Exhibit No:

Issues:	Separations/Jurisdiction
Witness:	Paul L. Cooper
Type of Exhibit:	Rebuttal Testimony
Sponsoring Party:	Southwestern Bell Telephone Company
Case No:	TC-2000-225, et al.

SOUTHWESTERN BELL TELEPHONE COMPANY

CASE NO. TC-2000-225 et al.

Rebuttal Testimony
Of

Paul L. Cooper

St. Louis, Missouri
May, 2000

FILED[3]

MAY 3 1 2000

Missouri Public
Service Commission

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

MCI WorldCom Communication, Inc. et. al., Complainants,	)	
vs.	)	Case No. TC-2000-225, et. al.
Southwestern Bell Telephone Company, Respondent.	)	

AFFIDAVIT OF PAUL L. COOPER

STATE OF MISSOURI	)	
	)	SS
CITY OF ST. LOUIS	)	

I, Paul L. Cooper, of lawful age, being duly sworn, depose and state:

1. My name is Paul L. Cooper. I am presently Executive Director – Settlements/Separations for SBC Telecommunications, Inc.

2. Attached hereto and made part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Paul L. Cooper

Subscribed and sworn to before me on this 25th day of May 2000.

Notary Public

NOTARY PUBLIC NOTARY KEVIN K SELSOR SEAL STATE OF MISSOURI

KEVIN K. SELSOR
NOTARY PUBLIC STATE OF MISSOURI
ST. LOUIS COUNTY
MY COMMISSION EXP. JULY 6, 2000

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Paul L. Cooper and my business address is One Bell Center, St. Louis, Missouri 63101.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by SBC Telecommunications, Inc., as Executive Director-Settlements/Separations.

Q. WHAT ARE YOUR RESPONSIBILITIES IN THIS POSITION?

A. I am responsible for:

1) Directing SBC studies and policy for jurisdictional cost separations, access costs and interconnection and compensation with other incumbent local exchange carriers ("ILECs");

2) Directing the development and implementation of methods, which support those functions.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I earned a Bachelor of Science Degree in Physics from Ottawa University in Ottawa, Kansas in 1969. I earned a Masters Degree in Business from Pace University in New York in 1982, which included courses in economics, accounting, finance and statistics.

Q PLEASE OUTLINE YOUR WORK EXPERIENCE.

A. I was employed by Southwestern Bell Telephone Company ("SWBT") in June 1969, where I worked for nine years in the Engineering department. My assignments included PBX, transmission, special service and circuit equipment engineering. In 1974, I assumed responsibility for review and analysis of toll cost studies and settlements with

independent telephone companies. I was also responsible for preparation and analysis of division of revenue studies and interstate toll separations with the Bell System Companies. In 1978, I transferred to the American Telephone and Telegraph Company ("AT&T") in New York as District Manager-Separations Planning. I was extensively involved in separations planning, including responsibility for evaluating and analyzing proposed separations changes and developing AT&T's separations positions. Specifically, I was involved in FCC Dockets CC 78-196 Uniform System of Accounts Rewrite, CC 80-286 Joint Board, CC 21263 Alaska-Hawaii Rate Integration and CC 78-72 Access Charges. In July 1982, I transferred to Southwestern Bell as District Staff Manager-Separations. I was responsible for separations and access cost planning for the Southwestern Bell five-state area. I was appointed Division Manager-Separations in September of 1987 and Division Manager-Separations and Settlements in early 1991. I am now, as Executive Director-Settlements/Separations, responsible for the overall direction and control of SBC activities for jurisdictional separations, interstate access costs and settlements with LECs.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY AND/OR APPEARED AS A WITNESS BEFORE ANY COMMISSION?

A. Yes. I have testified regarding the jurisdictional nature of Internet Service Provider ("ISP") Internet usage and reciprocal compensation in the following proceedings:

- Arkansas	-	Docket No. 98-167-C
- Missouri	-	Case No. T0-98-278 (Birch Telecom Arbitration)
- Nevada	-	Docket No. 98-10015
- Oklahoma	-	Cause No. PUD-970000548
- Texas	-	Docket Nos. 17922 and 18082; Docket No. 21982

I have also testified in numerous other dockets in Arkansas, Kansas, Missouri, Oklahoma and Texas regarding issues that dealt with settlements, arbitration, and separations.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. To address incorrect assertions made by Mr. Ashby and Ms. Senft, testifying on behalf of Primary Network Communications (PNC) and Mr. Aronson, Mr. Cadieux and Mr. Price testifying on behalf of Brooks Fiber (Brooks) and MCI Worldcom. In their effort to support their conclusion that ISP Internet-bound traffic is local and thus subject to local reciprocal compensation, Mr. Ashby, Mr. Cadieux and Mr. Price claim that ISPs are end users and that ISP Internet-bound traffic terminates at the ISP. Mr. Ashby and Mr. Price further claim that SWBT has always treated this traffic as local and therefore local reciprocal compensation is appropriate. These claims are incorrect. ISPs are not end users and ISP Internet-bound traffic does not terminate at an ISP but at a point on or beyond the Internet. Consequently, ISP Internet-bound usage is interstate, not local, and is not subject to local reciprocal compensation. At odds with Mr. Ashby's and Mr. Price's assertions, SWBT has treated this usage as interstate usage in accordance with Federal Communication Commission ("FCC") Orders. I will also address the claims of these witnesses that ISP Internet-bound usage has not been segregated from local traffic by SWBT (Mr. Ashby) or that it cannot be accurately segregated (Mr. Aronson and Ms. Senft). These claims are wrong. There are a number of methods that can be used to accurately measure and segregate ISP Internet-bound traffic from local traffic. SWBT now utilizes one of these methods and is accurately segregating this traffic.

ISP INTERNET-BOUND TRAFFIC IS INTERSTATE AND IS TREATED AS INTERSTATE, NOT LOCAL, BY SWBT

Q. WHAT TYPE OF TRAFFIC IS SUBJECT TO RECIPROCAL COMPENSATION UNDER THE TELECOMMUNICATIONS ACT OF 1996 (THE ACT)?

A. As discussed in more detail in the rebuttal testimony of SWBT witness Bert Halprin, under the Act, and the FCC's orders implementing the Act, only local traffic is subject to reciprocal compensation.

Q. HAS THE FCC ALREADY DETERMINED WHETHER ISP INTERNET-BOUND USAGE IS INTERSTATE OR SUBSTANTIALLY INTERSTATE?

A. Yes, it has. In a series of cases extending back to 1983[1], the FCC has consistently determined that enhanced service provider traffic, including ISP Internet-bound traffic, is interstate and ISPs are users of exchange access, not local telecommunications service. The FCC has not wavered from this position in its recent decisions on this subject.[2]

[1] FCC Docket No. 78-72, Phase 1, Memorandum Opinion and Order, released August 22, 1983; FCC Docket No. 86-1, Second Report and Order, released August 26, 1986; FCC Docket No. 87-215, Notice of Proposed Rulemaking, released July 17, 1987; FCC Docket No. 87-215, Order, released April 27, 1988; FCC Docket No. 89-79, Notice of Proposed Rulemaking, released May 9, 1989; FCC Docket Nos. 89-79 and 87-313, Report and Order, released July 11, 1991; FCC Docket Nos. 96-262, 94-1, 91-213, 96-263, Notice of Proposed Rulemaking, released December 24, 1996; FCC Docket Nos. 96-262, 94-1, 91-213, 95-72, First Report and Order, released May 16, 1997.

[2] On February 26, 1999, the FCC issued a Declaratory Ruling in which it declared that ISP Internet-bound traffic is non-local interstate traffic. Subsequently, on March 24, 2000, the D.C. Circuit Court of Appeals vacated and remanded the FCC's Declaratory Ruling. However, the decision permits the FCC to reach the same conclusion on remand. The FCC concluded that ISP Internet -bound traffic is interstate on an end to end basis. The D.C. Circuit reached no substantive conclusion either as to whether end-to-end analysis is appropriate in this context or as to whether ISP traffic terminates at an ISP's premises. Rather, the D.C. Circuit held only that the FCC had not adequately explained its conclusion and thus that the matter should be remanded so that the agency could provide a "satisfactory explanation". The FCC has indicated already informally that it believes that it can provide the requested clarification and still reach the same conclusion it has previously. See Schedule 1, excerpt from the Telecommunications Reports, March 27, 2000, (stating that the Chief of the FCC's Common Carrier Bureau, Lawrence E. Strickling, "...remained convinced that calls to ISPs should be considered interstate calls..." and that "...we need to better articulate our position.").

Q. WHAT CONCLUSION MAY BE DRAWN FROM THE FCC'S CASES EXTENDING BACK TO 1983?

A. Only one conclusion can be drawn -- ISP Internet–bound usage is interstate access usage, not local usage and thus, as SWBT witness Bert Halprin points out, local reciprocal compensation does not apply. Compensation for CLECs and ILECs carrying this usage on behalf of ISPs has been established by the FCC in its Orders dealing with the ESP or ISP access charge exemption.

Q. MR. ASHBY AND MR. PRICE BRIEFLY DISCUSS INTERCARRIER-COMPENSATION, RESPECTIVELY ON PAGES 4 TO 5 AND PAGE 7, OF THEIR TESTIMONIES. DO THEY ACCURATELY DESCRIBE THE REGULATORY FRAMEWORK FOR INTERCARRIER COMPENSATION?

A. No. These witnesses suggest that SWBT owes the complainants in this case reciprocal compensation for ISP Internet-bound traffic simply because an end user on SWBT's network originates a call to the Internet, that is transported to a CLEC and then carried to an ISP by the complainants.[3]

These witnesses would have the Commission believe that the only requirement for compensation from a carrier such as SWBT is that a call is originated by an end user on SWBT's network. This is simply not correct. These statements show a fundamental lack

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Moreover, the FCC has *already* addressed one of the primary concerns expressed in the D.C. Circuit opinion. The D.C. Circuit concluded that the FCC had not sufficiently explained *in the order under review* why Internet service constituted (interstate) "exchange access" and not (local) "telephone exchange service." But the FCC has explained in detail in a separate order that calls to ISPs of the sort at issue here constitute interstate "exchange access" not "telephone exchange service." Order on Remand, *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 98-147, 98-11, 98-26, 98-32, 98-78 and 98-91, released December 23, 1999, ¶ 43.

[3] Testimony of S. Blake Ashby in Case No. TC-2000-225 et al., dated May 1, 2000, page 3, lines 1 to 2; page 11, lines 11 to 18. Testimony of Edward J. Cadieux in Case No. TC-2000-225 et al., dated May 1, 2000, page 4, lines 5 to 8 and 14 to 17. Testimony of Don Price in Case No. TC-2000-225 et al., dated May 1, 2000, page 5, lines 11 to 14.

of understanding about the compensation framework for the use of another carrier's network and who should have the responsibility to pay.

Q. WHAT IS THE BASIS FOR DETERMINING IF COMPENSATION IS OWED IN THE TELECOMMUNICATIONS INDUSTRY?

A. Compensation is owed by a carrier if:

1. The carrier (retail service provider) sells a retail service to a customer or end user and has the revenue from the end user for the service and,
2. The end user originates a call using the service purchased from the retail service provider, and uses the network facilities of other interconnected carriers to originate and/or transport and/or terminate the call.

In other words, in order to owe compensation, a carrier must do more than just have an end user on its network that originates calls that use the network facilities of another carrier to transport and/or terminate the calls. The carrier that owes the compensation for the calls placed by the end user is the carrier (retail service provider) that sells the service to the end user that causes the end user to place the calls.

