LOCAL TELECOMMUNICATIONS COMPETITION SURVEY

YEAR 2001 REPORT

Economic Research and
Financial Analysis Division

Public Utility Commission of Oregon

December 11, 2001

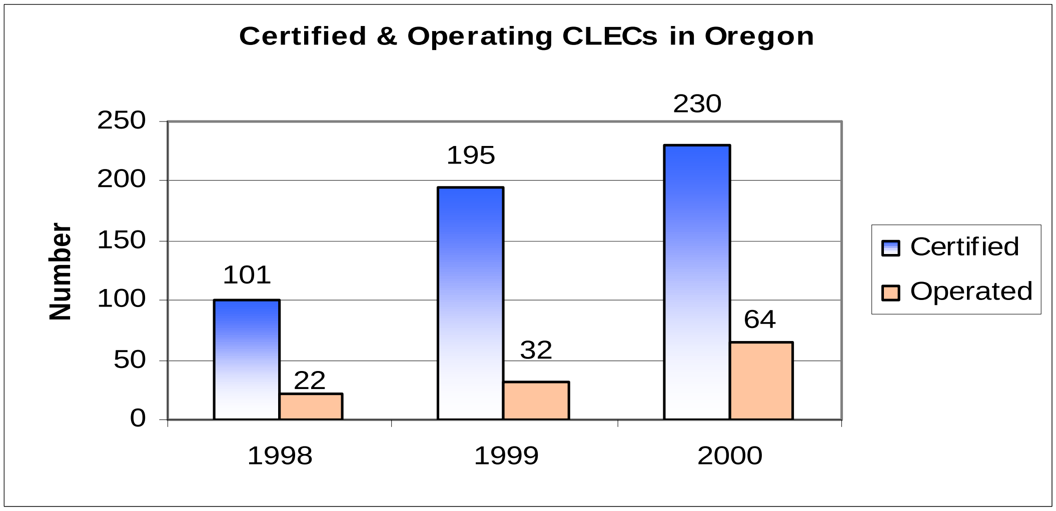
EXECUTIVE SUMMARY

In January 2001, the staff of the Public Utility Commission of Oregon sent a survey to the 264 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 2000. The staff received responses from all 34 ILECs and 148 out of 230 CLECs, for a total response rate of 69%.

HIGHLIGHTS

Total Oregon Telecom Industry Revenue 2000:	$905 Million
Total Switched Lines at Year-end 2000:	2,411,172
ILEC Switched Lines/Market Share:	2,257,594 / 93.6%
CLEC Switched Lines/Market Share:	153,578 / 6.4%
Total Residential Switched Lines at Year-end 2000:	1,554,231
ILEC Residential Switched Lines/Market Share:	1,516,239 / 97.6%
CLEC Residential Switched Line/Market Share:	37,992 / 2.4%
Total Switched Line Increase / Growth Rate:	211,215 (+9.6%)
ILEC Switched Line Increase / Growth Rate:	178,914 (+8.6%)
CLEC Switched Line Increase / Growth Rate:	32,301 (+26.6%)
CLECs Having Certificates:	230
CLECs Doing Business / % of Total CLECs:	64 / 28%
Total Number of Private Line Circuits:	55,226
Lower Capacity Circuits / % of Private Lines:	45,809 / 82.9%
Higher Capacity Circuits / % of Private Lines:	9,417 / 17.1%

Competitive telecommunications services are growing in Oregon. In the last 3 years, the certified numbers of CLECs increased from 101 to 230, and the numbers of CLECs actually provided services in Oregon increased from 22 to 64.



According to the survey responses, competitive entry in Oregon's telecommunications market is still small, especially in the residential segment. As of December 2000, 64 CLECs out of 230 (28%, up from 16% in 1999) reported that they were in the business of providing local exchange services. However, using a widely recognized measure of market share, percentage of local switched telephone lines, CLEC market share was 6.4% (up from 5.5% in 1999). In year 2000, CLECs had a 2% (up from 0.3% in 1999) share of the residential market. Most competitive entry was in the business segment. CLECs were supplying 14% (down from 18% in 1999) of business customers' switched local exchange lines statewide.

Growth in the number of total Oregon LEC switched local exchange lines was 10%, from 2.2 million in 1999 to 2.4 million in 2000. The following table summarizes the switched lines serviced in Oregon.

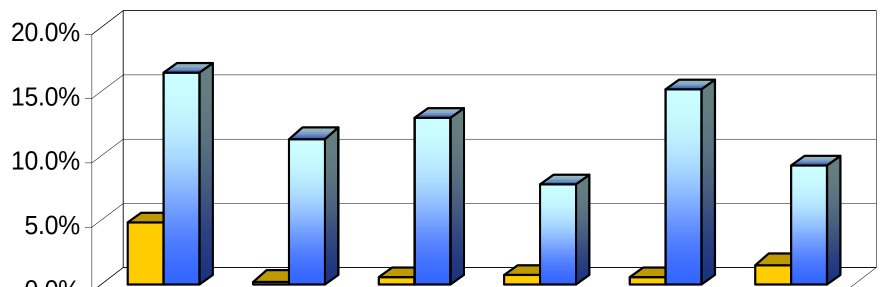
	Total LECs	Switched Services: Lines-000s and Shares-%		
2000	**Total**	**Residential**	**Business**	**Carriers**
ILECs	**2,258**	**1,516**	**664**	**77**
CLECs	**154**	**38**	**110**	**6**
All-LECs	**2,411**	**1,554**	**774**	**83**
ILECs	**93.6%**	**97.6%**	**85.8%**	**93.0%**
CLECs	**6.4%**	**2.4%**	**14.2%**	**7.0%**
All-LECs	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Competitive entry into the telecommunications market varies across different regions in Oregon. In Portland, the Willamette Valley, Central, and Southwest, CLEC's were providing between 11% and 16% of business customers' switched local exchange lines. While on the Coast and in Eastern Oregon CLEC's were providing about 8% of business customers' switched local exchange lines.

CLECs serve 5% of residential lines in the Portland area, but less than 2% elsewhere in the state. CLEC penetration increased from less than 1% to 5% in the Portland area residential market, reflecting the introduction of the hybrid voice and cable TV network. The following chart illustrates CLEC penetration into Oregon regional markets.

What are the CLEC's shares of the market by region?

CLEC Market Shares By Lines & Regions - Switched Services



	Portland	Willamette	S.W.	Coast	Central	East
Residential	4.8%	0.3%	0.6%	0.7%	0.5%	1.6%
Business	16.4%	11.4%	13.0%	7.8%	15.1%	9.2%

61% of all business lines served by CLECs and 88% of residential lines served by CLECs were in the Portland Metropolitan area. CLEC revenues were $86 million in 2000, up from $59 million in 1999.

TABLE OF CONTENTS

EXECUTIVE SUMMARY i
I. Purpose of the Survey 1
II. Survey Participants and Responses 1
III. Service Types 2
1. ILEC Service Types 2
2. CLEC Service Types 3
IV. Switched Services - Market Size and Share Analysis 5
1. Market Size and Shares 5
A. Business Market Shares 10
B. Residential Market Shares 11
2. CLEC Provisioning 14
3. Market Growth in Switched Services 14
V. Private Line & Data Market- Market Size and Share Analysis 16
1. Market Size and Shares 16
2. CLEC Provisioning 19
3. Market Growth in Private Line Services 19
VI. Market Segments by Regions and Types 20
1. Market Segments by Regions 22
A. Switched Services by Region 22
B. Private Line Services by Region 24
2. Market Segments by Types 27
A. Switched Services 27
B. Private Lines 28
VII. Conclusion 29

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 2001, the Commission staff sent a survey form to all 264 carriers that the Commission had certified to provide local services in Oregon as of December 2000. 34 of the 264 certified local exchange carriers (LECs) are incumbent local exchange carriers (ILECs), and 230 are competitive local exchange carriers (CLECs). The ILECs consist of 23 telecommunications utilities and 11 cooperatives. These are the traditional local incumbent 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 2000.

All 34 ILECs responded to the survey. 148 out of 230 (64.3%) competitive providers responded. The overall response rate among all LECs was 68.9% (Table 1). 37% (28% last year) of the certified carriers were actually providing services in December 2000, 100% of ILECs and 27.8% (16.4% last year) of CLECs (64 out of 230). 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

Dec. 2000 Data	Questionnaire		
	Sent	Responded	Response Rate %
Total LECs	264	182	68.9%
ILECs	34	34	100.0%
CLECs	230	148	64.3%

	Service Provided in December 2000		
	Questionnaire Sent	Service Provided	% Operating
Total LECs	264	98	37.1%
ILECs	34	34	100.0%
CLECs	230	64	27.8%

III. Service Types

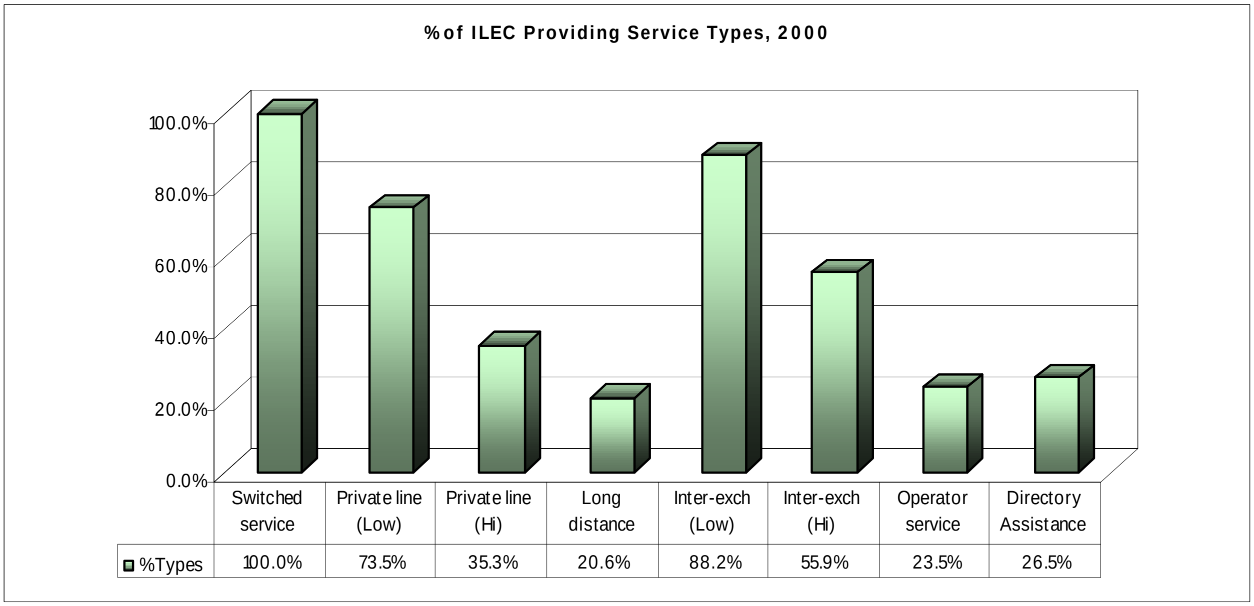
1. ILEC Service Types

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 Eight General Services – ILECs

