, 76 respondents own fiber optics, and 79 own copper cable, while only 12 respondents own DSL. Eighteen respondents are willing to offer fiber optics, while five are willing to offer DSL. Nine respondents currently offer fiber optics, versus two currently offering DSL.

![The Availability of High-Speed And Advanced Telecommunications Capability](image)

<table>
<thead>
<tr>
<th>Do not Own</th>
<th>Own Facilities</th>
<th>Willing to Offer</th>
<th>Currently Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>63%</td>
<td>37%</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6%</td>
</tr>
</tbody>
</table>
The survey included three questions.

1. Do you own the following telecommunications facilities?
   a. DSL (digital subscriber line)
   b. Coaxial Cable
   c. Fiber (DS-1, DS-3, OCn, SONET, includes Dark Fiber)
   d. Copper Cable (T-1, DS-1)
   e. Satellite or Fixed Wireless
   f. High Bandwidth Switches
   g. Other _______________

37 percent of the respondents said they own one or more type of advanced telecommunications facilities. The 36 percent represents 136 public bodies out of 365 respondents.
Following are descriptions of the various types of advanced telecommunication facilities:

a. **DSL**: Digital Subscriber Line - is a communication technology that uses existing twisted-pair telephone lines to transport high-bandwidth data, such as Internet, multimedia, and video.

b. **Coaxial cable**: Typically used to connect a television to cable TV services, coaxial cable consists of a small copper tube or wire surrounded by an insulating material and another conductor with a larger diameter, usually in the form of a tube or copper braid.

c. **Fiber Optics**: High-speed transmission using light to send images (in telecommunications: voice or data) through a bundle of glass fibers.

d. **Copper Cable**: Copper cable is a pair of traditional copper telephone lines using electric current to carry signals.

e. **Satellite or Fixed Wireless**: A satellite that is used to relay telecommunications information. Fixed wireless means the use of radio or microwaves to connect any two stationary points.

f. **High Bandwidth Switches**: Bandwidth, in digital systems, refers to data speed usually measured in bits per second (bps). High bandwidth is often equated with high-speed. ATM (Asynchronous Transfer Mode) is a high bandwidth, low-delay, connection-oriented, packet-like switching and multiplexing technique.

g. **Other**: Item "other" includes video telecommunications equipment.
2. Are you willing to offer telecommunications facilities to private entities for their use for advanced telecommunication services? If yes, indicate which facilities from the above list?

10 percent of the respondents said they are willing to offer their owned telecommunications facilities for use by private entities. The 10 percent represents 36 of 365 respondents.
3. Do you currently offer telecommunications facilities to private entities for their use for advanced telecommunications services? If yes, indicate which facilities from the above list?

Six percent of the respondents said they currently offer telecommunications facilities to private entities for their use for advanced telecommunications services. The 6 percent represents 22 public bodies out of 365 respondents.