Q. THIS GENERAL COMPENSATION METHOD APPLIES THEN, TO ALL CARRIERS (CLECS, ILECS, IXCS) IN THE TELECOMMUNICATIONS INDUSTRY?

A. Yes, it applies to them all and determines which of these carriers is responsible for paying compensation.

For CLECs and ILECs, this compensation or settlement is generally termed reciprocal compensation because each sell retail services to their end users, who then may utilize

these services to complete a call using the network facilities (transport and/or termination) of another carrier or carriers.

For example, ILEC(A) or CLEC(A), who sells a retail service to an end user on its network, must compensate ILEC(B) or CLEC(B), whose facilities are used to transport and/or terminate the end users call generated by that service. In return or reciprocally, the retail services ILEC(B) or CLEC(B) sells to end users on its network may generate calls using these services to ILEC(A) or CLEC(A). ILEC(B) or CLEC(B) then owes compensation to ILEC(A) or CLEC(A) for the use of their facilities to transport and/or terminate calls generated by these services.

An ILEC's or CLEC's responsibility to pay compensation is determined by whether or not the ILEC or CLEC is the customer's retail service provider for the service which uses the facilities of other ILECs or CLECs to transport and/or terminate calls.

Q. WHEN ARE LECS NOT RESPONSIBLE FOR PAYING COMPENSATION FOR A CALL WHICH AN END USER ORIGINATES ON THEIR NETWORK?

A. If they do not sell the retail service to the end user (even when the end user originates calls on their network), LECs are not responsible for paying compensation to other carriers for the transport and/or termination of the end users' calls utilizing this service.

An example is when the retail service is sold to the end user by an IXC. In this circumstance, the IXC sells a retail service (toll) to an end user. The end user may utilize this service to originate calls on a CLEC or ILEC network. The call may also utilize the network facilities of other CLECs or ILECs to transport and/or terminate the call. This use of CLEC or ILEC facilities by an end user utilizing an IXC service is called access and is simply another form of compensation. The IXC sold the retail service to the end

user and is the carrier responsible for paying compensation for facilities used by the end user.

The compensation rule is not, that "the originator pays costs." With access, calls are originated on CLEC or ILEC networks. However, even though the CLECs or ILECs originate these calls on their networks, they do not cause other carriers to incur costs to transport and/or terminate these calls and are not responsible for compensation. The carrier responsible for compensation for the use of network facilities is the IXC who sold the service to the customer or end user.

Q. HOW DOES COMPENSATION OCCUR FOR IXC CALLS?

A. Each CLEC or ILEC, whose facilities are used by the end user to place a call using the IXC retail service, bills the IXC for the facilities that are used to originate, transport and terminate the call. This is called meet point billing because each CLEC or ILEC bills the IXC (whose end user is the cost causer) for their facilities that are utilized in placing the call.

Q. PLEASE SUMMARIZE THE "RULE" FOR DETERMINING WHEN A CARRIER IS RESPONSIBLE FOR PAYING COMPENSATION TO OTHER CARRIERS FOR THE USE OF THEIR FACILITIES.

A. The simplest way to determine which carrier is responsible for compensation for a service used by a customer or end user is to determine which carrier sold the retail service that the customer utilizes when originating calls on the network. That carrier has the customer's service revenues and is responsible for paying other carriers whose facilities are used to originate and/or transport and/or terminate the call. The carrier on whose

network the call is originated is only responsible for paying compensation if it also is the service provider for the end user's call.

Q. UNDER THIS "RULE", WHO IS RESPONSIBLE FOR PAYING COMPENSATION FOR ISP INTERNET-BOUND CALLS?

A. One simply has to answer the question - "Which company or carrier has the retail relationship with the end user that causes ISP Internet-bound calls to be placed?" ILECs (including SWBT) or CLECs do not sell Internet-bound access service to the end user. Consequently, even though the end user originates an Internet-bound call on an ILEC or CLEC network, the ILEC or CLEC did not sell the service to the end user nor did its actions cause any network usage and thus costs to be incurred. As a result, neither ILECs nor CLECs have any responsibility for compensation for ISP Internet-bound calling.

On the other hand, ISPs do sell Internet-bound access service to end-users. The service they sell causes end users to place Internet-bound calls that use the network facilities of ILECs and CLECs to originate and/or transport and/or terminate the calls. This use of the network by ISPs is like the IXC use of the network for toll access services they sell to their end user customers. Like the IXCs, the ISPs are responsible for paying (compensating) the ILECs and CLECs for the Internet-bound access service sold to their customers.

Q. DO THE ISPS NOW PAY FOR THEIR USE OF THE NETWORK TO ALLOW THEIR CUSTOMERS TO PLACE INTERNET-BOUND CALLS?

A. Yes, the FCC has recognized numerous times that ISP Internet-bound usage is interstate access usage. Consequently, ISPs pay as required by the FCC under the FCC's ESP and ISP switched access exemption requirements. They do not pay usage based switched

access (they are currently exempt), but, as required by the FCC, they pay a local business line rate to obtain the network facilities necessary to interconnect with the ILEC or CLEC network in order to allow their customers the ability to place ISP Internet-bound calls.

Q. WHAT OTHER ASSERTIONS DO MR. ASHBY AND MR. PRICE MAKE IN ORDER TO ATTEMPT TO SHOW THAT ISP INTERNET- BOUND CALLING IS LOCAL?

A. They claim that ISP Internet-bound traffic is local because: (a) a seven-digit number is dialed to access the ISP[4]; (b) SWBT bills its customers out of local tariffs for calls they place to access the Internet[5]; (c) ISPs are allowed to interconnect to the network via a local business line sold to them out of an intrastate tariff[6]; and (d) SWBT treats the revenues and expenses associated with this traffic as intrastate in its reports filed with the FCC.[7]

Q. DOES THE FACT THAT AN ISP INTERNET CUSTOMER PLACES A SEVEN (OR TEN) DIGIT CALL TO ACCESS AN ISP, MAKE THE CALL LOCAL AS MR. ASHBY AND MR. PRICE CLAIM?

A. No. This is simply the access arrangement that the FCC allowed ISPs to use (access to the Public Switched Network through a line side connection via a business line facility)

[4] Testimony of S. Blake Ashby in Case No. TC-2000-225, et al., dated May 1, 2000, page 13, lines 5 to 6 and page 17, lines 4 to 5. Testimony of Don Price, Case No. TC-2000-225 et al., dated May 1, 2000, page 11, line 27; page 13, lines 3 to 4; page 17, lines 22 to 23.

[5] Testimony of S. Blake Ashby, Case No. TC-2000-225 et al., dated May 1, 2000, page 6, lines 6 to 8; page 13, lines 8 to 9; page 17, lines 5 to 6. Testimony of Don Price, Case No. TC-2000-225 et al., dated May 1, 2000, page 12, lines 1 to 3; page 13, lines 6 to 7; page 17, lines 23 to 24.

[6] Testimony of S. Blake Ashby, Case No. TC-2000-225 et al., dated May 1, 2000, page 13, lines 11 to 12; page 17, lines 3 to 4. Testimony of Don Price, Case No. TC-2000-225 et al., dated May 1, 2000, page 12, lines 4 to 6; page 13, lines 9 to 10; page 17, line 21.

[7] Testimony of S. Blake Ashby, Case No. TC-2000-225 et al., dated May 1, 2000, page 13, lines 14 to 15; page 17, lines 6 to 8. Testimony of Don Price, Case No. TC-2000-225 et al., dated May 1, 2000, page 12, lines 7 to 8; page 13, lines 12 to 13; page 17, line 24 and page 18, lines 1 to 2.

when they required that ILECs and CLECs treat ISPs like end users for access rate purposes and exempted ISPs from switched access charges.

In 1983, when the FCC gave the ISPs an exemption from switched access charges, the FCC clearly recognized that ISP Internet-bound traffic is interstate access, not local, and that ISPs were (and still are) users of exchange access, otherwise the exemption would not have been necessary. The exemption allowed the then small enhanced and information service providers, who used exchange access, to avoid paying switched access charges. Under the FCC's access rules, the only way to avoid paying switched access is to (for access rate purposes only) treat ISPs like end users. This requirement by the FCC allowed ISPs to buy access at a much reduced rate (the business line rate) and because they were connecting to the switch on the line, not the trunk side, allowed their customers to dial seven or ten digits when placing an ISP Internet-bound call.

This network exchange access arrangement is the same as Feature Group A (FGA) access used by Interexchange Carriers ("IXCs"). ISP Internet-bound calls (like FGA calls) are not local simply because the ISP's customer dials a seven digit number to access the ISP. The jurisdiction of a call is determined by its end-to-end use, not as Mr. Ashby and Mr. Price assert, the dialing pattern used by the customer to access the ISP.

Q. MR. ASHBY AND MR. PRICE ASSERT THAT SWBT BILLS ISP CUSTOMERS OUT OF LOCAL TARIFFS FOR ISP INTERNET-BOUND CALLS. IS THAT CORRECT?

A. No, it is not. . ISP Internet-bound calls are exchange access calls[8] as are toll calls delivered by SWBT to IXCs. Consequently, SWBT does not bill the end user customer who originates a call, either to access an IXC to place a toll call or to access an ISP to place an Internet-bound call, out of local exchange tariffs. Billing for these services is governed by access service tariffs. IXCs are billed by SWBT for exchange access toll calls that their customers place and, were it not for the FCC's switched access exemption, ISPs would be billed by SWBT out of switched access tariffs for the exchange access Internet-bound calls that their customers place.

Q. MR. ASHBY AND MR. PRICE CLAIM THAT ISP INTERNET-BOUND CALLING IS LOCAL BECAUSE ISPS ARE ABLE TO PURCHASE NETWORK ACCESS OUT OF LOCAL BUSINESS TARIFFS. IS THIS CORRECT?

A. No, it is not. The FCC has recognized numerous times that ISP Internet-bound usage is interstate access usage. Consequently, ISPs pay as required by the FCC under the FCC's ESP and ISP switched access exemption requirements. As discussed previously, under the exemption, ISPs do not pay usage based switched access (they are currently exempt), but, as required by the FCC, they pay a local business line rate to obtain the network

[8] CC Docket Nos. 98-147, 98-11, 98-26, 98-32, 98-78, 98-91, Order On Remand, released December 23, 1999, page 21, ¶ 43. In his testimony at page 5, lines 19 to 23 and page 6, lines 1 to 2, Mr. Ashby claims that ISPs only provide information services and do not provide telephone services. Mr. Price makes similar claims on page 11, lines 19 to 23 of his testimony. Mr. Ashby and Price are wrong. As discussed in Schedule 2 to my Testimony, ISPs are providing not only information services, but also telecommunications services. Further it is clear that whether providing information or telecommunications services, ISPs are using LEC provided exchange access. The FCC Order On Remand states that "...the service provided by the local exchange carrier to the ISP is ordinarily exchange access service..."(¶ 35) and the FCC "...reject(s) the argument of those commenters who suggest that the *only* service originated or terminated by the local exchange carrier, when it provides access to the ISP, is an information service...."(¶ 37). The FCC concluded in ¶ 37 and 38, that the access provided to the ISP by the LEC facilitates the delivery of information services because these applications ride on top of telecommunications service and that this internet access service, predominately because of its end-to end inter-exchange nature, is largely non-local for purposes of the reciprocal obligations of section 251(b)(5).

facilities necessary to interconnect with the ILEC or CLEC network in order to allow their customers the ability to place ISP Internet-bound calls. This network access requirement of the FCC for ISPs does not, as Mr. Ashby and Mr. Price claim, change the end-to-end nature of Internet-bound calling from interstate to local. This was simply the way the FCC chose to allow ISPs to obtain exchange access at a reduced rate. ISP Internet bound traffic is interstate, not local as claimed by Mr. Ashby and Mr. Price.