Service Types	# of ILECs Providing Service	% of ILECs Providing Service
Local Exchange Switched Service	34	100.0%
Local Exchange Private Line Service:	25	73.5%
Lower Capacity	25	73.5%
Higher Capacity	12	35.3%
Long Distance Service	7	20.6%
Inter-exchange Private Line Service:	30	88.2%
Lower Capacity	30	88.2%
Higher Capacity	19	55.9%
Operator Service	8	23.5%
Directory Assistance Service	9	26.5%

Figure 1. Service Types and Distributions - ILECs



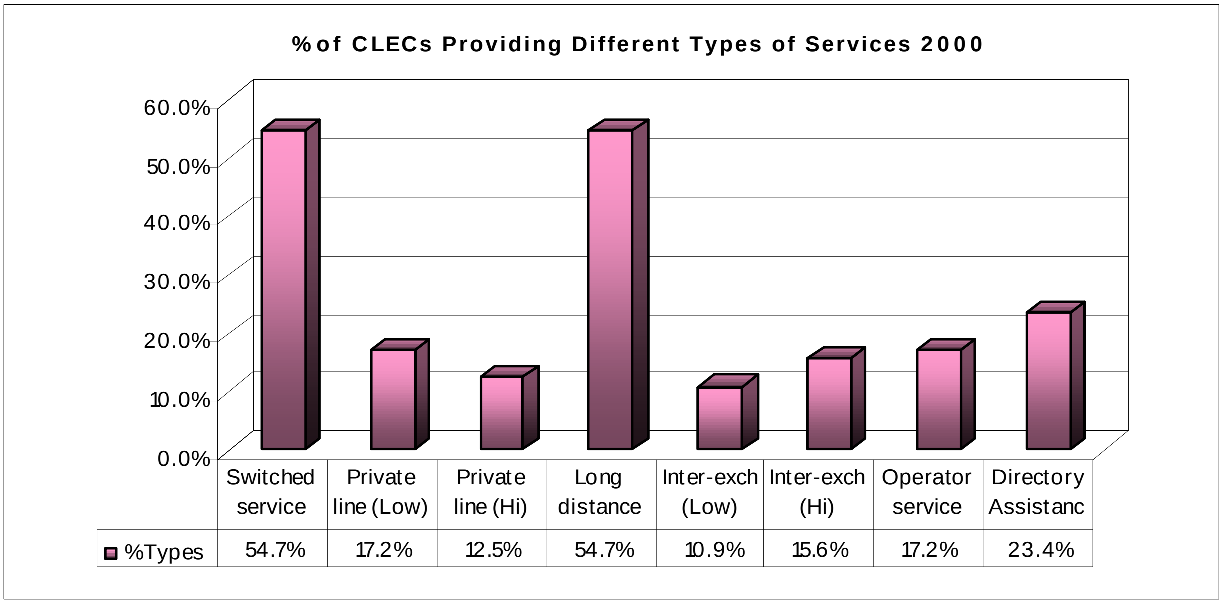
2. CLEC Service Types

64 (27.8%) of the 230 certified CLECs were providing some kind of telecommunications service in Oregon in December 2000 (up from 16.4% in 1999). (Again we assume that only those CLECs that responded to our survey were providing services in Oregon.) Of the 64 CLECs that were providing service, 35 were providing local exchange service (up from 16 in 1999). 35 CLECs were providing long distance service (up from 17 in 1999), and 11 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 Eight General Services – CLECs

CLEC Service Types	# of CLECs Providing Service	% of CLECs Providing This Service
Operating CLECs	64	
Local Exchange Switched Service	35	54.7%
Local Exchange Private Line Service:	14	21.9%
Lower Capacity	11	17.2%
Higher Capacity	8	12.5%
Long Distance Service	35	54.7%
Inter-exchange Private Line Service:	11	17.2%
Lower Capacity	7	10.9%
Higher Capacity	10	15.6%
Operator Service	11	17.2%
Directory Assistance Service	15	23.4%

Figure 2. Service Types and Distributions – CLECs



IV. Switched Services – Market Size and Share Analysis

1. Market Size and Shares

In 2000, there were 35 CLECs competing in the local exchange switched services market. The CLECs as a group had a market share ranging between 2.2% and 9.9%, depending on how market share is measured. For this report, market share is measured in three ways: (1) customers, (2) lines, and (3) revenues.

Table 4. Oregon Switched Service Market Shares - 2000

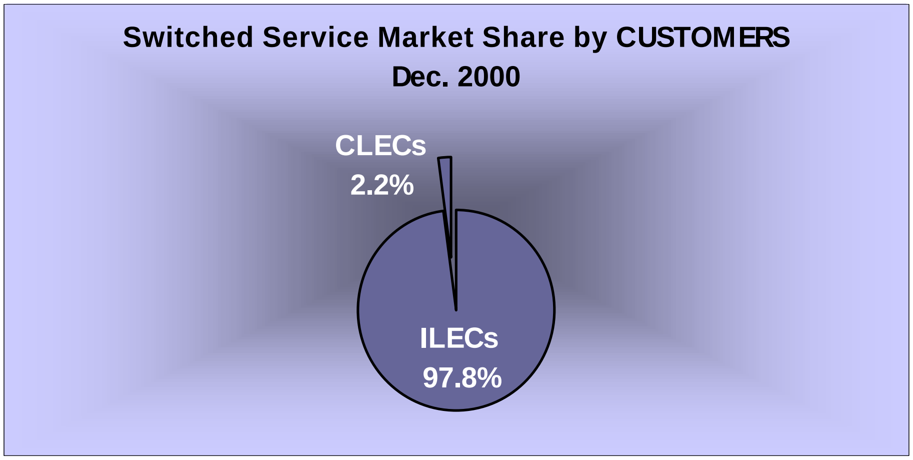
	Customer	Lines	Revenue-$Millions
ILEC	1,724,098	2,257,594	783.9
CLEC	38,723	153,578	85.8
Total	1,762,821	2,411,172	869.7

%	Customer	Lines	Revenue
ILEC	97.8%	93.6%	90.1%
CLEC	2.2%	6.4%	9.9%
Total	100.0%	100.0%	100.0%

(1) The CLEC share of retail customers[1] was 2.2%. In 2000, 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 1,762,623 Oregon customers. ILECs served 1,724,098 (97.8%) of the total, while 38,525 customers were served by 35 CLECs (Table 3 and Figure 3).

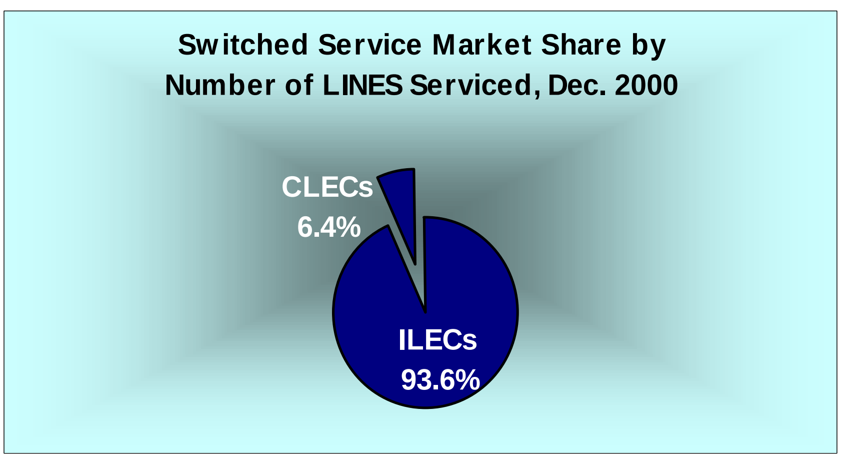
[1] The survey defined **"customer"** as "any person or entity that has a physical location within Oregon, and has applied for, been accepted, and receives service for a price. Included are residential and business end users (i.e. retail customers), as well as other telecommunications carriers (i.e.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

Figure 3. Market Share by Customers for Switched Services



(2) The CLEC share of retail lines[2] was 6.4% in 2000. All Oregon LECs were supplying a total of 2,411,172 local switched telephone lines to retail customers. Of that total, the ILECs were supplying 93.6% (2,257,594) of all lines (Figure 4), leaving the CLECs with the remaining 153,578 (6.4%). The CLECs were supplying an average of 4 lines per customer, while ILECs were supplying an average of 1.3 lines per customer.

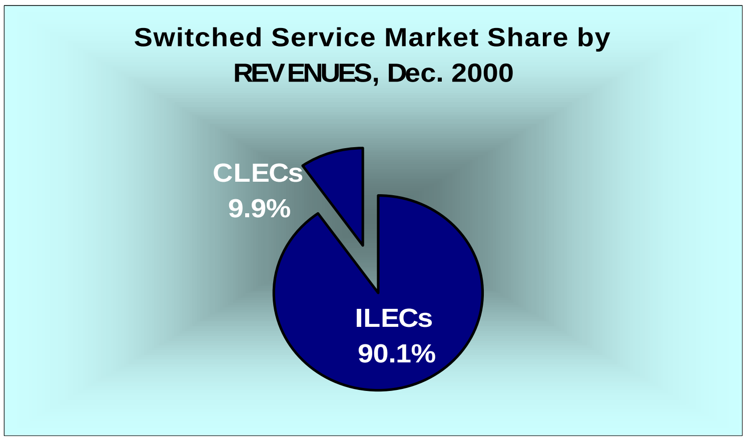
Figure 4. Market Share by Lines for Switched Services



[2] 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."

(3) The CLEC share of retail revenues[3] was 9.9% (Figure 5). In 2000, retail revenues from local exchange switched services in Oregon were an estimated $869.6 million annually[4] (down from $944.7 million in 1999). Of the total, ILECs received $783.9 million, 90.1% (down from $885.7 million in 1999), and CLECs the remaining $85.7 million, 9.9% (up from $59 million in 1999).

Figure 5. Market Share by Revenues for Switched Services



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. Businesses provide substantially more revenue than residential consumers both on a per-line and on a per-customer basis. The ILECs' average annual local switched revenue per line was $347 (down from $426/line/year in 1999). For CLECs, the average was $558 (up from $486) per line per year. The ILECs' average annual local switched revenue per customer was $455 (down from $559 in 1999). The CLECs' average annual revenue was $2,225 per customer (up from $2,215 in 1999) (see Table 5 below).

[3] 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."

[4] Annual revenues are calculated as revenues reported for December 2000 times twelve.