Q. DO MR. ASHBY AND MR. PRICE CLAIM THAT ISP INTERNET-BOUND TRAFFIC IS LOCAL BECAUSE SWBT TREATS IT AS LOCAL IN REPORTS TO THE FCC?

A. Yes, they do, and again they are wrong. Since 1997, when SWBT began to identify and segregate this traffic, it has been separately identified and reported on internal company reports. This usage was reported as interstate usage in the FCC Automated Reporting Management Information System ("ARMIS") reports. On May 18, 1999, SBC received a letter from the FCC Common Carrier Bureau indicating that SBC should reassign ISP Internet usage, on an interim basis, to the intrastate jurisdiction for jurisdictional separations purposes. A copy of this letter is attached to my testimony as Schedule 3. SBC has complied with this requirement.

Q. IF THE FCC HAS DETERMINED THAT ISP INTERNET-BOUND USAGE TO BE INTERSTATE IN NATURE, WHY DID THE FCC REQUIRE SWBT TO REASSIGN THIS USAGE TO THE INTRASTATE JURISDICTION?

A. Quite simply, to jurisdictionally match ISP revenues with ISP costs. As a result of the FCC's ISP access charge exemption, ISPs were allowed by the FCC to purchase access to the network via local business tariffed rates. Consequently, as a result of this FCC

mandated rate structure for ESP or ISP network access, the network access revenues for their interconnection (local business revenues) are currently booked by the FCC's accounting rules (Part 32 of the FCC's Rules) to intrastate. Pending consideration of the jurisdictional assignment of both ISP usage and ISP network access revenues by the Separations Joint Board, the FCC decided to move ISP usage and thus costs to intrastate to match the booked ISP network access revenues.

Q. DOES THIS FCC REQUIREMENT CHANGE THE FACT THAT ISP INTERNET USAGE IS INTERSTATE AND NOT INTRASTATE LOCAL USAGE?

A. No, it does not. The reassignment was simply a convenience to facilitate matching of ISP costs and revenues pending revisions by the Joint Board.

Q. ARE ANY OF THE CLAIMS THAT MR. ASHBY, MR. CADIEUX AND MR. PRICE MAKE, TO SUPPORT THEIR THEORY THAT ISP INTERNET-BOUND USAGE IS LOCAL AND THAT LOCAL RECIPROCAL COMPENSATION IS APPLICABLE, VALID?

A. No. Mr. Ashby and Mr. Price claim that it was SWBT's intent and it is the "industry custom and practice"[9] to treat ISP Internet-bound traffic as local. If there is such an "industry custom and practice", SWBT is unaware of it. It was not, nor is it SWBT's intent, nor was it, or is it SWBT's custom and practice to treat ISP Internet-bound traffic as local, as these witness claim. Mr. Ashby and Mr. Price claim that "...SWBT always

[9] Testimony of S. Blake Ashby, Case No. TC-2000-225, et al., dated May 1, 2000, page 3, lines 6 to 8; page 11, line 23; page 17, lines 1 to 2. Testimony of Don Price, Case No. TC-2000-225, et al., dated May 1, 2000, page 5, lines 16 to 18; page 17, lines 19 to 20; page 20, line 15.

treated calls to ISPs as local traffic."[10] This is simply not true. SWBT has believed and continues to believe that this traffic, like IXC traffic, is interstate access or exchange access traffic. Seven digit dialing to access an ISP, the ISP's ability to obtain network exchange access via a line side business line rate and the resulting FCC reporting are all consequences that are derived from the FCC's switched access exemption for ISPs. None of these access exemption consequences change the nature of ISP Internet-bound calling from interstate to local.

Q. IF SWBT BELIEVED ISP INTERNET-BOUND TRAFFIC TO BE INTERSTATE, WHY DID IT BEGIN TO MEASURE AND IDENTIFY IT IN 1997?

A. Because of the FCC's exemption, the dialing pattern for this traffic is seven or ten digits, like local or FGA traffic. Consequently, some method had to be developed to segregate this traffic from local traffic. The FCC recognized this as a problem when it initiated the exemption and indicated that "... it will take time to develop a comprehensive plan for detecting all such usage...".[11] The FCC continued to explore possible methods to identify this usage in later dockets. Throughout this period (the early 1980's to the early 1990's), the FCC viewed this usage to be minimal and therefore it apparently was not critical that a procedure be developed to properly identify and assign this usage to interstate. However, in the mid-1990's (prior to the Act and CLEC interconnection), it became clear to SWBT that this traffic was becoming more significant. Consequently, SWBT began to evaluate and develop methods to measure and segregate this traffic to

[10] Testimony of S. Blake Ashby in Case No. TC-2000-225, et al., dated May 1, 2000, page 13, lines 3 to 4 and 23 and 24. Testimony of Don Price in Case No. TC-2000-225, et al., dated May 1, 2000, page 13, lines 1 and 21 to 22.

[11] FCC Memorandum Opinion and Order in Docket No. 78-72 Phase 1, released August 22, 1983, ¶ 84.

insure the proper jurisdictional assignment of our costs as required by Part 36 of the FCC's Rules and Regulations. We found that a system which would accurately identify and measure all ISP Internet-bound usage would be costly and take some time to implement. We therefore embarked on a two-part approach to segregating, identifying and measuring this traffic. We began the process of purchasing, helping to develop and then testing the equipment necessary to measure ISP Internet-bound usage which originated and is transported to ISPs connected to SWBT switches. We are currently phasing this equipment into our network and are in the testing phase, prior to full deployment. The second approach was to utilize, where available, existing measurement processes to identify ISP Internet-bound traffic where this traffic was originated on SWBT's network and transported to CLECs which were connected to ISPs. As discussed below, segregation of this ISP Internet-bound traffic was possible because a usage measurement system already existed (depending on the settlement or interconnection agreement) for usage over trunk groups to these CLECs. SWBT embarked on this measurement process precisely because we believed this usage to be interstate and that as a consequence, we had a duty to segregate and measure the usage in order to assign it to the proper jurisdiction – interstate.

SWBT MEASURES AND SEGREGATES ISP INTERNET-BOUND USAGE AND TREATS IT FOR JURISDICTIONAL PURPOSES IN ACCORDANCE WITH FCC RULES AND ORDERS

Q. MR. ASHBY AND MR. PRICE CLAIM THAT SWBT IS NOT SEGREGATING AND MEASURING ISP INTERNET-BOUND TRAFFIC.[12] FURTHER, MR. ARONSON AND MS. SENFT CLAIM THAT NEITHER SWBT NOR THE CLECS THEY REPRESENT CAN PRECISELY SEGREGATE ISP INTERNET-BOUND TRAFFIC FROM LOCAL TRAFFIC.[13] ARE THESE CLAIMS CORRECT?

A. Mr. Ashby and Mr. Price are wrong. As I will describe below, SWBT is segregating and measuring ISP Internet-bound traffic. Mr. Aronson and Ms. Senft are also wrong. CLECs could, with minimal effort and expense, measure ISP Internet-bound traffic. They could (as is currently done with FGA traffic) measure the usage over the line side connections that they sell to the ISPs for Internet access. Alternatively, they could, with minimal effort and expense, provide the ISP Internet-bound access line numbers to SWBT. SWBT could then measure the ISP Internet-bound usage originating to those line numbers.

Q. HAVE THE CLECS BEEN WILLING TO PERFORM THESE MEASUREMENTS OR TO PROVIDE THE ISP INTERNET-BOUND ACCESS NUMBERS TO SWBT?

A. No, they have not.

[12] Testimony of S. Blake Ashby in Case No. TC-2000-225, et al., dated May 1, 2000, page 13, lines 17 to 18. Testimony of Don Price in Case No. TC-2000-225 et al., dated May 1, 2000, page 13, lines 15 to 16.

[13] Testimony of Daniel Aronson in Case No. TC-2000-225, et al., dated May 1, 2000, page 3, lines 22 to 23. Testimony of Pat Senft in Case No. TC-2000-225, et al., dated May 1, 2000, page 3, lines 4 to 5.

Q. IS SWBT ABLE TO IDENTIFY ISP INTERNET-BOUND TRAFFIC TRANSPORTED BY SWBT TO CLECS AND SEGREGATE IT FROM LOCAL TRAFFIC?

A. Yes. SWBT identifies and segregates ISP Internet-bound traffic originated on SWBT's network by the ISP's end users and transported by SWBT to CLECs from seven or ten digit dialed local traffic. In the absence of CLEC identification and measurement of this usage or ISP numbers provided by the CLEC,[14] SWBT has developed a process to identify, based on Internet call characteristics, what it believes to be ISP Internet-bound usage delivered to CLECs by ISP customers on SWBT's network and the corresponding ISP Internet connection telephone numbers. Detailed information regarding the minutes of use and related telephone numbers is provided to the CLEC so it can verify the accuracy of the ISP Internet-bound usage identified by SWBT. Based on the CLEC analysis and validation, SWBT is willing to make appropriate adjustments, if necessary, to the identified ISP Internet-bound minutes. This process will provide a precise identification of ISP Internet-bound traffic.

Q. WHAT USAGE MEASUREMENT SYSTEM DOES SWBT UTILIZE TO IDENTIFY THE ISP INTERNET-BOUND TRAFFIC?

A. SWBT utilizes what is referred to as the "92 Record System" in the industry. This system is further described in the rebuttal testimony of SWBT witness Joe B. Murphy. It is a usage based compensation system which uses records of the usage at the point where

[14] If CLECs were to provide ISP Internet connection numbers to SWBT, usage to these numbers could be collected directly and the identification process now used by SWBT would be unnecessary.

enters (or is originated on) the Incumbent LEC (ILEC) or CLEC network and identifies where (to which company) the usage is delivered when it leaves the ILEC or CLEC network. The basic purpose of this system is to identify and account for usage at the point in the network where the ILEC or CLEC can identify the company whose customer originates the call (and thus has the revenues for the call). In the case of ISP Internet-bound usage, the ISP is the customer's carrier and has the customer's revenue for the ISP call. The company (in this case the ISP) whose customer originates the call and thus has the customer revenue for the call, has the responsibility to pay other interconnected companies for their facilities used to complete the call.[15] This system, or its equivalent, has been used in the industry by the ILECs for many years and was developed because the company receiving the call (terminating the call) could not identify which company had originated the call and was responsible for paying the terminating company for the use of its facilities.

Q. IN 1999, WHAT IS THE AVERAGE LENGTH OF AN ISP INTERNET-BOUND CALL AND A LOCAL (NON-INTERNET) CALL?

A. In 1999, on SWBT's network in Missouri, the average length of Internet-bound calls (originated by ISP customers on SWBT's network, transported by SWBT to CLECs for transport to ISPs) was approximately 26 minutes. The average length of local calling (excluding CLEC handled ISP-bound usage) is approximately 3 minutes.

Q. DOES SWBT JURISDICTIONALLY SEGREGATE ISP INTERNET-BOUND TRAFFIC?

[15] Because of the FCC's access charge exemption, ISPs are not required to pay usage based access charges to CLECs and ILECs whose facilities they use to originate and transport ISP Internet-bound calls.

A. No, it does not. The FCC has stated that this usage is interstate or largely interstate. Even if the FCC had not asserted jurisdiction over ISP-bound traffic, from a practical standpoint, SWBT could not unilaterally determine the jurisdiction. Numerous interconnected companies including ILECs, CLECs, Interexchange Carriers (IXCs) and ISPs may be involved in handling an Internet call which may be terminated anywhere in the United States or the world. These companies would have to cooperate in developing systems and procedures that might be able to determine the jurisdiction of this traffic. Without significant administrative expense to develop a jurisdictional reporting, auditing and verification procedure for all of the parties handling the calls, or significant investment in measuring equipment by all the parties, the end-to-end jurisdiction of the call cannot be determined. Even if reporting or measuring is attempted, it may be virtually impossible to measure or to determine appropriate jurisdictional usage because the Internet can, on a real time basis, deliver calls (intrastate, interstate or international) simultaneously. Likewise, during a single Internet call, an end user may visit many jurisdictionally different sites. Consequently, much (or all) ISP Internet-bound traffic is jurisdictionally inseverable and must be assigned to the jurisdiction with the preponderance of use. As the FCC has recognized, for ISP Internet-bound traffic, that jurisdiction is interstate.

Q. HAS SWBT TREATED ISP INTERNET CALLS AND USAGE AS LOCAL FOR JURISDICTIONAL PURPOSES?

A. No, it has not. SWBT recognized that ISP Internet-bound usage was under the jurisdiction of the FCC. Consequently, SWBT began evaluating a number of years ago, when it appeared that ISP usage was fairly minimal, how to measure and identify it and

segregate it from local traffic. SWBT was successful in its efforts to measure and identify ISP Internet-bound usage transported to CLECs in 1997. Consistent with the past FCC Orders[16] in which the FCC asserted jurisdiction over this traffic, ISP Internet access traffic or usage, as it is identified, has been assigned by SWBT to interstate. Initially, ISP Internet usage, including that originated and transported by SWBT to CLECs, appears (like Feature Group A usage) to be "local" in nature because only seven digits are dialed. As SWBT identified such traffic as Internet, the calls, their usage and consequently, their costs were removed from local. SWBT made the corresponding adjustment to its jurisdictional traffic volumes to treat such usage and the related costs as interstate for jurisdictional allocation purposes and use in its internal systems. The FCC recognized SWBT's assignment of ISP Internet traffic to interstate in its Docket No. 96-98 Declaratory Ruling, stating:

> "Not all incumbent LECs characterize Internet traffic as intrastate traffic for separations purposes. In January, 1998, SBC indicated that it planned to allocate 100 percent of the costs associated with Internet traffic...to the interstate jurisdiction."[17]

Q. IS THIS ASSIGNMENT TO INTERSTATE CONSISTENT WITH HOW CURRENT SERVICES ARE ASSIGNED TO THE INTERSTATE JURISDICTION?

A. Yes. The assignment of ISP Internet access usage to interstate is consistent with how separations jurisdictionally assigns all usage and costs for services on an end-to-end basis and how it treats jurisdictionally inseverable or "contaminated" service usage (usage which could be interstate, intrastate or international) and costs. ISP Internet access calls

[16] See Orders cited in footnote 1.

[17] FCC Declaratory Ruling in CC Docket 96-98, released February 26, 1999, page 15, footnote 76.

and usage originate on SWBT's network and may be sent directly to an Internet provider which transports the call to a distant location for termination, or sent to a CLEC, which transports the call to an Internet provider which then transports it to a distant location for termination. In either case, there is no "termination" by SWBT or a CLEC of the call at either the Internet provider or the CLEC. For the ISP Internet access call, a continuous connection is maintained by SWBT and usage is counted as required by Part 36 of the FCC's rules (the Separations Manual), for the entire time that SWBT's network is in use and the customer is off hook.

Q. HAS SWBT TREATED ISP INTERNET TRAFFIC AS INTERSTATE IN ITS INTERNAL AND EXTERNAL COMPANY REPORTS?

A. Yes, it has, and as discussed previously, the FCC's May 18, 1999, requirement that this usage be assigned to intrastate to facilitate matching of costs and revenues, does not change the nature of ISP Internet-bound traffic. It is interstate, not local and, consequently, is not subject to local reciprocal compensation.

SWBT SEGREGATES ISP INTERNET USAGE

FOR BILLING PURPOSES

Q. IS SWBT STILL IDENTIFYING AND SEGREGATING ISP INTERNET USAGE DELIVERED TO CLECS?

A. Yes, it is. ISP Internet usage is still interstate, not local calling. Consequently, SWBT is still segregating, as it identifies it, this usage for (a) jurisdictional purposes and (b) reciprocal compensation billing purposes. Jurisdictionally, SWBT will comply with the FCC's directions, but pending Joint Board changes, SWBT intends to separately identify this interstate ISP Internet usage.

For reciprocal compensation billing purposes, SWBT will continue to measure and segregate ISP Internet usage and to treat it as interstate and not subject to local reciprocal compensation.

Q. IS THERE ANY CIRCUMSTANCE WHERE SWBT WOULD, IN THE ABSENCE OF A FCC REQUIREMENT, TREAT THIS INTERSTATE TRAFFIC AS INTRASTATE LOCAL TRAFFIC?

A. No, there is not. First, as it is able to technically identify the usage, SWBT is, for jurisdictional and reciprocal compensation billing purposes, accounting for this interstate traffic and separately identifying it from local traffic. Second, SWBT is serving ISPs out of intrastate tariffs and including ISP Internet network access revenues as intrastate, not based on its own decision making process, but in concert with current FCC requirements and FCC Part 32 rules, as a result of the FCC, ISP access charge exemption.[18]

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

[18] When SWBT or any ILEC or CLEC connects an ISP to the network, the ISPs pay the ILEC or CLEC, as required by the FCC, a local business tariffed rate. Due to the FCC ESP or ISP exemption, access charges are not paid to either the ILEC or CLEC. However, when a CLEC connects the ISP to the network, they, not SWBT have the ISP local business rate revenues. SWBT has no revenues, either from the ISP nor from the ISP's customers (who generate the ISP Internet usage) to offset the cost of originating or transporting the ISP Internet call. In this circumstance, although SWBT is identifying the traffic, there are no revenues either from the ISP or local customer that are booked to either interstate or intrastate by SWBT for the ISP Internet call.

FCC Stands by Conclusion That Calls to ISPs Are Interstate, Despite Court's Nixing 1999 Order

The U.S. Court of Appeals in Washington has vacated and remanded for further consideration the FCC's 1999 order regarding intercarrier compensation for traffic bound for Internet service providers (ISPs).

Despite some harsh language for the FCC in the court decision, the FCC's Common Carrier Bureau chief says he still thinks that calls to ISPs are interstate and that some fine tuning and further explanation should satisfy the court that the agency's view was correct.

Highlights...

- Court says FCC didn't justify using "end-to-end" analysis of Internet calls.
- ESP exemption from access charges is "embarrassment" to FCC's ruling on reciprocal compensation, court says.
- Strickling says FCC just needs to "better articulate" its position that calls are interstate.
- ALTS thinks ruling means calls to ISPs should be considered local traffic.

In the 1999 order, the FCC tried to perform a delicate jurisdictional balancing act (*TR*, March 1, 1999). It found that calls to ISPs were jurisdictionally interstate. But it allowed numerous state commission rulings that treated such traffic as local to remain in effect. The FCC said it was reasonable for the states to have reached such conclusions because no federal rules on ISP-bound traffic had been in place.

At the same time, the FCC launched a proceeding to consider whether to set up a federal compensation regime for ISP-bound traffic. A proposed order has been circulating at the FCC and had been expected to go to the Commissioners for consideration soon, sources told *TR*. Now those plans likely will be put on hold as the agency addresses the court remand.

Court Sees No 'Reasoned Decision Making'

In ***Bell Atlantic Corp. et al. v. FCC*** (consolidated cases beginning at 99-1094), the court remanded the order for "want of reasoned decision making." The opinion released March 24 was written by Circuit Judge Stephen F. Williams, joined by Judges David B. Sentelle and A. Raymond Randolph.

The court was unhappy with the FCC's application of an "end-to-end" analysis in determining that calls to ISPs were jurisdictionally interstate. Focusing on the end points of the communications, the FCC had determined that calls to ISPs could "terminate" at a Web site anywhere, making them jurisdictionally interstate.

Such an "end-to-end" analysis is straightforward in a circuit-switched world, the court said, but the FCC's reasons for using such an analysis are "not obviously transferable in this context." The court pointed to MCI WorldCom, Inc.'s argument that telecommunications traffic is considered local if it "originates and terminates within a local service area."

MCI WorldCom had said the FCC had failed to apply, or even mention, its definition of *termination*—"the switching of traffic that is subject to section 251(b)(5) [of the Telecommunications Act of 1996] at the terminating carrier's end-office switch (or equivalent facility) and delivery of that traffic from that switch to the called party's premises."

The court said, "Calls to ISPs appear to fit this definition: The traffic is switched by the [carrier] whose customer is the ISP and then delivered to the ISP, which is clearly the called party." The FCC avoided that result by analyzing the communication on an end-to-end basis, the court said. "But the cases it relied on for using this analysis are not on point."

The precedents the FCC used involved telecommunications services like "800" calls and voice-mail services, the court recalled. ISPs, however, are information service providers, "which upon receiving a call originate further communications to deliver and retrieve information to and from distant Web sites," the court said.

"Although ISPs use telecommunications to provide information service, they are not themselves telecommunications providers," the court said.

"In this regard an ISP appears, as MCI WorldCom argued, no different from many businesses, such as pizza-delivery firms, travel-reservation agencies, credit card verification firms, or taxicab companies, which use a variety of communication services to provide their goods or services to their customers," the court wrote.

The FCC has not explained why an ISP is not, for purposes of reciprocal compensation, "simply a

FCC Bureaus Mull Action on Collocation after Remand

The FCC's Common Carrier and Enforcement bureaus are evaluating whether the agency should adopt a "standstill" order to keep current "collocation" rules in place while the FCC deals with a court remand, Common Carrier Bureau Chief Lawrence Strickling told *TR.* The U.S. Court of Appeals in Washington recently remanded the FCC's rules on collocation of competitive local exchange carriers' equipment in incumbents' central offices (*TR,* March 20).

Mr. Strickling said it was unclear whether a "standstill" order would be necessary or if the agency would need to ask incumbent local exchange carriers (ILECs) to pledge to continue following the previous collocation rules. "We haven't heard yet any suggestion that ILECs were taking any particular actions to disrupt existing collocation arrangements," he said.

Meanwhile, the FCC and the U.S. Telecom Association have filed a request with the appeals court asking it to extend the deadline for a remand order on a separate issue. The court last year remanded the FCC's 1997 "price cap performance review" order (Common Carrier docket 94-1) and directed the FCC to respond by March 31.

The FCC and USTA want the deadline extended to July 1 to allow for more time to consider the CALLS (Coalition for Affordable Local and Long Distance Services) proposal to overhaul the interstate access charge system.

The FCC has taken steps of its own to allow for more time to evaluate the CALLS proposal. On March 24, the FCC granted a USTA petition to move back the deadline for local exchange carriers that operate under the FCC's "price cap" regulations to file their tariff review plans. Those typically are due March 31, with annual access tariffs taking effect July 1. The tariff review plans now are due June 16.

communications-intensive business end user selling a product to other consumer and business end users," the court said.

Court Cites Conflicting Arguments

The court noted that the FCC had exempted enhanced service providers (ESPs), which include ISPs, from paying interstate access charges. The ESP exemption is "something of an embarrassment to the Commission's present ruling," the court said.

In defending its ESP exemption before the U.S. Court of Appeals for the Eighth Circuit (St. Louis) in a separate case, the FCC had distinguished between ESP traffic and long distance traffic, "even using the analogy that calls to ESPs are really like a call to a local business that uses the telephone to order wares that meet the need," the court said.