Table 5. Average Amount for Switched Services:
Customers, Lines and Revenues, 2000

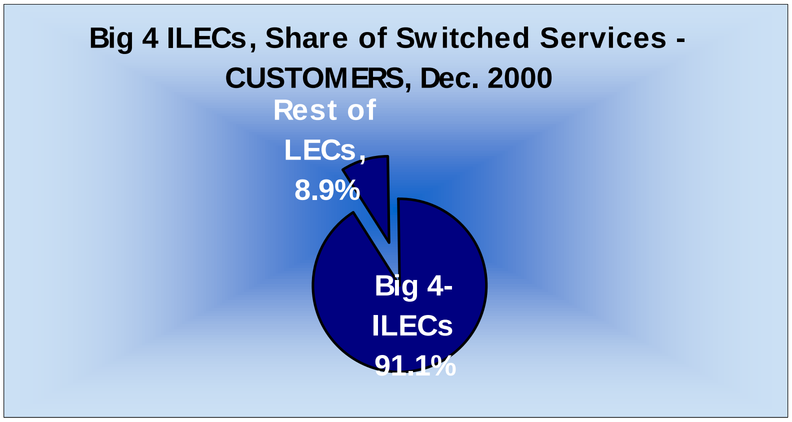
2000	CLECs	ILECs
Lines / Customer	4.0	1.3
Business Revenue / Line / Year	$646	$490
Residential Revenue / Lines / Year	$272	$286
Revenue / Customer / Year	$2,217	$455
Revenue / Line / Year	$559	$347

The 34 ILECs providing local exchange switched services had 98% of customers, 94% of switched lines and 90% of switched service revenues (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. The Big Four had 91.1% of total customers (Figure 6), 87.5% of total exchange lines (Figure 7), and 85.7% of total switched service revenues (Figure 8) in December 2000.

Table 6. Market Shares of ILECs, CLECs and Big 4 ILECs, 2000

% Market Shares			
CUSTOMERS	ILECs/Total	CLECs/Total	Big-4 ILECs/Total
Residential	97.8%	2.2%	90.7%
Business	97.7%	2.3%	92.3%
Carriers	99.6%	0.4%	98.9%
Total Customers	97.8%	2.2%	91.1%
EXCHANGE LINES	ILECs/Total	CLECs/Total	Big-4 ILECs/Total
Residential	97.6%	2.4%	90.4%
Business	85.8%	14.2%	81.2%
Carriers	93.0%	7.0%	92.6%
Total Lines	93.6%	6.4%	87.5%
REVENUES	ILECs/Total	CLECs/Total	Big-4 ILECs/Total
Residential	97.7%	2.3%	91.9%
Business	82.1%	17.9%	78.9%
Carriers	84.1%	15.9%	84.1%
Total Revenues	90.1%	9.9%	85.7%

Figure 6. Share of Big Four ILECs, Switched Services - Customers



In Figures 6 to 8, Rest of LECs includes remaining ILECs and all of the CLECs.

Figure 7. Share of Big Four ILECs, Switched Services - Lines

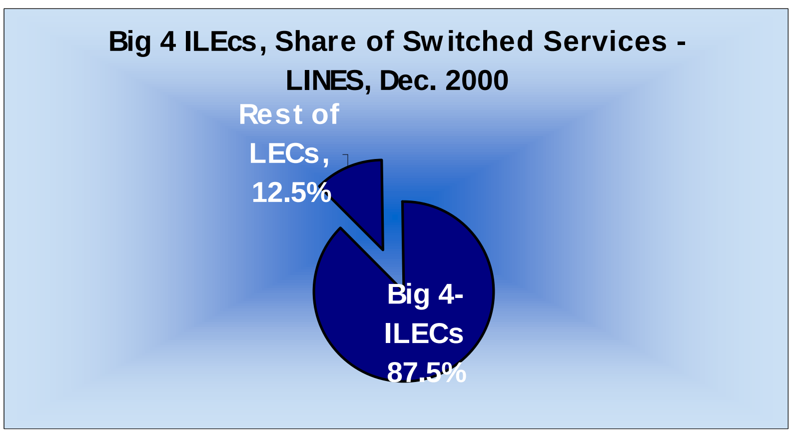
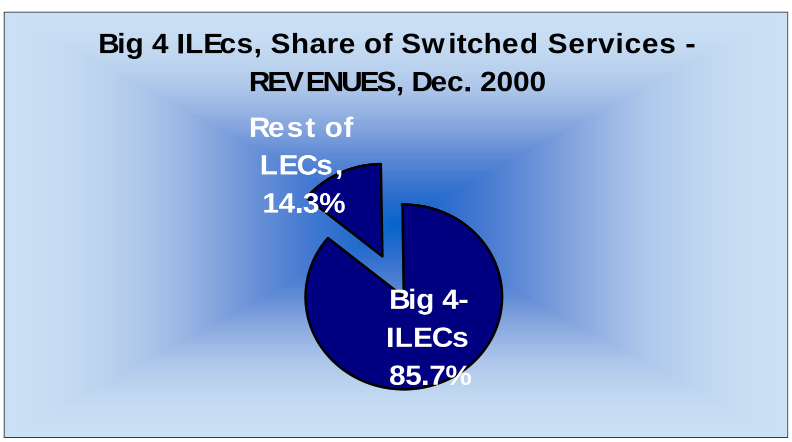


Figure 8. Share of Big Four ILECs, Switched Services - Revenues



A. Business Market Shares

CLECs were supplying service to 2.3% of business customers (Figure 9), compared to 2.2% of total customers. CLECs supplied 14.2% of business[5] lines (Figure 10). This is substantially greater than the 6.4% CLEC share of Oregon total lines. Similarly, CLECs had a 17.9% share of business local exchange switched service revenues (Figure 11), compared to a 9.9% share of Oregon total revenues.

Figure 9. Business Market Shares, Measured by Customer Numbers

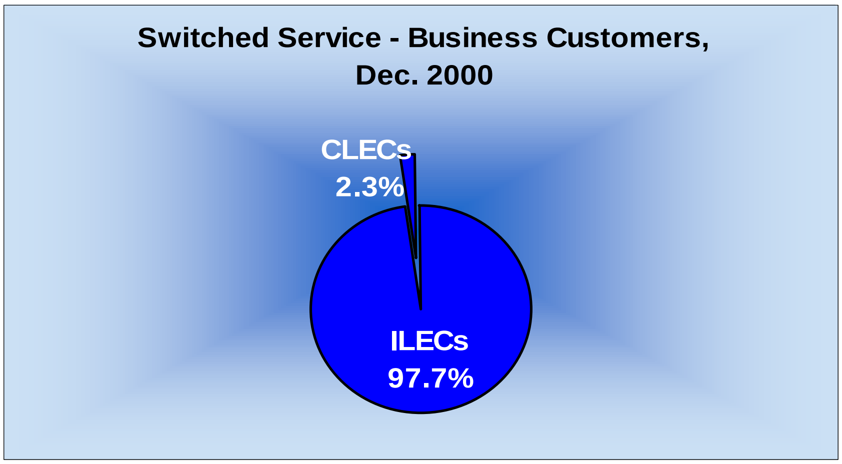
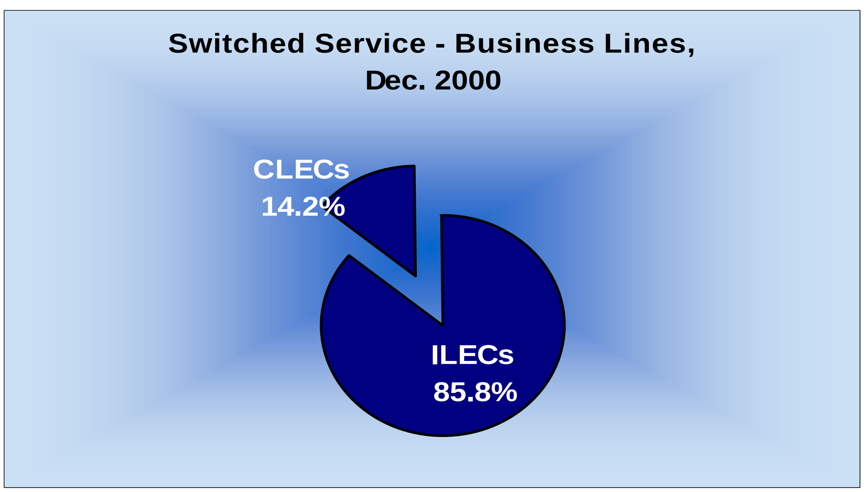
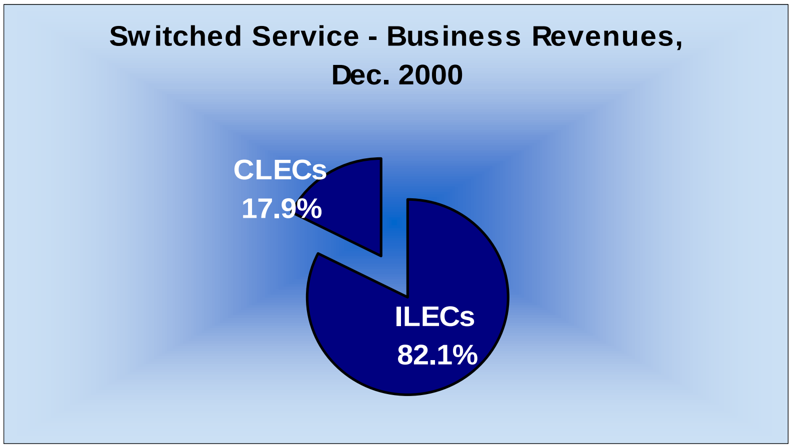


Figure 10. Business Market Shares, Measured by Line Numbers



[5] The survey defined **"business customer"** as a "customer whose actual or obvious use of a service is for conducting a business, trade, or profession, or whose use of the service is obviously not primarily for domestic use. The telephone number(s) for a business customer are displayed in telephone directories under a business name and in sections of the directory reserved for business listings (i.e., yellow pages)."

Figure 11. Business Market Shares, Measured by Revenues



The CLEC share of business revenues was higher than their share of business lines. For CLECs, in 2000, the annual revenue per business line was $645 ($54/mo). For ILECs, the average was $490 ($41/mo) per line (Table 5).

B. Residential Market Shares

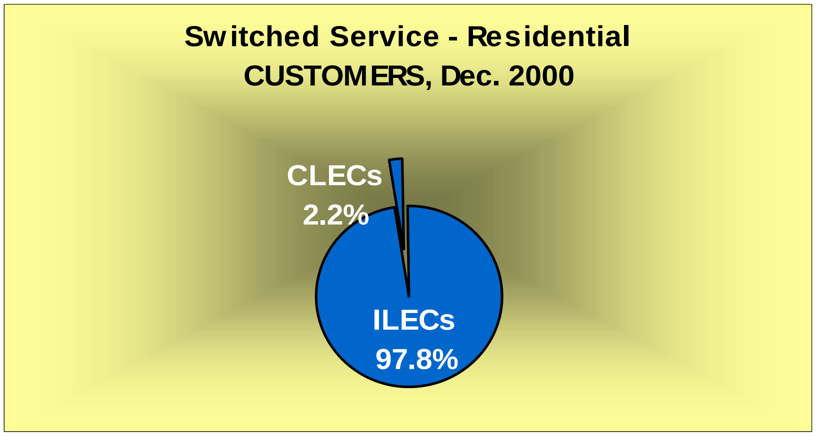
Table 7. Switched Service RESIDENTIAL Market Shares, 2000

Residential	Customers	Lines	Revenues
ILECs	1,280,556	1,516,239	36,149,255
CLECs	28,377	37,992	861,371
Total	1,308,933	1,554,231	37,010,626
ILECs/Total	97.8%	97.6%	97.7%
CLECs/Total	2.2%	2.4%	2.3%

(1) The CLEC share of residential customers[6] was 2.2% (Table 7). According to the survey, Oregon LECs were providing local exchange switched services to 1,308,933 Oregon residential customers based on an annual average rate. ILECs served 1,280,556 (97.8%) of the total, while 28,377 customers (2.2%) were served by CLECs (see Figure 12).