At that time, the FCC acknowledged "real differences" between long distance calls and calls to ESPs, the court recalled. "*It is obscure why those have now dropped out* of the picture."

The court cited another reason for remanding the order: the FCC's failure to explain whether ISP-bound traffic should be considered "telephone exchange service" or "exchange access service" or should be included in a third category.

MCI WorldCom contended the traffic is telephone exchange service, while incumbent local exchange carriers (ILECs) want it to be considered exchange access service.

The court recalled that the FCC's order addressed this point only briefly by stating that it had characterized enhanced service providers as users of access service but treated them as end users for pricing.

"If the Commission meant to place ISP traffic within a third category, . . .[doing so] would conflict with its concession . . .that 'exchange access' and 'telephone exchange service' occupy the field," the court said. The 1996 Act is ambiguous as to whether calls to ISPs fit within the definition of exchange access or telephone exchange service, the court said, so the FCC's interpretation would be subject to judicial deference.

The courts review an "agency's interpretation only for reasonableness where Congress has not resolved the issue," the court noted. But "where a decision is 'valid only as a determination of policy or judgment which the agency alone is authorized to make and which it has not made, a judicial judgment cannot be made to do service,'" the court wrote.

"Because the Commission has not provided a satisfactory explanation of why [local exchange carriers] that terminate calls to ISPs are not properly seen as 'terminating. . .local telecommunications traffic,' and why such traffic is 'exchange access' rather than

(continued on page 26)

Bureau Chief Says Calls Are Still Interstate *(continued from page 4)*

'telephone exchange service,' we vacate the ruling and remand the case to the Commission," the court wrote.

The court didn't reach the ILECs' contention—that section 251(b)(5) preempts state commission authority to compel payments to CLECs.

Strickling: Calls Are Still Interstate

Common Carrier Bureau Chief Lawrence E. Strickling told *TR* shortly after the court released its opinion that he remained convinced that calls to ISPs should be considered interstate calls. "It seems to me that what the court is really telling us is that we need to better articulate our position," Mr. Strickling said.

"I don't read this decision as telling us that we made a mistake" in finding ISP-bound calls to be interstate in nature, he said. "We need to take the confusing precedents and make clear to the court why this is interstate traffic."

Mr. Strickling said he also didn't expect the decision to have much of an effect on the marketplace. Without a federal reciprocal compensation regime in place, the states have moved forward to resolve the disputes, and that should continue, he said.

Edward D. Young III, senior vice president-regulatory at Bell Atlantic, agreed with Mr. Strickling's assessment. The court vacated the FCC's order "not because the FCC was wrong, but because in its view the FCC did not adequately explain the basis for its conclusion that Internet calls are interstate calls." Bell Atlantic still supports the FCC's decision, saying it applied the correct analysis. "The FCC needs to simply explain why [calls to ISPs] are exchange access and not telephone exchange service," Mr. Young told *TR*.

Competitive local exchange carriers (CLECs), however, disagreed. The decision is "very favorable to the CLEC industry," providing more clarity and certainty regarding the compensation CLECs can expect for terminating calls to ISPs, said Jonathan Askin, general counsel at the Association for Local Telecommunications Services.

"This is a very strong ruling," he said. The FCC will be "hard pressed" to see this as anything other than requiring ISP-bound calls to be local calls, he added.

Section 252(d)(2) of the Act gives the FCC authority to set reciprocal compensation rates for local traffic, Mr. Askin noted. If, in the wake of the court ruling, the FCC decides ISP-bound traffic is jurisdictionally local, it can issue federal reciprocal compensation rules, he said. Now it can set federal reciprocal compensation rules without "stepping on anyone's toes" at the state commission level, Mr. Askin said.

An MCI WorldCom spokesman said his company "welcomed" the court's decision. "This validates our long-held observation that ISPs should be treated like any other end user," he said. TR

Nortel Commits Another $1.43B In Race for 'All-Optical' Network

Another small company with promising technology but no actual customers has caught the eye of Nortel Networks Corp., which is betting billions of dollars that it can dominate the market for optical networking gear. Nortel agreed last week to pay $1.43 billion in stock for CoreTek, Inc., of Wilmington, Mass., which makes "tunable" lasers. CoreTek still is testing its product and plans to begin "pilot production" by year-end, Chief Executive Officer Parviz Tayebati said.

Tunable laser technology promises to slash the number of components needed for fiber optic systems while boosting network efficiency. Tunable lasers emit several different colors of light—a useful development in today's multiple-wavelength optical systems. A single CoreTek laser could replace dozens of other components, simplifying Nortel's manufacturing processes, said Greg Mumford, Nortel's president-optical networks.

Nortel had been developing tunable lasers on its own, Mr. Mumford said, but they weren't as good as CoreTek's. Nortel will incorporate CoreTek's technology into Nortel systems next year and will sell CoreTek lasers to other equipment makers, Mr. Mumford said.

"Tunable lasers are one of the key missing components for next-generation optical networks," Merrill Lynch analyst Thomas B. Astle said in a note to investors. "CoreTek appears to have a technological lead in this area—thus we applaud this move."

Nortel executives said CoreTek's technology would complement the capabilities of other recent acquisitions, such as optical-switch maker Xros, Inc., and Qtera Corp., which makes long-haul optical fiber (*TR*, March 20). Like those companies, CoreTek offers technology that will help Nortel construct high-capacity networks in which optical signals can travel long distances without being converted to electrons. Nortel expects to complete the CoreTek transaction in the second quarter. TR

The Net is beginning to be used for a dizzying array of voice communications–and you don't even need a computer

the TALKING

Spokane is 250 miles east of Seattle, far enough to avoid the traffic jams but close enough to be caught in the orbit of the nearby technology center. So it shouldn't surprise anyone that this small city has started a revolution of its own. School officials ripped out the district's old phone network and, last fall, started using radically new Internet technology for all its communications. The Net system is saving the school district about $100,000 a year in telephone- and Internet-access fees. More important, it's doing wonders for the education process. One example: Students scattered throughout the district can listen in real time to a teacher giving a lesson over the Net—and ask questions through their computers if they have them. "The payoff has been unbelievable," says information tech-

INTERNET

nology manager Dennis Schweikhardt. "But the real value is that it has changed the way teachers teach."

Welcome to the dawn of the talking Internet. What has been mostly a medium for text, colorful graphics, and the occasional music clip, the Internet is beginning to be used for a dizzying array of voice communications. Web sites like Yahoo! Inc. and Excite@Home are letting Web surfers chat verbally with each other about everything from a stock's prospects in the turbulent tech market to the New York Knicks' prospects in the NBA playoffs. America Online Inc. just introduced a Web browser that lets people click on a button so that they can talk to friends over the Net. And you don't even need a computer: Companies like Net2Phone Inc. will route a call from your home phone over the Internet to another telephone,

Special Report

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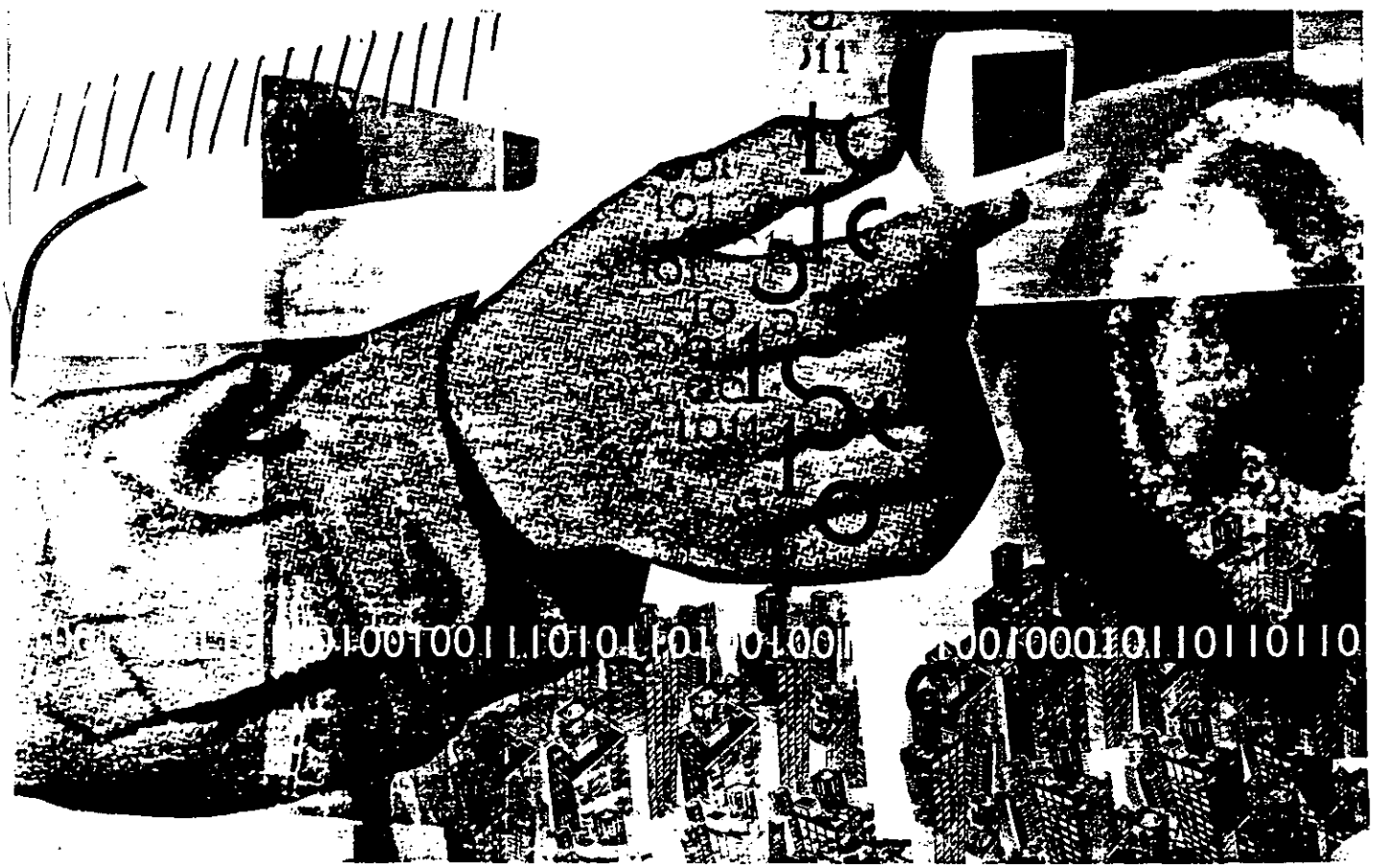

ILLUSTRATION BY PETER HORVATH

SCHEDULE 2-2

American Express is starting to employ voice technology to combat online fraud and assist applicants

cutting your phone bill by as much as 90%.

Voice-on-the-Net is serious business, too. Companies around the globe are beginning to use new systems based on Net technology in place of their old phone networks—not only because they're cheaper but also because they can do so much more. In its New Jersey offices, brokerage giant Merrill Lynch & Co. is installing 6,500 Internet phones that will let employees have free conference calls over the Net and trade instant text messages at the same time. That's just the first step in the company's plan to convert its entire global network to let all 67,200 employees do the same. Compaq Computer Corp. is expected to launch a massive initiative within the next month that will let visitors to its Web site click on an icon to speak live to a company representative. And American Express Co. is using voice technology to combat fraud. When it suspects that someone is trying to use a stolen credit card online, an AmEx employee can zip a text message to the person and then start up a voice conversation over the Net. If the person can't answer certain questions, such as the cardholder's mother's maiden name, the transaction won't be processed. "We can actually use this technology to ask additional questions and go through a verification process," says Jeff Fleischman, vice-president of interactive services at American Express.