[6] 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)."

Figure 12. Market Share of Residential Customers



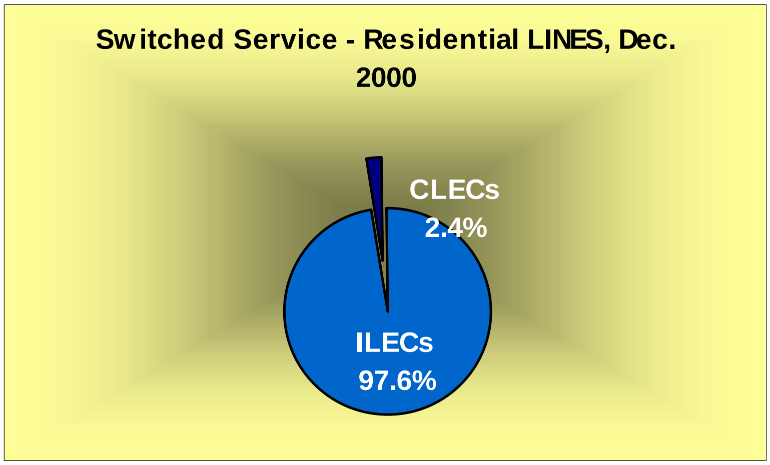
(2) The CLEC share of residential exchange lines[7] was 3.8% in 2000. Oregon LECs were supplying a total of 1,554,231 local switched telephone lines to residential customers. The ILECs were supplying 97.6%, 1,516,239 (up from 1,503,061 in 1999) of all lines, and the CLECs provided 2.4%, 37,992 residential lines (up from 4,871 in 1999) (see Figure 13).

CLEC's market share of local residential phone lines increased from 0.3% to 2.4% in 2000. This increase was driven by the introduction of new technology, a hybrid voice and cable TV network to the Portland metro market (Coaxial loop), which was not available in 1999 (copper wire based loop).

At today's prices for basic residential services competitors do not have an incentive to compete for residential customers currently served by the ILECs. In 2000, ILECs controlled 97.6% residential market shares (big-4 ILECs controlled 92.7%); 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 to wire an individual home than it does to wire tightly clustered office buildings.

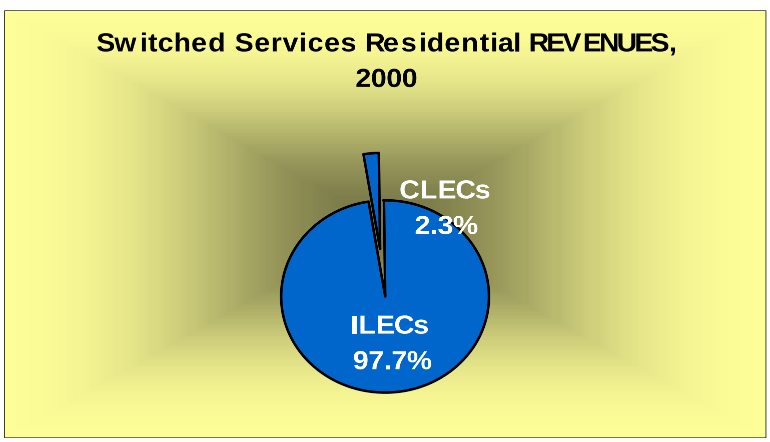
[7] The survey defined **"local exchange lines"** as "voice level transmission paths (64kbps digital or <4kHz analog) that link an end user location with the switching center that provides dial tone. For ISDN, each B channel was counted as one line. For Centrex, each station line was counted as one line."

Figure 13. Market Share of Residential Lines



(3) Residential revenues from local exchange switched services in Oregon in 2000 were an estimated $444 million annually[8], down from $476 million in 1999. Of the total, ILECs received $434 million (97.7%), down from $473 million in 1999; and CLECs the remaining $10 million (2.3%) up from $3 million in 1999 (see Figure 14).

Figure 14. Market Share of Residential Revenues



[8] Annual revenues are calculated as revenues reported for December 2000 times 12.

2. CLEC Provisioning

Twenty-seven of the 35 CLECs (77%) providing local switched services in December 2000 were ILEC-service-resellers. A CLEC reseller buys complete retail services from ILECs, and then resells those services under the CLEC's own name to consumers.

Table 8. Reselling Local Exchange Switched Services, CLECs

CLECs	Portland	Willamette	SW Interior	Coast	Central	East	# of CLECs
Resell ILEC's	51%	17%	9%	4%	10%	8%	27
Resell CLEC's	18%	47%	6%	21%	7%	1%	3

Twenty-seven CLECs provided local exchange switched service at least in part by reselling the exchange lines of incumbent carriers. Over 51% of resold service occurred in the Portland area. Only 3 CLECs provided service by reselling services of another CLEC, of which 47% of its service was in the Willamette area (Table 8).

Table 9. Type of Rates Resellers Paid for Switched Services

Pay Rate	Wholesale	Retail	Both
CLEC Resell ILEC	52%	19%	26%
CLEC Resell CLEC	33%	33%	33%

According to the survey, 52% of the CLECs paid wholesale prices to ILECs, 19% paid full retail prices to ILECs, and 26% paid both wholesale and retail prices (see Table 9).

3. Market Growth in Switched Services

CLEC annual retail revenue from the residential market (Table 10) increased in 2000 by 283% to $10.3 million from $2.7 million in 1999. ILEC residential revenue decreased 8.3%, dropping to $434 million from $473 million in 1999. ILEC's revenue decreased because of the Qwest revenue reduction (refund and credit to local customers' accounts) under the Docket UT 125. CLEC retail revenue from the business market increased 25.9% to $71 million from $56 million. Driving CLEC growth is business demand for additional telecommunications services. ILEC business revenue dropped 9.6% to $326 million from $360 million that was due to Qwest refund under UT 125. CLEC wholesale revenue from carriers increased to $4.6 million from $96,000. ILEC wholesale revenue decreased 48%, dropped to $25 million from $47 million in 1999.

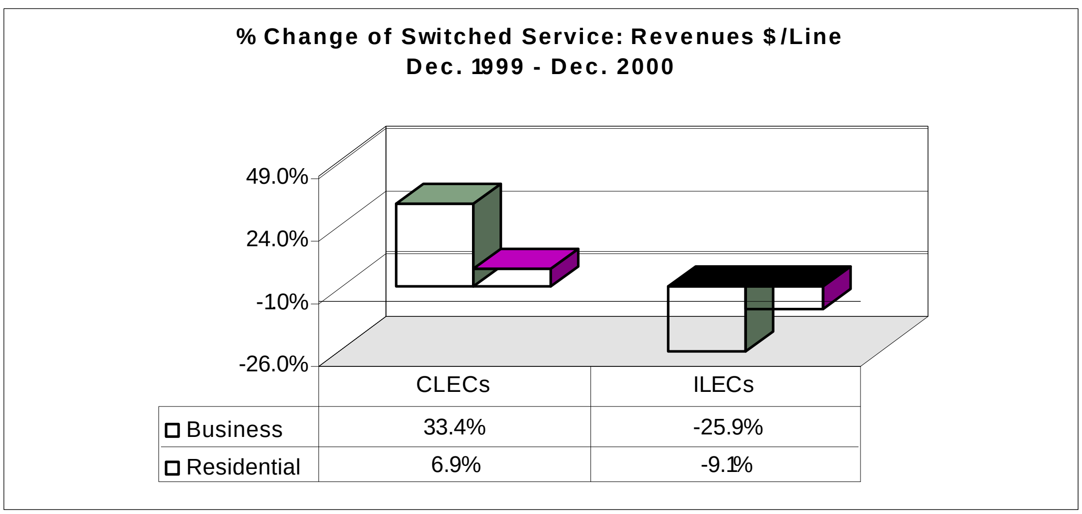
Table 10. Change in Revenue from Switched Services – 1999 to 2000

1999/00, % Growth	All LECs	CLECs	ILECs
Residential	-7%	283%	-8%
Business	-5%	26%	-10%
Carriers	-38%	4720%	-48%

Compared to December 1999, switched service business revenue per line in December 2000 was higher for CLECs and lower for ILECs. CLEC business revenue per line increased 33% to $54 from $40 in December 1999. ILEC business revenue per line dropped 26% to $41 from $55 in December 1999.

Compared to 1999, residential revenues per line per month for CLECs in December 2000 increased to $49 from $46 (increased by 7%). ILEC residential revenue per line decreased by 9%, decreasing to $24 from $26 in December 1999 (see Figure 15).

Figure 15. Revenue Per Line Changes of Switched Services



V. Private Line & Data Market - Market Size and Share Analysis

1. Market Size and Shares

Local exchange private lines are dedicated circuits that customers use to transmit information between two or more pre-selected locations within a telephone exchange. 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 of private line services made up 3.9% of total service revenues, and switched services provided the other 96.1%.

14 CLECs reported they provide local exchange private line services. These CLECs share of the retail market ranged from 2.6% to 5.0% (Table 11). 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 11. Private Line Services

2000	All LECs	CLECs	ILECs	CLECs Share
Customers	14,451	602	13,849	4.2%
Total Circuits	55,226	1,486	53,740	2.7%
Lower Capacity	45,809	1,191	44,618	2.6%
Higher Capacity	9,417	295	9,122	3.1%
Revenues Year - $000	$34,882	$1,729	$33,153	5.0%
Revenue$ / Circuit/Year	$632	$1,164	$617	

(1) The CLEC market share of private line customers[9] was 4.2% up from 3.0% in 1999. According to the survey, there were 14,451 local exchange private line retail customers.[10] The ILECs were providing service to 13,849 (95.8%) of the total.

[9] 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)."

[10] 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 circuits[11] was 2.7% (1,486). The CLEC market share of higher capacity circuits was 3.1% (295), while the market share for lower capacity circuits was 2.6% (1,191) (Table 11 and Figure 16).

Figure 16. Oregon Private Line Circuits - Lower Capacity

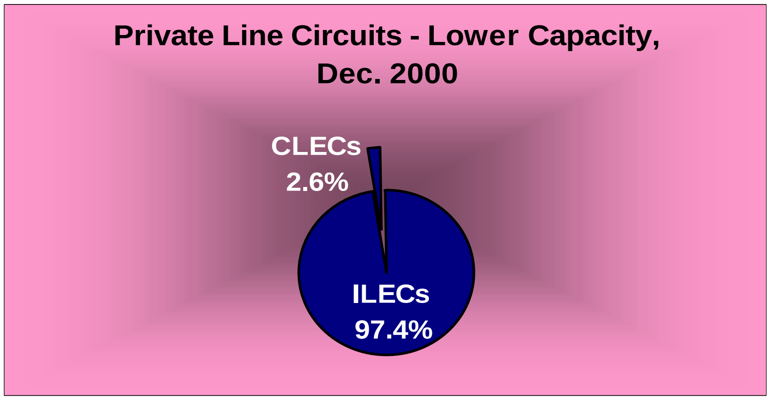
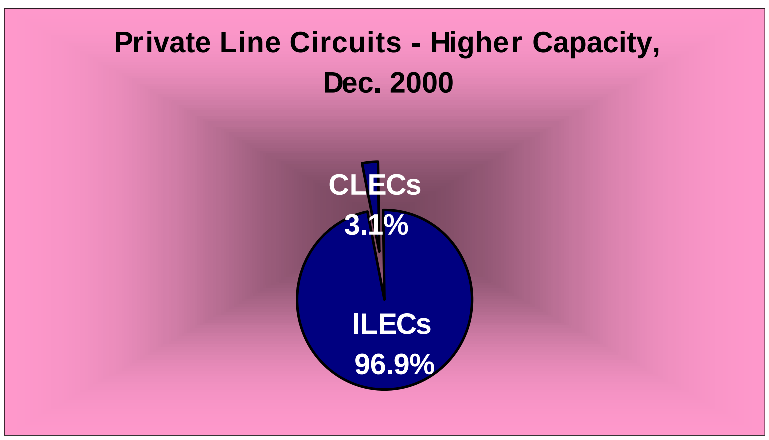


Figure 17. Oregon Private Line Circuits - Higher Capacity



Oregon LECs were providing 9,417 higher capacity local exchange private line circuits to retail customers. The ILECs supplied 9,122 (96.9%), while CLECs supplied the remaining 295 (3.1%), (See Figure 17).

According to the survey responses, Oregon LECs provided 55,226 local exchange private line circuits to retail customers in 2000. The ILECs supplied 97.3% (53,740) of the total, while the CLECs supplied the remaining 1,486 circuits (2.7%) (Figure 18).

[11] 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.

Figure 18. Oregon Private Line Circuits, All Capacities

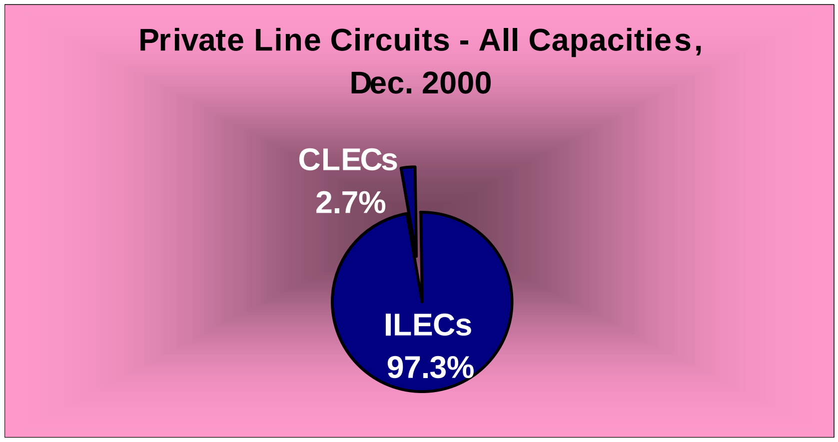
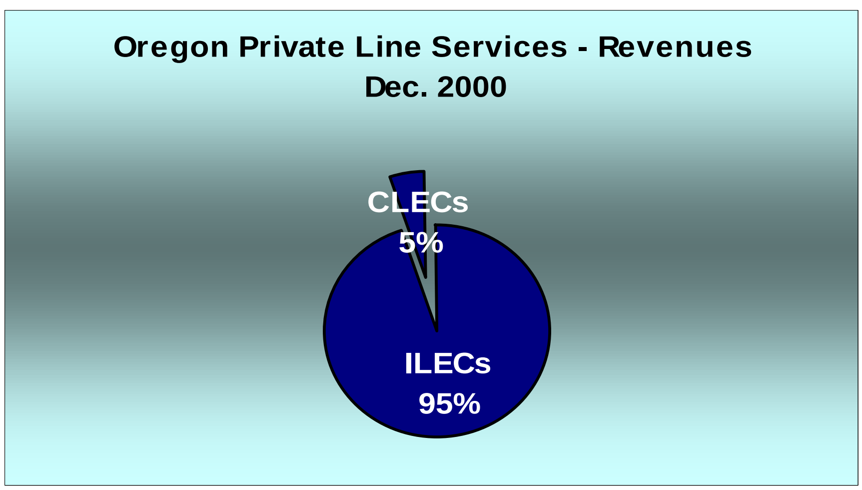


Table 12. Private Line Revenues, 2000

2000	Total	ILECs	CLECs
Shares	100.0%	95.0%	5.0%
$ Million/year	$34.9	$33.2	$1.7

Figure 19. Private Line Services - Revenues



(3) The CLEC market share of total private line revenues[12] was 5.0% (Table. 12). Retail revenues from local exchange private line services were an estimated $34.9 million annually[13]. As shown in Figure 19, of the total estimated annual revenues, ILECs received $33.2 million (95.0%), and CLECs the remaining $1.7 million (5.0%). The CLEC share of revenues was greater than the CLEC share of circuits and customers. CLECs have focused on higher capacity private line services. Higher capacity circuits also have higher prices. For the ILECs, annual revenue per circuit was $617. CLEC average annual revenue per circuit was $1,164.

2. CLEC Provisioning

Of the 1,486 CLECs local exchange private line circuits identified in the survey, 733 (49%) were supplied by five facilities-based carriers. 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.

Eight CLECs provided private line services by reselling ILEC services. Over 86% of the resale was to business customers. 45% of the circuits provided were in the S.W. Interior area. Only one CLEC provided private line service by reselling other CLEC services, 100% of this resale was to business customers, and 100% of this resale was in the Portland metropolitan area.

3. Market Growth in 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 today's 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 2000, market growth from 1999 was 10.7% as measured by revenue. If market growth is measured by number of circuits, the private line market increased by 21% compared with the year before.

[12] The survey defined private line **"revenues"** as the amount a firm billed in December 2000 for local exchange private line services, whether billed in advance or arrears. This included regulated and non-regulated, federal and state charges. Circuit terminations, transport, and add-on capabilities such as multiplexing, conditioning, and bridging. Exclude taxes that your firm billed to customers."

[13] Annual revenues are calculated as revenues reported for December 2000 times 12.

VI. Market Segments by Regions and Types

The survey identified six geographic regions. The regions are based on clusters of ILEC local exchange serving areas (figure 20). The regions are: (1) Portland Metropolitan,[14] (2) Willamette Valley,[15] (3) Southwest Interior,[16] (4) Coast,[17] (5) Central,[18] and (6) East.[19]

---

[14] **"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.

[15] **"Willamette Valley"** region consists of the following exchanges: Albany, Alsea, Amity, Aumsville/Turner, Bellfountain, Blodgett, Blue River, Brownsville, Clatskanie, Corvallis, Cottage Grove, Creswell, Dallas, Dayton, Deadwood, Detroit, Drain, Eugene/Springfield, Falls City, Gervais, Government Camp, Grand Island, Grand Ronde, Halsey, Harlan, Harrisburg, Horton, Independence/Monmouth, Jefferson, Junction City, Leaburg, Lebanon, Lobster Valley, Lowell, Lyons, Marcola, McMinnville, Mill City, Monitor, Monroe, Mt. Angel, Murphy/Provolt, Oakridge, Philomath, Ripplebrook, Salem, Scio, Shedd, Sheridan, Silverton, St. Helens, Rainier, St. Paul, Stayton, Summit, Sweet Home, Triangle Lake, Veneta, Willamina.

[16] **"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.

[17] **"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, Yachats.

[18] **"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.

[19] **"East"** region consists of the following exchanges: Adrian, Athena/Weston, Baker, Bates, Boardman, Burns, Cove, Dayville, Durkee, Echo, Elgin, Enterprise, Flora/Troy, Haines, Halfway, Harney, Helix, Heppner, Hereford/Unity, Hermiston, Huntington, Imbler, Ione, John Day, Jordan Valley, Joseph, La Grande, Lexington, Long Creek, Lostine, Meacham, Medical Springs, Milton-Freewater, Monument, Mt. Vernon, North Powder, Nyssa, Ontario, Oregon Slope, Pendleton, Pilot Rock, Prairie City, Richland, Ridgeview, Seneca, Spray, Stanfield, Starkey, Sumpter, Ukiah, Umatilla, Union, Vale, Walla Walla (Stateline), Wallowa.