All this adds up to the biggest change to hit telecommunications since the invention of the telephone 124 years. Today's phone technology is basically a souped-up version of the 19th Century system. It converts sound into electrical waves and shoots it across copper wires and optical cables.

Internet technology is completely different. It turns sound, like the human voice, into digital form and breaks it into chunks of data for transmission. That allows many calls to share the same phone line. Voice-on-the-Net is cheaper, and it opens up the communications field to a flowering of innovation. While the old phone system was tightly controlled by a handful of companies,

Special Report
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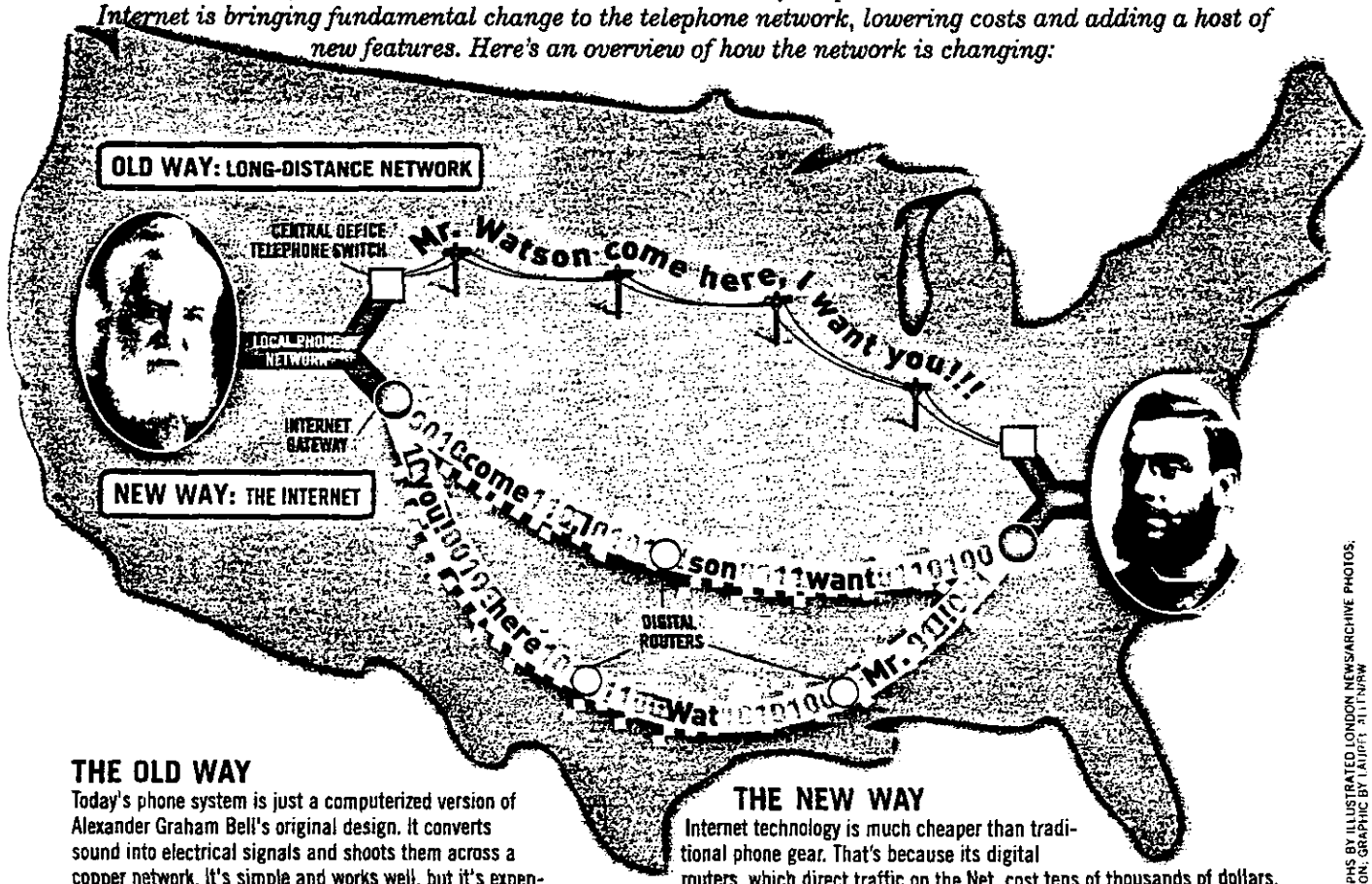
BIRTH OF A NEW COMMUNICATIONS NETWORK

It was 124 years ago when Alexander Graham Bell made his first phone call to Thomas Watson. Now the Internet is bringing fundamental change to the telephone network, lowering costs and adding a host of new features. Here's an overview of how the network is changing:



THE OLD WAY

Today's phone system is just a computerized version of Alexander Graham Bell's original design. It converts sound into electrical signals and shoots them across a copper network. It's simple and works well, but it's expensive. The switches that direct traffic across the network cost millions of dollars. And each call uses an entire circuit. That's like every car on the highway getting its own lane. The result: Long-distance calls cost about 10¢ a minute.

THE NEW WAY

Internet technology is much cheaper than traditional phone gear. That's because its digital routers, which direct traffic on the Net, cost tens of thousands of dollars, not millions. What's more, each piece of data shares a line with data from other calls, just as cars share a highway lane. Parts of the same conversation often travel different paths, taking whatever route is available. The result: Long-distance calls can cost as little as 2¢ or 3¢ a minute.

(L TO R) PHOTOGRAPHS BY ILLUSTRATED LONDON NEWS/ARCHIVE PHOTOS, GRANGER COLLECTION; GRAPHIC BY LAURA MURRAY

SCHEDULE 2-3

OHRMUNDT: *The Chicago architectural project manager uses audio on the Net to troubleshoot construction problems*

the new technology is being developed by a host of fast-moving companies in Silicon Valley and the rest of techdom. The outlook: Voice-on-the-Net, which accounted for less than 1% of global telecom traffic in 1999, is expected to surge to 17% by 2003 and more than 30% by 2005, according to U.S. Bancorp Piper Jaffray. "I think voice over [the Net] is an inevitable outcome of technology," says C. Michael Armstrong, the chairman and CEO of AT&T, which is investing billions in Internet telephony.

The move of voice traffic to the Internet will force wrenching change on established telecom players like AT&T. While they used to keep the same equipment for up to 30 years, they now have to replace some gear every 24 months or so in order to keep up with competitors that are buying the latest technology from the computer industry. To make matters worse, prices for their core telephone services are plunging as lower-cost alternatives emerge. To stay on top of the changes, AT&T agreed on Mar. 31 to lead a coalition that is investing $1.4 billion in Net2Phone, a leading provider of phone services over the Net. AT&T also is preparing to offer voice-on-the-Net service over its cable networks.

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Even more vulnerable are overseas phone companies that have been living off international phone rates that are sky-high. For example, people in Afghanistan who use Net2Phone to call the U.S. pay $1.13 per minute compared with more than $5.50 per minute without the service. Not surprisingly, many phone companies have fought off voice-on-the-Net services. They were illegal in Japan until last year, and Telefonos de Mexico has been trying to shut down Net-based services offered by AT&T and British Telecommunications PLC.

RELIABILITY. The transition to Net technology won't be easy for corporations and other customers either. Spokane had to redo part of its $19 million project last summer because of technical glitches like strange pauses in conversations and scratchy music when callers were put on hold. Another big hurdle is reliability. Calls over the traditional system are completed on the first attempt 99.999% of the time, and even if the power goes out, the network continues to work. The Internet, or people's connections to the Net, fail all the time—and if the power goes out, so does a phone link to the Net.

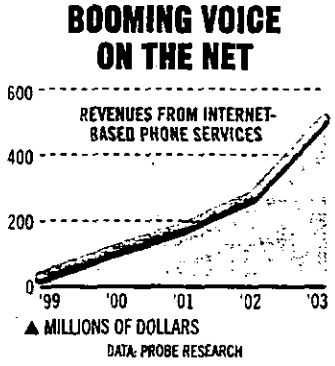
Carriers are rushing to fix these problems. AT&T originally installed batteries in people's homes to make sure that its local telephone service would continue to work even when the power went out. However since AT&T would lose some control with that approach, it later decided to put power supplies for each neighborhood in its own facilities. Qwest Communications In-

TODD BUCHANAN

New voice services could be a boon to electronic commerce by helping confused shoppers

Internet telephony is becoming so contentious an issue that in China, two entrepreneurs were jailed

ternational Inc. and other carriers are investing in their own Internet equipment so they don't have to depend on the sometimes unreliable public Net.



Still, the sheer economic benefits of voice-on-the-Net keep the market growing. Geoequipos SRL, a mining equipment company based in Peru, slashed its international phone bill 90%, to $150 a month, by using a Net telephone service from an upstart called deltathree.com Inc. Parsons Brinckerhoff Inc., an engineering company in New York, has cut the cost of its conference calls in half, to $3,000 a month, by conducting them on the Net. And Merrill Lynch's new Net phones in New Jersey are expected to reduce its telecom bill by one-third, people familiar with the project say.

UP FROM WALKIE-TALKIES. Cost savings will pale in comparison to the innovation that lies ahead. Voice-on-the-Net will lead to profound changes in how we communicate. A company called Voyant Technologies Inc. in Westminster, Colo., plans to make its click-to-chat technology available for handheld Palms and other devices in about three months. That means you could make a Net phone call with your electronic organizer—and wouldn't need to carry around a cell phone. Tellme Networks in Mountain View, Calif., and other companies are developing voice-recognition technology that will allow people to navigate the Net from a phone by asking verbally for things like stock quotes or movie locations. And Evoke Inc. in Louisville, Colo., is working on software that will let people make cheap video calls over the Net. "I believe that our services will be as popular and pervasive as e-mail and the telephone," says Evoke CEO Paul A. Berberian. "We believe these tools will be used every single day in the corporate environment."

If that happens, the new voice services could have a powerful effect on electronic commerce. Right now, 80% of people who begin a transaction on the Web cancel it before it's completed. While market research on the topic is thin, that could be because those folks get confused, or they're worried about security. If they could speak live to a company representative, that completion rate would likely shoot up. "The fact that you can click on the button of a Web page and instantly talk to someone over the Internet will make people feel more comfortable about buying things online," says AmEx's Fleischman. Market researchers agree. "Companies that voice-enable their Web sites will achieve an immediate improvement in the number of sales that are completed—in the realm of 50%," says Charu Gupta, an analyst with Renaissance Strategy in San Francisco.

Special Report
TELECOMMUNICATIONS

It's hard to believe that voice-on-the-Net didn't exist until five years ago. It began with a pioneering Israeli company called VocalTec Communications Ltd., which developed early commercial versions of the hardware and software for making calls on the Net. Users downloaded the software from the Web for a fee. Once installed on a PC with a speaker and a microphone, free calls could be placed to other similarly equipped computers around the world. But there were drawbacks: Both users had to be logged on to the Internet at the same time and the callers had to take turns pushing a button to talk, just as if they were using walkie-talkies. To make matters worse, the sound quality was terrible.

The big break occurred a few years later when VocalTec developed a device called a gateway that allowed people to make Internet calls with regular phones. The gateway serves as a bridge between the Internet and local phone networks around the world. It essentially allows callers to bypass the long-distance networks. That means you can call around the world for the price of a local call. Because the service was so much easier to use and the quality had improved substantially, upstart phone companies like Net2Phone began buying VocalTec's gateways and marketing the service aggressively. In some markets, such as South Korea, voice-on-the-Net accounts for 20% of international calls.