Figure 20. Local Exchange Carriers Market Segments and Shares

MARKET SEGMENT ANALYSIS
All LECs

2000
$904,573,816 Year
$75,381,151 Month

Total Service Revenue ($), 2000

Private Line & Data Services
$34,882,248
3.86%
Private Line Circuits 55,226

Switched Services
$869,691,568
96.14%
Switched Lines 2,411,172

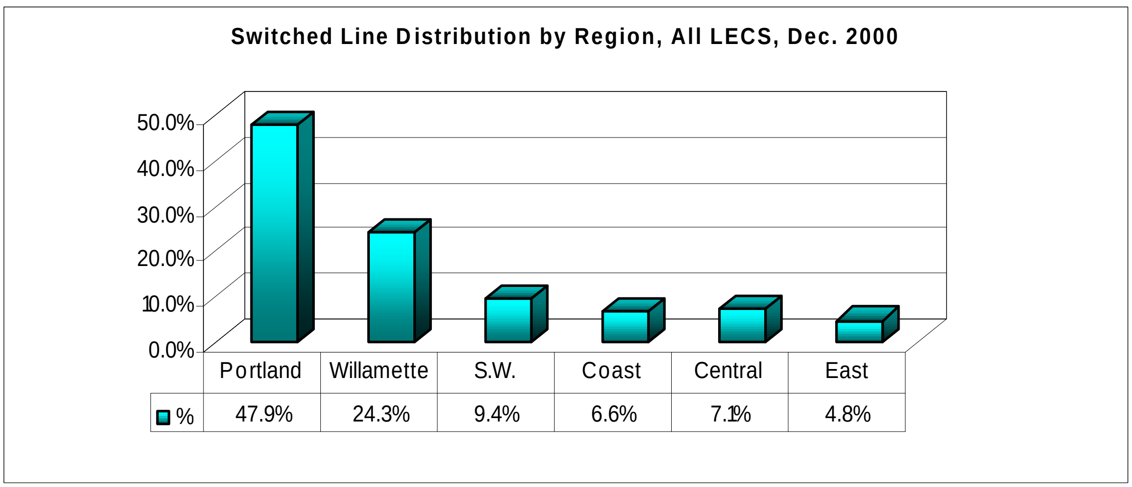
	Lower Capacity		Higher		Total Circuits		Residential		Business		Carriers		(Total)	
	45,809		9,417		55,226		1,554,231		773,763		83,178		2,411,172	
	82.9%		17.1%		100.0%		64.5%		32.1%		3.4%		100.0%	
	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs
Portland	42.4%	0.6%	70.2%	0.2%	47.2%	0.5%	45.4%	2.2%	53.0%	8.7%	46.0%	0.0%	47.9%	4.2%
Willamette	24.0%	0.3%	19.1%	0.1%	23.1%	0.3%	25.6%	0.1%	21.7%	2.5%	22.8%	0.0%	24.3%	0.8%
S.W.	10.3%	1.1%	4.0%	2.0%	9.2%	1.2%	9.6%	0.1%	8.2%	1.1%	15.0%	7.0%	9.4%	0.6%
Coast	10.7%	0.0%	2.7%	0.1%	9.3%	0.0%	7.1%	0.1%	5.7%	0.4%	4.8%	0.0%	6.6%	0.2%
Central	7.0%	0.4%	2.1%	0.4%	6.1%	0.4%	7.1%	0.0%	7.3%	1.1%	6.3%	0.0%	7.1%	0.4%
East	5.6%	0.2%	2.0%	0.3%	5.0%	0.2%	5.1%	0.1%	4.1%	0.4%	5.1%	0.0%	4.8%	0.2%
Total	100.0%	2.6%	100.0%	3.1%	100.0%	2.7%	100.0%	2.4%	100.0%	14.2%	100.0%	7.0%	100.0%	6.4%

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.[20] According to the responses, the largest regional market as of December 2000 was the Portland Metropolitan Region. It accounted for 47.8% (Figure 21) of all retail local exchange switched lines in the state. Second was the Willamette Valley Region, with 24.3% of lines. The other four regions accounted for less than a third of the state's lines: Southwest Interior (9.4%), Coast (7.1%), Central (6.6%), and East (4.8%).

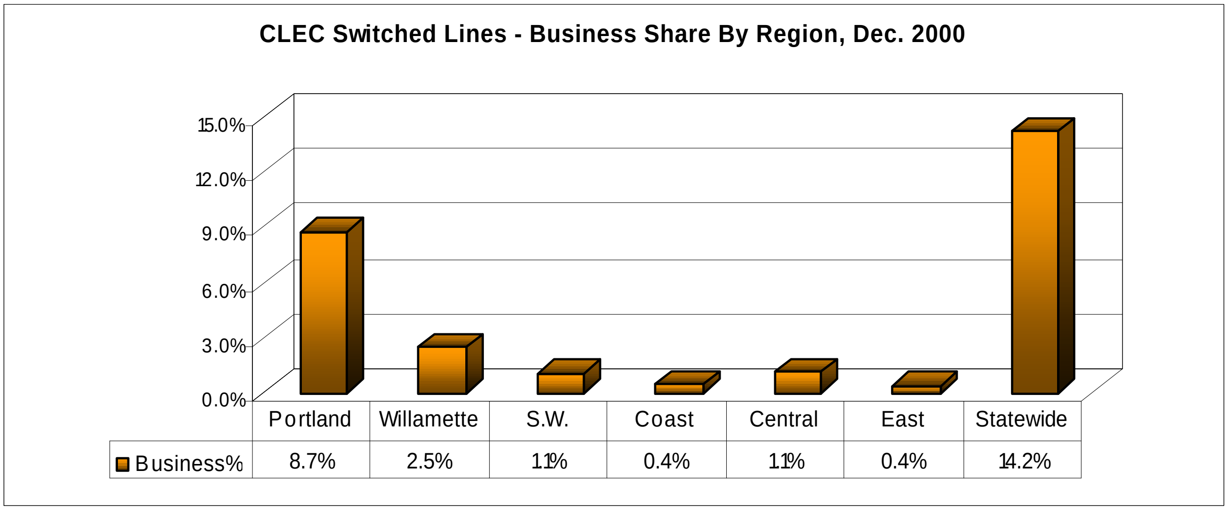
Figure 21. Oregon Switched Lines by Region



Survey responses indicate that CLECs were providing competitive local switched services in all six regions of the state. Competitive entry was highest in the Portland Metropolitan Region, with the Willamette Region a close second. Statewide, CLECs had a 6.4% share of switched local exchange lines. Nearly 70% of the CLECs lines are in the Portland Metropolitan Region, followed by the Willamette Valley with 12%, then the Southwest Interior (8%), Central (6%), Coast (2%) and East (2%).

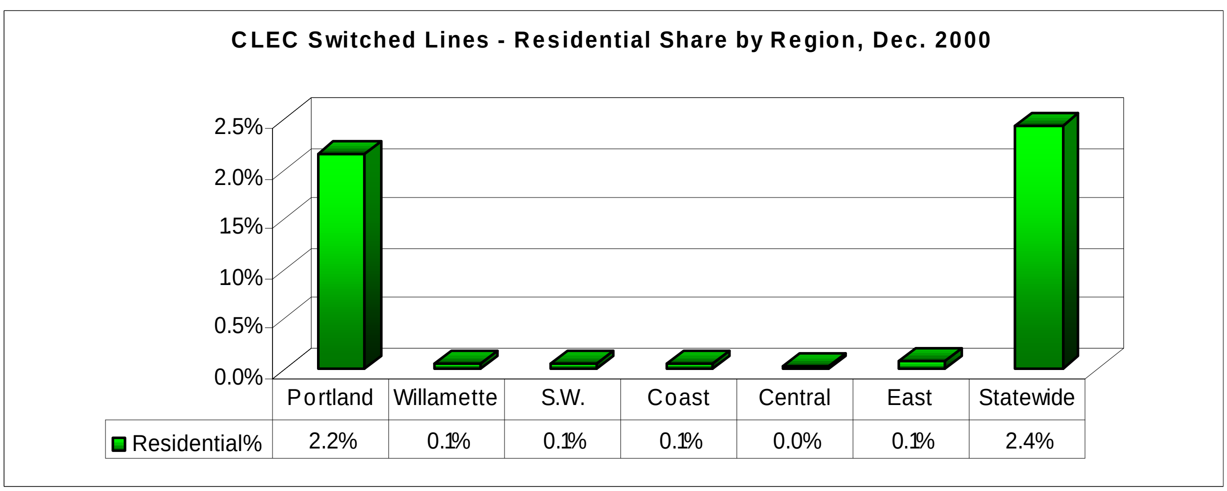
[20] The survey also asked each LEC to report how many local private line circuits it was supplying to customers in each region during December 2000. Some LECs did not provide useable responses to this question. As a result, it is not possible to conduct a reliable analysis of regional differences for local private line services. Staff is attempting to obtain better information.

Figure 22. CLEC Switched Lines – Business Service by Region



When business lines are considered separately, the highest CLEC market share was, once again, in the Portland Metropolitan Region (8.7%). The Willamette Valley was next at 2.5% (Figure 22), followed by the Central Region (1.1%), Southwest Interior (1.1%), Coast (0.5%) and East (0.4%). CLECs have a 14% share of business lines in the State.

Figure 23. CLEC Switched Lines – Residential Service by Region

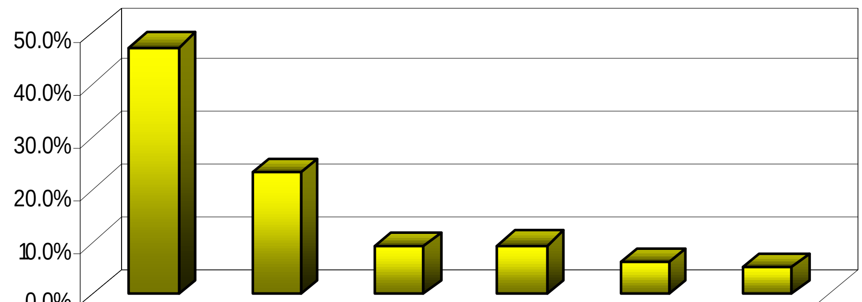


Statewide, the CLEC share of RESIDENTIAL lines was 2.4% up from 0.3% in 1999. By region, about 90% of the CLEC residential lines are in the Portland Metropolitan Region (Figure 23). In 2000, a new technology introduced a hybrid voice and cable TV network to the market (Coaxial loop), which was not available in 1999 (copper wire based on loop).

B. Private Line Services by Region

The survey asked each LEC to report how many local exchange private line circuits were supplied to customers in each region during December 2000. The Portland Metropolitan Region was the largest regional private line market, with 47% (Figure 24) of all retail local exchange private line circuits in the state. The second largest was the Willamette Valley, with 23% of circuits. The other four regions together accounted for about 30% of the state's circuits: Coast (9%), Southwest Interior (9%), Central (6%), and East (5%).

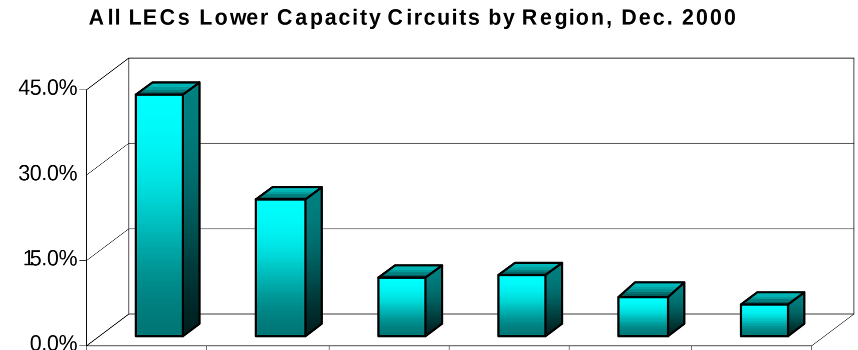
Figure 24. Oregon Private Line Service by Region, Dec. 2000



	Portland	Willamette	S.W.	Coast	Central	East
All LECs	47.2%	23.1%	9.2%	9.3%	6.1%	5.0%

Lower Capacity Circuits. Of the state's 55,226 local exchange private line circuits, most (83%) were in the lower capacity category. The Portland Metropolitan Region was the largest market for lower capacity circuits, with 42% (Figure 25) of the lower capacity circuits in the state. The second largest market was the Willamette Valley, with 24% of lower capacity circuits, followed by Coast (11%), Southwest Interior (10%), Central (7%), and East (6%).