Internet telephony is becoming an extremely contentious issue among major phone companies. AT&T and British Telecom, through their Concert joint venture, have created a clearinghouse that finds the cheapest international route for other phone companies. Sometimes that's a traditional telephone cable, and, increasingly, it's an Internet-based network. "We have been using voice over [the Net] to carry traffic to countries such as Mexico, China, and Vietnam," says Cathy-Ann Martine, president of Concert international carrier services. In contrast, consider China. The country imprisoned Chen Zhui, 36, and Chen Yan, 30, last year after they launched a tiny dis-

Telephones on Steroids

Forget Caller ID. Routing voice calls over the Net opens up a new world of services—while cutting costs. Here are some examples:

FASTER, BETTER, CHEAPER The telecom budget for School District 81 in Spokane, Wash., was rising by $100,000 a year until it switched to voice-on-the-Net. Now, costs will be frozen at the current $800,000 a year for the next five years and drop to $400,000 after that. And the new system can transmit data 15,000 times faster than before.

SOUPED-UP CONFERENCE CALLS At engineering firm Parsons Brinckerhoff, managers hold conference calls on the Web using a service called Evoke. That has cut their monthly conference call bill in half, to $3,000, and lets them view the same PowerPoint slides while they talk.

CLICK TO TALK In a bid to boost sales, many e-commerce sites are increasing customer service by adding click-to-talk buttons. For example, the online jewelry retailer Miadora lets customers with a question click on an icon on its Web site to speak to a live sales agent.

VOICE-ENABLED CHAT ROOMS Many Web portals now allow people to talk to one another without a phone, using only a PC equipped with a microphone and a speaker. For example, Excite@Home has added voice capabilities to its formerly text-only chat rooms using technology from Lipstream.

count phone service using Internet technology. The brothers were released on appeal, and now China has issued a limited number of licenses for voice-on-the- Net. Taiwan, Vietnam, and Singapore continue to limit use of the technology.

Although voice-on-the-Net technology was developed for discount phone service, it's now evolving in myriad ways. Here's an example. Back in February, Justin Ohrmundt, a project manager at the architecture firm Grund & Riesterer in Chicago, faced the task of inspecting all 30 buildings in Walpole Point, a condo development on the Windy City's North Side. A real estate firm called Prairie Management & Development Inc. had hired Ohrmundt's firm because it needed to know if it had budgeted enough money to fix up the property. No problem: Ohrmundt used his digital video camera to shoot a snapshot and record a brief voice clip about any problems. He then sent the digital photos and audio descriptions over the Net to a group of people at Prairie Management and his own firm. The job was done in one week instead of the usual three—and the clients

YAHOO! LOOK WHO'S YAKKING AWAY

At the end of last year, John Garrett discovered that he could use Yahoo!'s Web site to reach out and talk to someone. Garrett is one of 70 employees at eFrenzy.com, a San Francisco startup that created an online marketplace for services such as housecleaning and tax preparation. Now when eFrenzy employees who are traveling want to chat verbally with their cohorts, they simply click on a button on Yahoo's instant messaging service and gab away. "It's definitely handy," says Garrett, a senior manager of business development. "We generally talk about different deals or get updates on day-to-day activities."

RALSTON: *At the intersection of old and new communication*

Leave it to Yahoo to lead the way to the talking Net. The giant portal was one of the first sites to add live voices—in addition to typed communications—when it launched the latest version of its instant messaging service last May. Then in October, Yahoo introduced voice in its chat rooms. "There's this convergence of the old style of communication with the new communication, and we want to play a major role at that intersection," says Geoff Ralston, Yahoo's vice-president and general manager for communication services. Hard on Yahoo's heels, rival portal Excite rolled out voice chat last August and, on Apr. 10, America Online Inc. unveiled a me-too phone service in the newest version of its Instant Messenger.

They'll have to move fast to catch up to Yahoo. Already, the company has talkified Yahoo! Clubs, which are similar to chat rooms and are formed around specific topics such as day-trading, movies, or erotic wrestling. This April, Yahoo unveiled a new version of its Messenger product that allows users to conduct hands-free conversations instead of communicating walkie-talkie style by pressing a talk button on their computer as they did in the past. What's more, the new Messenger has been woven into Yahoo's news section so that people reading a story about, say, the Cuban boy Elián González can click on a conversation link and rant away to others visiting that section. "We want to have the broadest set of communication services out there," says Yahoo senior producer Brian Park, who heads the Messenger group. "And voice is just the next step."

Cutting-edge corporate users like eFrenzy.com's Garrett are finding plenty of new uses for the services. Garrett thinks voice chat is helping his co-workers become more productive because they can quickly jump from text chat to voice chat to iron out a sticky issue. His company is thinking of letting the buyers and sellers who come to its site for services use Yahoo! Messenger's voice chat to haggle over price or other terms. Garrett figures talking would probably make negotiations move faster and could foster trust between buyers and sellers.

Yet there is still a lot of work to do done before mainstream Web surfers embrace the audible Web. Park says voice services tend to be popular with Generation Y teens, geeks, gadgeteers, and New Economy road warriors like Garrett. But most consumers and business users have shied away. That's partly because voice conversations on the Web are hampered by poor security and a snarl of technology issues. The biggest problem is poor audio quality. At a recent demonstration of Yahoo's voice technology, having a conversation proved irksome because the voices were choppy and hard to hear—much like dialogue over a CB radio. "I don't think the phone carriers have much to worry about," says analyst John Dalton of Forrester Research. "If anyone thinks this is a reliable communications channel they're smoking crack."

For the time being, Yahoo's voice services are more about creating community than creating commerce. But if Net voice technology continues to improve, voice services could become a critical part of online communications for consumers and businesses.

By Spencer E. Ante in Silicon Valley

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Before more major corporations plunge in, security must improve and agreement on one standard must be reached

could use the Net to see more accurately than ever before what problems they faced. "We're a small firm, but we can update our technology faster than larger firms," says Ohrmundt. "That helps us compete."

The Web also is doing wonders for communications within companies. Managers at the engineering firm Parsons Brinckerhoff used to gather once a year for an annual training session at company headquarters in New York. The trip has been replaced with 12 monthly conference calls on the Web. "The total cost is about $200, and that includes the cookies," says Stephanie Parson, the company's chief information officer. "But more important, we are communicating more often." And more effectively. During the conference calls, participants can send Parson instant text messages, which she can answer privately or share with the group. The conference software also lets the participants view PowerPoint slides as they talk to one another.

CLICK FOR HELP. Voice-on-the-Net is likely to be the biggest development in customer service since the invention of the 800 number. While Compaq Computer won't comment, people familiar with the company's plans say it will roll out the technology on its site within the next month. That will allow customers who press "click-to-talk" icons on Compaq Web pages to speak live with customer service agents. American Express is about to begin a 90-day trial of similar voice technology, from Lipstream Networks Inc., on its Web site. If the trial works, AmEx plans to integrate voice throughout its Internet operations.

There are a few big challenges for voice-on-the-Net before other companies follow suit. One major issue is that the medium is split by a series of currently incompatible technology standards. That means that someone using Yahoo for voice chat can't talk to another Web surfer who is using AOL's technology. The issue may get ironed out over the next year. AT&T's investment in Net2Phone, which also counts AOL and Yahoo among its investors, is designed to make Net2Phone the industry standard for both voice and text instant messaging. Once a standard is clear, businesses can use voice-on-the-Net to communicate with many more people than previously possible.

That's hardly the only challenge for the talking Internet. Instant messaging's "presence" function, which announces whether that person is online, isn't that useful yet because many people are online all day, especially in office environments, even when they aren't sitting at their desk. Newer versions of instant messaging software are expected to correct this problem by the end of the year. What's more, security is poor, so that in some cases outsiders may be able to listen to private conversations. "It is vulnerable to security hacks," says Jeff Pulver, CEO of pulver.com, which publishes voice-on-the-Net research. Future generations of the software should become more secure.

Perhaps the biggest problem for voice-on-the-Net is that sound quality can be dreadful. In some cases, people can't even understand each other because of delays and interference. Carriers have been boosting quality in recent months by integrating their Internet telephony equipment with a high-quality data transmission standard called asynchronous transfer mode. In addition, some Net voice players, including Lipstream, are installing their own servers so their can improve the quality of their service.

During the next few years, these new voice technologies will find as many applications as there are users. Back in Spokane, the new network has allowed the school district to create a special class for hearing-impaired students, who use videoconferencing gear to work with teachers many miles away. "Yes, the network is faster, but that is not the point," Schweikhardt says. "It is allowing us to do things we could never do before." Alexander Graham Bell, who began his career tutoring deaf students, would have been pleased.

By Steve Rosenbush in New York, with Bruce Einhorn in Hong Kong

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DOUGLAS LEVERE/COM

PARSON: *The engineering firm exec likes conference calls on the Web*

EUROPE SWOONS FOR VOICE-ON-THE-NET

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Cyril Dupas, speaking from his call center in Paris, describes the moment of surprise. It comes when French Web surfers click on an icon on the Capitol.fr page. Suddenly, without cutting off the computer and dialing the phone, they find themselves speaking to Dupas. "Most of them are new to the Internet, and it takes them a moment to collect themselves and speak to the computer," he says.

Talk about getting cozy with customers. Dupas, who works for Capitol, a new French online brokerage, uses Internet telephony to guide prospects, sometimes click by click, through the Web site. He shows them the portfolio information at hand and soothes concerns about hackers intercepting online transactions. Dozens of times a day, he and his 11 colleagues in the call center bring the deal to a close, leading new Netizens to open accounts at Capitol. So far, the sole French brokerage using Internet telephony has more than met its goals for signing up new customers. While its current 4,000 clients is tiny by American standards, the goal was to land 7,000 or 8,000 by the end of the year. "Now we're expecting twice as many," says company President Dominique Velter.

MARKETING TOOL. While Europe is a year or two behind the U.S. when it comes to exploiting the Internet, voice on the Net holds true appeal for the Continent. For starters, it promises relief from phone bills, which are on average 40% higher in Europe than the U.S. "For now, price is the key selling point," says Stefan Krook, founder and CEO of Sweden's Glocalnet, one of Europe's Net telephony pioneers. But in the coming year, many European companies like Capitol are likely to hitch the computer to the phone and employ it as a marketing tool.

For Velter, voice-on-the-Net offered a solution to a thorny dilemma. As a marketing director at institutional brokerage Viel & Cie, she persuaded the board a year and a half ago to let her start up an online brokerage to make the Paris firm's first push into the French consumer market. Trouble was, her target population was one of Europe's slowest in embracing the Net, with only 15% of the population online even today. Worse, the French have long shied away from equity investments, seeing them as schemes that enrich insiders while fleecing novices. Only 12% of French adults own stocks, compared with about 50% of Americans. Velter had to reach customers through machines they didn't understand to sell them products they feared. "We had those two things going against us," she admits.

Enter Olivier Hersant. The former Cisco Systems Inc. executive had a Net telephony startup, called NetCentrix, based in the French city of Caen. Looking for financing, Hersant was eager to come up with a corporate customer. His "talking computer" technology appealed to Velter because it would help her market Capitol. Better yet, it could be put into place quickly. She counts on her fingers. "We were up and running in a matter of months," she says. "And when we move to bigger offices, the system just moves with us." She won't disclose the cost of the system or detail savings, but she says that the marketing advantages far outweigh the expenses.

IN A SNAP. Now that she has linked Capitol's computers to the phones, Velter is planning to make a host of financial information available to customers on their cellular telephones. Capitol is testing chat programs that will permit users to scan their portfolios while talking with a broker—all on their mobile phones. With time, she sees Capitol barging straight into the mobile-phone business, too. The plan is simply to buy wireless capacity from an established carrier and provide Capitol's own telephone service to customers. "Offering phone service will be a great way to keep customers loyal," she figures.

For now, she's concentrating far more on marketing than on the savings from cheap phone calls. But those savings will become more important if Capitol spreads, as planned, across Europe in the coming two years.

If voice-on-the-Net works as promised at Capitol, the technology could be used in the trading operations of its parent company, $310 million Viel & Cie. There, telephone bills account for more than 10% of total costs, second only to salaries. And traders should take to the new technology in a snap. Unlike Capitol's customers, they're old hands on computers—and they even know a thing or two about stocks.

By Stephen Baker in Paris

Continued on page 196

Paris online broker Capitol uses Net telephony to get cozy with customers

VELTER: "WE WERE UP AND RUNNING IN A MATTER OF MONTHS"

WHERE THE MONEY WILL BE

Special Report
TELECOMMUNICATIONS

It's little wonder that companies making the equipment for voice-on-the-Net are catching investors' attention. Even after the recent market tumble, many of their stocks have enviable long-term returns. Check out VocalTec Communications Ltd. The Israeli company that sells innovative gear for sending telephone calls over the Internet has racked up a 40% return in the past year. "Now that the quality [of Internet telephony equipment] has improved, it's clear that it's going to be the backbone of the international telecommunications world," says Elon A. Ganor, the company's chief executive.

Wall Street seems to agree. Over the past three years, the stocks of the 55 companies in Piper Jaffray's Net Telephony Index have surged sevenfold, while the Standard & Poor's 500-stock index has doubled. Look for more stellar returns in the future as the service becomes more popular. Market research firm Probe Research Inc. predicts that revenues from Internet telephony services will soar from $332 million in 1999 to $5.3 billion in 2003. "Money will be made there," says Brian Hayward, manager of the $4 billion Invesco Telecommunications Fund. In fact, Invesco counts Nortel Networks and Cisco Systems among its top stock market holdings, in part because of the potential of their Internet telephony businesses.

MOST LIKELY STANDARD. Where are the best investments? Bet on a couple of key trends. For starters, the companies that are rolling out Net telephony need to agree on standards. Right now, you can't use Yahoo! Inc.'s technology to talk to somebody who's using Netscape Communications Inc.'s voice-ready browser. The company that is most likely to emerge as the standard-bearer for Net telephony is Net2Phone Inc. Just last month, AT&T, British Telecommunications, and Liberty Media agreed to invest $1.4 billion in the company as part of their plans to use its technology. Separately, Web giants America Online Inc. and Yahoo have invested in the company. With such heavyweight backers, Net2Phone has a head start on the contenders. "We think Net2Phone is the world-class company in this market—it will become the standard," says John C. Petrillo, AT&T's executive vice-president for corporate strategy.

There are other innovative companies as well. Phone.com Inc., based in Redwood City, Calif., has been a leader in developing software that will let cell-phone users browse the Web. Now it's pushing into new voice applications. On Feb. 10, it paid $300 million for @Motion Inc., a Redwood Shores (Calif.) maker of software that links Web sites to mobile phone networks. Together, the two companies hope to develop the technology that will let someone start a conversation on the Web, then transfer the call to their cellular phone—all without breaking the connection. "We are a good bridge," says Dave Weinstein, co-founder of @Motion.

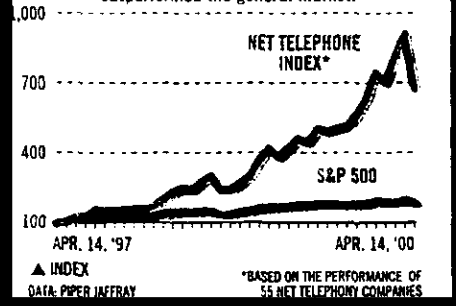
Indeed, companies that straddle the old telecommunications world and the new cyberspace frontier have bright prospects. Nortel Networks is a prime example. The Canadian company has racked up a sizzling 189% stock return over the past year because it has been able to combine its telecom expertise with the networking knowhow of Silicon Valley's Bay Networks, which it acquired in 1998. Partly because of its growing voice on the Internet business, analysts expect its earnings to rise 25% over the next two years.

There are more promising companies on the way. Sonus Networks Inc. in Westford, Mass., filed for an initial public offering in March and analysts think the company is strong enough to go public in the current market turbulence. The company makes gateways that connect the old telephone networks and the Internet. It has deals with Williams Communications and Global Crossing Ltd. and more deals are expected soon. "They are at the accesss point (to the Internet), and that is where everything is happening," says Edward Jackson, a managing director and senior equity analyst at U.S. Bancorp Piper Jaffray Inc. With that kind of backing, the company may just keep up the hot track record of Net telephony stocks.

By Jim Kerstetter in Silicon Valley

INVESTING IN VOICE ON THE NET

Wall Street is enthralled with the potential of voice on the Net. Companies in this hot new sector have outperformed the general market.



Stock Stars

The top five voices in Net stocks

NORTEL NETWORKS (Brampton, Ont.) The venerable phone-equipment maker offers a wide range of voice-on-the-Net products. One-year return: 189.2%.

NATURAL MICROSYSTEMS (Framingham, Mass.) Makes gateways that serve as a bridge between phone networks and Internet-based networks. One-year return: 143%.

CISCO SYSTEMS (San Jose, Calif.) Corporate networking king is trying to muscle into the telecom field. One-year return: 127.8%.

BROOKTROUT (Needham, Mass.) Telecom-equipment maker now offers broad platform for voice-on-the-Net. One-year return: 53.5%.

VOCALTEC COMMUNICATIONS (Herzliya, Israel) The pioneer of hardware and software for voice-on-the-Net is focusing more heavily on software and e-business. One-year return: 46.2%.

DATA: PIPER JAFFRAY

Federal Communications Commission
Washington, D.C. 20554
May 18, 1999

Dale Robertson
Sr. Vice President
SBC Communications, Inc.
1401 I Street, N.W., Suite 1100
Washington, D.C. 20005

Re: Separations Treatment of ISP-Bound Traffic

Dear Zeke:

We have reviewed SBC's 1997 and 1998 ARMIS filings, together with letters dated January 20, 1998, and April 2, 1999,[1] and find that SBC's jurisdictional classification of traffic bound for Internet Service Providers (ISPs) does not comport with Commission decisions. According to SBC, the ISP-bound traffic of Southwestern Bell Telephone Company, Pacific Bell, and Nevada Bell is being identified as interstate rather than intrastate for separations and reporting purposes, starting with 1997 data.[2] The result of reclassifying ISP-bound traffic as interstate is that the associated traffic-sensitive costs are also being identified as interstate.

Although the Commission has ruled that ISP-bound traffic is largely interstate in nature,[3] the Commission up to now has consistently characterized the traffic-sensitive costs associated with ISP-bound traffic as intrastate for jurisdictional separations purposes. The Commission noted ten years ago that ESP traffic (which includes ISP-bound traffic) "is classified as local traffic for

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[1] Letters from B. Jeannie Fry, Director - Federal Regulatory, SBC, to Ken Moran, Chief, Accounting Safeguards Division, FCC, on January 20, 1998, and April 2, 1999.

[2] *See* SBC January 20 letter at 1-2.

[3] The Commission has recognized that enhanced service providers (ESPs), including ISPs, use interstate access services. *See, e.g.*, MTS and WATS Market Structure, Memorandum Opinion and Order, 97 FCC 2d 682, 711 (1983) ("[a]mong the variety of users of access service are . . . enhanced service providers"); Amendments of Part 69 of the Commission's Rules Relating to Enhanced Service Providers, Order, 3 FCC Rcd 2631 (1988) (referring to "certain classes of exchange access users, including enhanced service providers"); Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Inter-Carrier Compensation for ISP-Bound Traffic, Declaratory Ruling and Notice of Proposed Rulemaking, FCC 99-38, released February 26, 1999, at para. 5 (*Reciprocal Compensation Order*) ("the Commission has recognized that enhanced service providers . . . including ISPs, use interstate access services"); *Id.*, at note 87 ("ISP-bound traffic is non-local interstate traffic").

SCHEDULE 3-1

separations purposes," with the result that traffic-sensitive costs associated with ESP traffic are apportioned to the intrastate jurisdiction.[4]

Moreover, the Commission reaffirmed that analysis early this year. The Commission observed that, "although recognizing that it was interstate access, the Commission has treated ISP-bound traffic as though it were local."[5] The Commission emphasized that its exercise of jurisdiction over this traffic is not inconsistent with "the Commission's decision to treat ISPs as end users for access charge purposes and, hence, to treat ISP-bound traffic as local . . . ."[6] The Commission explained that, because ISPs acquire their connections under intrastate business tariffs rather than interstate access tariffs, the revenues associated with ISP-bound traffic traditionally have been classified as intrastate.[7] The Commission thus concluded that carriers should continue to classify the associated costs as intrastate to prevent a mismatch in the treatment of costs and revenues. Specifically, the Commission stated:

> [w]ith respect to current arrangements, we note that this order does not alter the long-standing determination that ESPs (including ISPs) can procure their connections to LEC end offices under intrastate end-user tariffs, and thus for those LECs subject to jurisdictional separations both the costs and the revenues associated with such connections will continue to be accounted for as intrastate.[8]

In view of these Commission rulings, the Bureau directs SBC to reclassify its 1997 and 1998 ISP-bound traffic, and the associated traffic-sensitive costs, as intrastate for separations and reporting purposes. Moreover, until the Commission decides otherwise,[9] SBC should treat such traffic and costs as intrastate. We also direct SBC to correct and refile the 1997 and 1998 ARMIS data for

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[4] Amendments of Part 69 of the Commission's Rules Relating to the Creation of Access Charge Subelements for Open Network Architecture, Notice of Proposed Rulemaking, 4 FCC Rcd. 3983, 3987-88 (1989).

[5] *Reciprocal Compensation Order* at para. 23.

[6] *Id.* at para. 16.

[7] *Id.*, at para. 5.

[8] *Id.*, at para. 36. Most of the LECs' costs of providing ISPs with business line service consist of traffic-sensitive costs, such as local switching costs, which must be allocated entirely to intrastate operations. These traffic-sensitive costs are jurisdictionally separated based on relative traffic measurements, which for this service must be classified as entirely local as explained above. The remaining service costs consist of non-traffic-sensitive costs, such as loop costs, which are allocated mostly to intrastate. Hence, incumbent LECs traditionally have allocated most of the service's total cost to intrastate operations.

[9] The long-term treatment of ISP-bound traffic has been raised as an issue in the pending Separations Reform proceeding and is under consideration by the Federal-State Joint Board on Separations. *See* Jurisdictional Separations Reform and Referral to the Federal-State Joint Board, Notice of Proposed Rulemaking, 12 FCC Rcd 22120 (1997). *See also* Public Notice, "Report Filed by State Members of Joint Board on Jurisdictional Separations," DA 99-414 (rel. February 26, 1999).

Southwestern Bell Telephone Company, Pacific Bell, and Nevada Bell. In addition, SBC should send Mr. Kenneth P. Moran, Chief, ASD, a written analysis showing the impact of this correction on the 1997 and 1998 revenue requirements for each of these companies. This information should be submitted within two weeks of the date of this letter. If you have any questions regarding this matter, please contact Chuck Needy at (202) 418-0855.

Sincerely,

Lawrence E. Strickling

Lawrence E. Strickling, Chief
Common Carrier Bureau