Figure 25. Oregon Lower Capacity Circuits by Regions, Dec. 2000

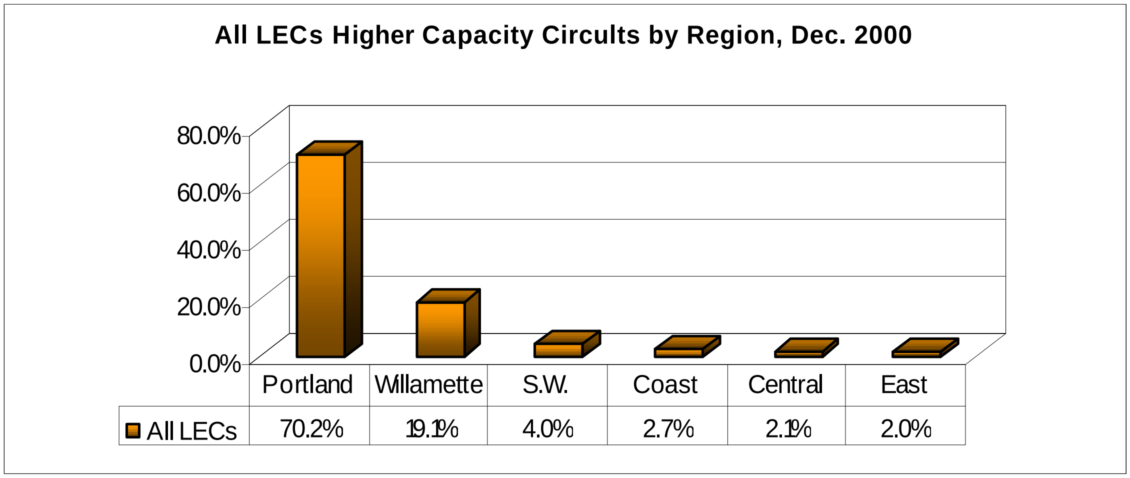


	Portland	Willamette	S.W.	Coast	Central	East
All LECs	42.4%	24.0%	10.3%	10.7%	7.0%	5.6%

The CLEC share of lower capacity circuits was very low statewide, at only 2.6%. Nearly 40% of the CLEC lower capacity circuits are in the Southwest Interior Region.

Higher Capacity Circuits. Higher capacity circuits accounted for 17% of the state's total local exchange private line circuits. In December 2000, the market for higher capacity circuits was concentrated in the Portland Metropolitan Region. It had 70% (Figure 26) of all higher capacity circuits. The second largest regional market was the Willamette Valley, with 19%, followed by Southwest Interior (4%), Coast (3%), Central (2%), and East (2%).

Figure 26. Oregon Higher Capacity Circuits by Regions, Dec. 2000



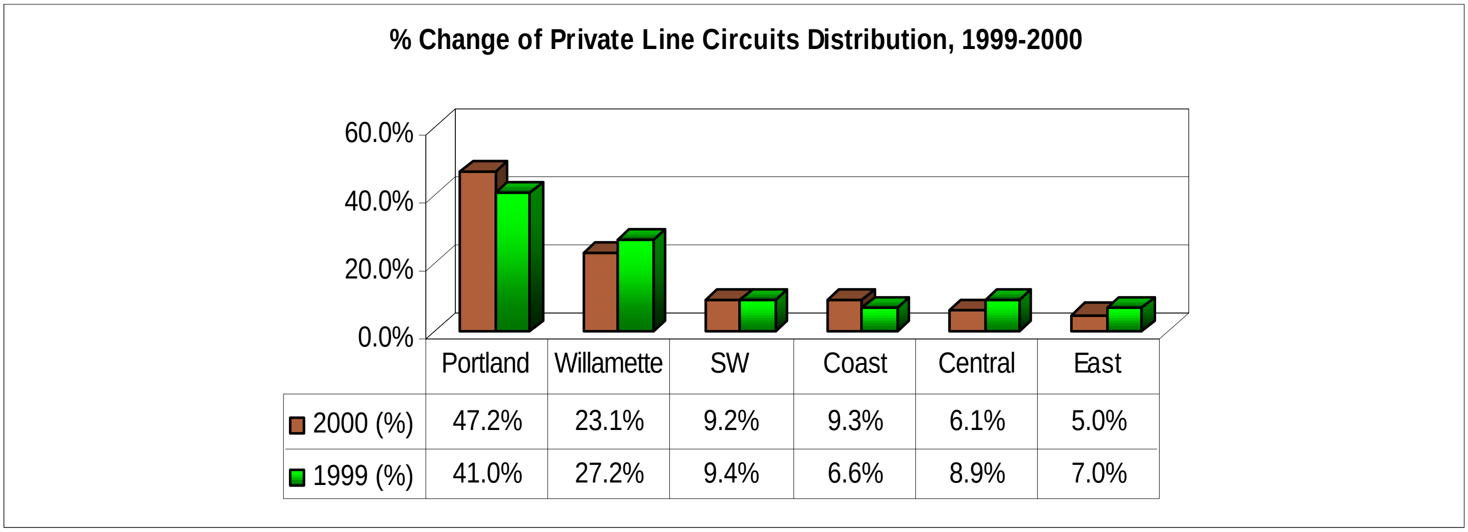
The CLEC share of higher capacity circuits was 3.1% statewide. Again the Southwest Interior Region has the largest portion of the total CLEC share at about 60%.

Compared to 1999, the share of all private lines in the Portland region increased 6.2%, decreased 4% in Willamette Valley (Table 13 and Figure 27).

Table 13. % Change of Private Line Circuits Distribution, 1999 - 2000

CIRCUITS	# in 2000	% in 2000	# in 1999	% in 1999	% Change in 2000
Portland	275	47.2%	18,361	41.0%	6.2%
Willamette	159	23.1%	12,178	27.2%	-4.0%
SW	675	9.2%	4,194	9.4%	-0.1%
Coast	19	9.3%	2,962	6.6%	2.7%
Central	239	6.1%	3,984	8.9%	-2.7%
East	119	5.0%	3,135	7.0%	-2.0%

Figure 27. % Change of Private Line Distribution, 1999 - 2000



	Portland	Willamette	SW	Coast	Central	East
2000 (%)	47.2%	23.1%	9.2%	9.3%	6.1%	5.0%
1999 (%)	41.0%	27.2%	9.4%	6.6%	8.9%	7.0%

2. Market Segments by Types

A. Switched Services

The survey grouped customers into three segments: Business, residential, and carrier and others. Figure 28 shows that 51% of switched service revenues were from residential services, 46% were from business, and 3% were from carrier and others.

Figure 28. Oregon Switched Service Revenues by Types

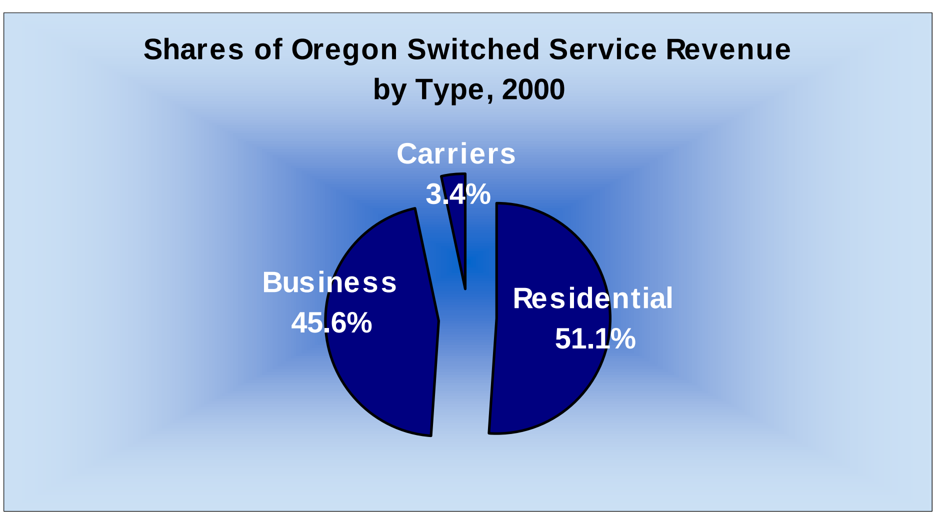
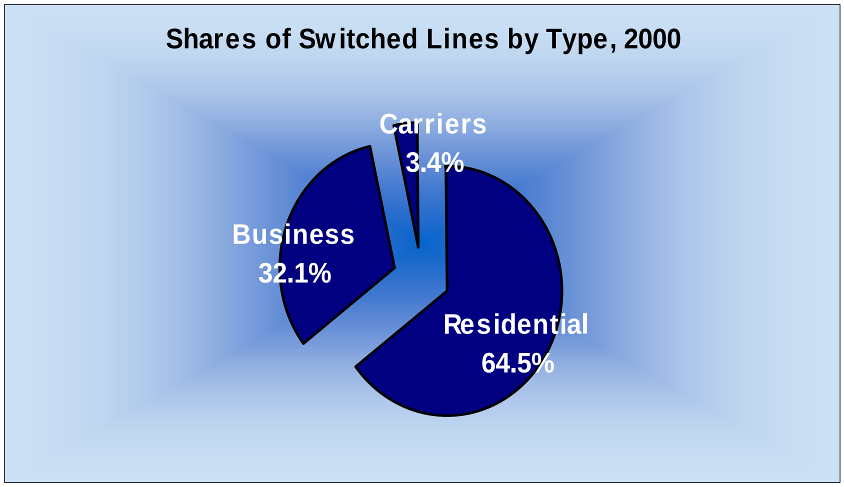


Figure 29 shows that 65% of switched service lines were for residential service, 32% were business lines, and 3% were carrier and other lines.

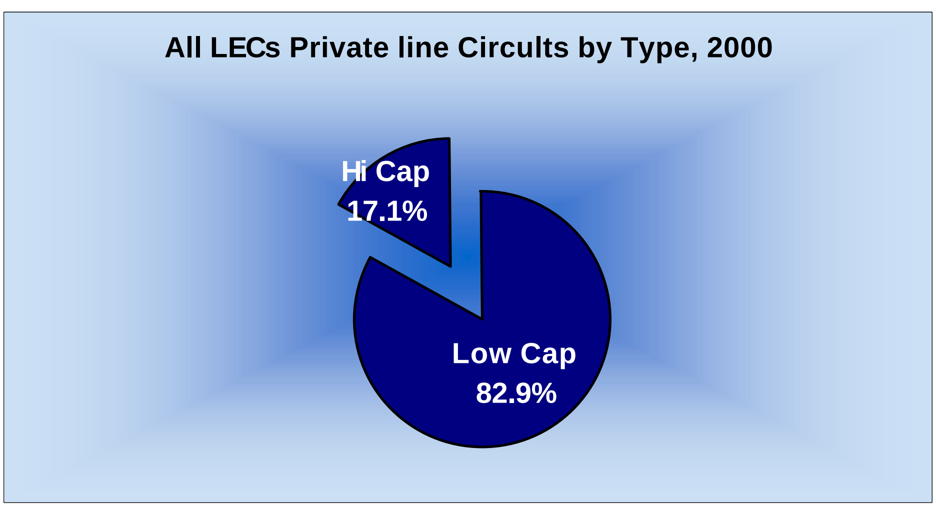
Figure 29. Oregon Switched Service Lines by Types



B. Private Lines

Figure 30 shows that 83% of private line circuits were lower capacity, and that 17% were higher capacity.

Figure 30. Oregon Private Line Circuits by Types.



VII. Conclusion

Oregon local telecommunications market is a $905 million industry, comprised of 2,411,172 switched lines and 55,266 private line circuits. In 2000, industry wide revenues decreased; down $71 million from $976 million in 1999. ILEC's revenue decreased mainly because of the revenue reduction under the Docket UT 125, Qwest refund and credit to local customers' accounts. For switched lines, while revenues decreased by 7.3%, the estimated number of lines served increased 9.6%. For private lines, circuits served increased 23%, and revenue increased by 11%.

The local telecom markets remain mostly as monopolies, with competitors accounting for just 6.4% of all local exchange switched phone lines. CLEC's share of exchange lines for the residential category was 2.4% in 2000; there does not appear to be sufficient incentives for CLECs to compete with ILECs on a broad scale in local residential market. In 2000, CLEC's share increased from 0.3%, driven by a coaxial loop technology introduced which combined voice and cable TV.

High-speed digital access is still a dream for most Oregonians: about 4.8% of Oregon consumers (residential and business) have any type of speedy Internet hookup. This is comparable to the nationwide penetration of less than 5% in late 2000. Oregon's 4.8% market share (measured by revenue) for speedy Internet services consist of 3.86% private line services (including DSL- Digital Subscriber Line) and 0.96% cable TV network in switched services. The market share of high-speed digital access is low because of its availability in Oregon.

By December 2000, CLECs provided 6.4% of switched local exchange telephone lines (Figure 31), which produced 9.9% (up from 6.3% in 1999) of total revenues (Figure 32) for switched service. CLECs provided 2.7% of the local exchange private line circuits (Figure 33), which produced 5.0% of total revenues (Figure 34) in private line services.

Figure 31. Market Shares of SWITCHED Service: Lines

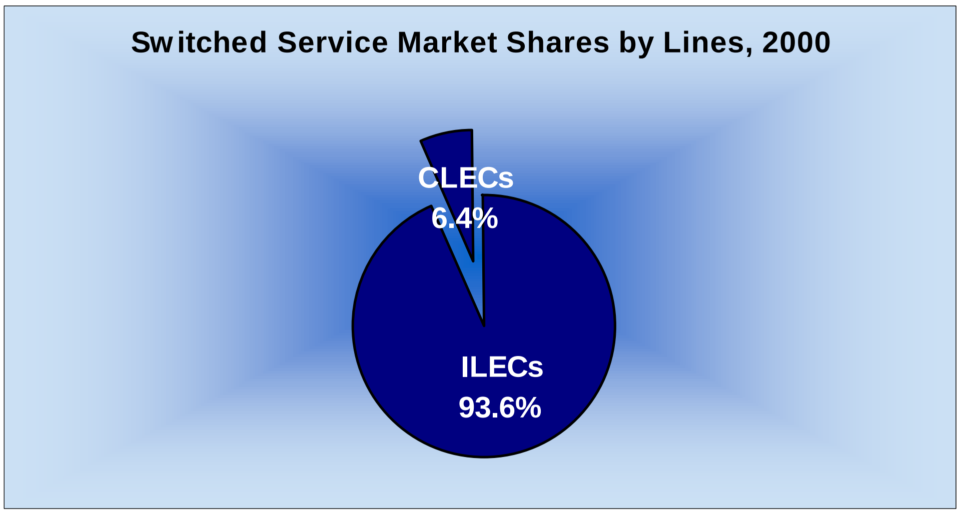


Figure 32. Market Shares of SWITCHED Service: Revenues

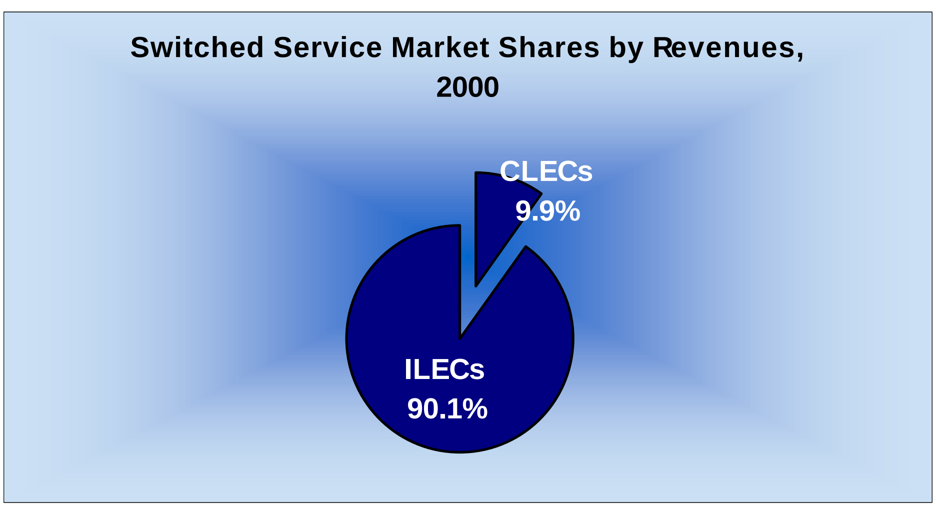


Figure 33. Market Shares of PRIVATE LINE Service: Circuits

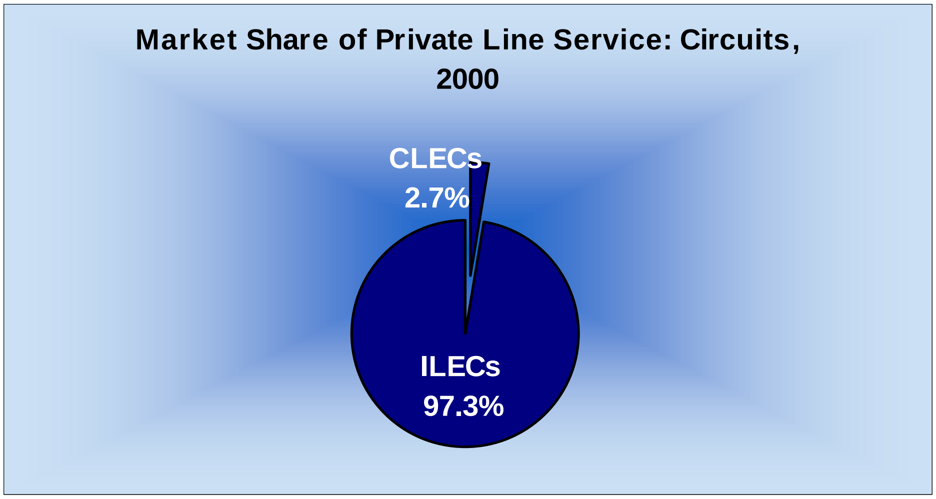
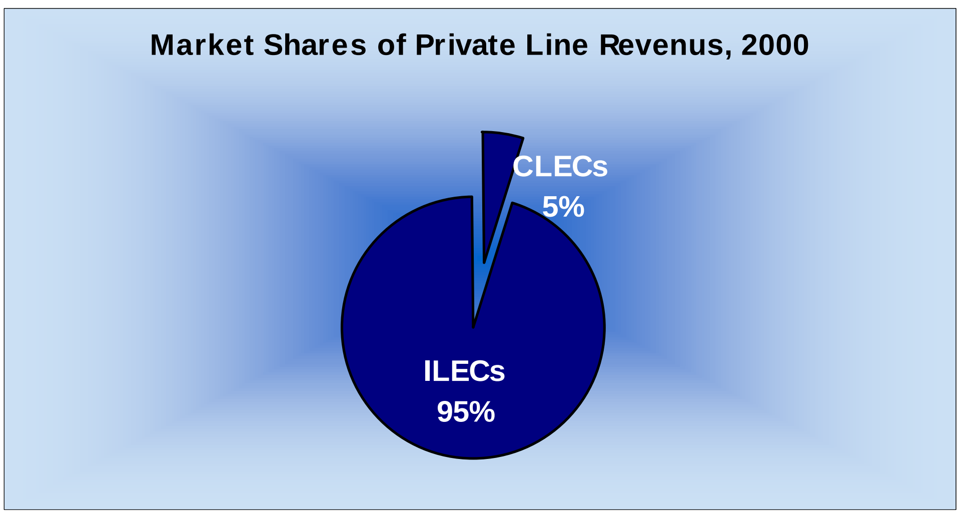


Figure 34. Market Shares of PRIVATE LINE Service: Revenues



While the CLECs had a small percentage of the overall market, they had achieved a significant presence in specific market segments. CLECs were providing a 14.2% of switched business lines. The predominant form of CLEC competitive entry was resale. The largest regional market as of December 2000 was the Portland Metropolitan Region.

MARKET SEGMENT ANALYSIS **2000**
All LECs **$904,573,816** Year
$75,381,151 Month
Total Service Revenue ($), 2000

	Private Line & Data Services	Switched Services
Revenue	$34,882,248	$869,691,568
Share	3.86%	96.14%
Count	Private Line Circuits # 55,226	Switched Lines ; 2,411,172

	Lower Capacity		Higher		Total Circuits		Residential		Business		Carriers		(Total)	
	45,809		9,417		55,226		1,554,231		773,763		83,178		2,411,172	
	82.9%		17.1%		100.0%		64.5%		32.1%		3.4%		100.0%	
	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs	All LECs	CLECs
Portland	42.4%	0.6%	70.2%	0.2%	47.2%	0.5%	45.4%	2.2%	53.0%	8.7%	46.0%	0.0%	47.9%	4.2%
Willamette	24.0%	0.3%	19.1%	0.1%	23.1%	0.3%	25.6%	0.1%	21.7%	2.5%	22.8%	0.0%	24.3%	0.8%
S.W.	10.3%	1.1%	4.0%	2.0%	9.2%	1.2%	9.6%	0.1%	8.2%	1.1%	15.0%	7.0%	9.4%	0.6%
Coast	10.7%	0.0%	2.7%	0.1%	9.3%	0.0%	7.1%	0.1%	5.7%	0.4%	4.8%	0.0%	6.6%	0.2%
Central	7.0%	0.4%	2.1%	0.4%	6.1%	0.4%	7.1%	0.0%	7.3%	1.1%	6.3%	0.0%	7.1%	0.4%
East	5.6%	0.2%	2.0%	0.3%	5.0%	0.2%	5.1%	0.1%	4.1%	0.4%	5.1%	0.0%	4.8%	0.2%
Total	100.0%	2.6%	100.0%	3.1%	100.0%	2.7%	100.0%	2.4%	100.0%	14.2%	100.0%	7.0%	100.0%	6.4%

For switched services CLEC revenue from the Business market increased 20.1% from 1999 to 2000, from $56.2 to $70.9 million. CLECs have been actively pursuing business customers. ILEC business revenue continued to drop in 2000, by 9.6%, after a drop of 9.9% in 1999.

In Private Line Services, State all Local Exchange Carrier's revenue stayed about the same in 2000 at $35 million.