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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order instituting investigation on the Commission's own motion to determine the extent to which the public utility telephone service known as Voice over Internet Protocol should be exempted from regulatory requirements.	FILED PUBLIC UTILITIES COMMISSION FEBRUARY 11, 2004 SAN FRANCISCO OFFICE INVESTIGATION 04-02-007

ORDER INSTITUTING INVESTIGATION

Summary

By this order we initiate an investigation to consider the appropriate regulatory framework that should govern the provision of Voice over Internet Protocol telephony (VoIP). VoIP is a service using Internet technology that is utilized today by business and residential customers. In offering ubiquitous real-time, point-to-point voice service, VoIP competes with traditional providers of voice telephony, including incumbent telephone companies (ILECs), competitive local exchange carriers and cable telephony providers. At the same time, the ILECs and cable operators themselves have deployed, or have announced plans to deploy, VoIP on a commercial basis to business and/or residential customers over the next few years. Many of these providers, such as SBC and TimeWarner, are actively migrating customers to VoIP technology. Recently, Time Warner filed an application with the Commission to provide local and intrastate VoIP service in California. VoIP represents the next generation technology for the provision of voice and other services.

Providers of Internet-based voice communications may face very few barriers to entry into the local and long-distance telecommunications markets. Those who are not existing providers (i.e., cable, interexchange and local exchange carriers) represent an entirely new class of potential competitors to existing telephone service providers. VoIP providers assert that they enjoy cost advantages over other providers because they need not build expensive switching facilities, can use the existing Internet infrastructure to handle voice transmissions originated by their customers, and are not required to amortize historic fixed costs. In addition, VoIP providers do not pay the same fees and charges applicable to other providers. VoIP providers often charge lower rates than either ILECs or CLECs. The potential benefit to consumers from the entry of VoIP providers may be significant.

Some VoIP providers also offer their customers features unavailable from an existing wireline telephone provider or reseller, for example, the ability to make and receive a phone call from the same number and at no additional charge from any high-speed Internet connection in the world.

As VoIP is offered to the mass market, major public policy issues arise. These include the impact of VoIP on critical universal service programs designed to ensure accessible and affordable telephone service to low-income customers, customers in high-cost and rural areas, and to disabled customers; VoIP's ability to address public safety and reliability concerns; VoIP's impact on intercarrier compensation for use of the Public Switched Telephone Network (PSTN); VoIP's impact on rapidly dwindling numbering resources; and VoIP's impact on a fair, competitive telecommunications market for all providers. As regulators, we must address and carefully consider these public policy issues in a manner that balances the interests of providers, consumers and competitors alike. In striking the appropriate balance, we are mindful of the need to minimize regulation so as not to stifle the continued development of VoIP service while simultaneously fulfilling our responsibilities under state law to realize state-mandated policies and objectives on behalf of all California consumers.

Even as some public policy problems arise, other major problems may go away. For example, "slamming," the illegal switching of customers, becomes difficult and perhaps impossible. As a result, regulations aimed to protect consumers from slamming may be unnecessary for VOIP providers.

What is VoIP: VoIP is a public utility telecommunications service that delivers voice and other related services using Internet Protocol (IP) technology. IP is a type of digital transmission technology over which services are provided. Voice using IP is a substitute for voice using traditional digital protocols, such as Time Division Multiplexing (TDM). VoIP is similar to digital protocol interfaces of two decades ago enabling existing customer telephone equipment to transmit voice calls under a new and different protocol. In both cases, the customer's analog voice signal is converted into a digital format and transmitted as data to the point of termination, at which point the voice is converted back to an analog format. In both cases, there is no net change in form or content of the voice message, and no net protocol conversion. VoIP providers offer a telephone number and a network translator device to the customer.

Like voice transmitted using TDM digital protocol, VoIP transmissions interconnect with the PSTN and utilize telephone numbers from the North American Numbering Plan (NANP). VoIP requires a customer to have a high-speed connection to the Internet. Typically, this connection is either a Digital Subscriber Line (DSL) offered by the incumbent telephone company, a competitive local exchange carrier or a high-speed cable line offered by cable operators. While these high-speed services require their own continuous electric supply (and supply their own backup), VoIP service itself is dependent on the customer also having a continuous supply from their electric service provider to power the network translator device, which is generally not connected to a computer. VOIP providers may take the same route and include battery backup to maintain service.

VoIP may be provided between computers, between a standard telephone and a computer, between a computer and a standard telephone, or between two standard telephones. With the exception of computer-to-computer transmissions, all other transmissions interconnect with the PSTN.

Viewing VoIP functionally from the end-user's perspective, and consistent with definitions in the Public Utilities Code, we tentatively conclude that those who provide VOIP service interconnected with the PSTN are public utilities offering a telephone service subject to our regulatory authority. Under Section 216(a) of the Public Utilities Code, a "public utility" includes "every telephone corporation … where the service is performed for … the public or any portion thereof." Under section 234(a), a "telephone corporation" includes "every corporation or person owning, controlling, operating, or managing any telephone line for compensation within this state." Section 233 defines a "telephone line" to include "all conduits, ducts, poles, wires, cables, instruments, and appliances, and all other real estate, fixtures, and personal property owned, controlled, operated, or managed in connection with or to facilitate communication by telephone, whether such communication is had with or without the use of transmission wires." Against this statutory backdrop, to the extent that a VoIP provider holds itself out to the public to offer for a fee voice telephony on a local or intrastate basis, it appears to qualify as a public utility telephone corporation in California. Cf. Commercial Communications, Inc. v. Public Utilities Commission, 50 Cal. 2d 512 (1958).

Our preliminary analysis suggests that similar to federal law, it is the functional nature of the service offered, not the technology used to deploy the service that determines whether a service qualifies as a public utility service under state law.[1] From an end-user's functional standpoint, the subscriber controls the form or content of the information sent and received when placing real-time, point-to-point voice calls anywhere the subscriber chooses. Placing such calls using IP technology does not appear to alter the fundamental character of the voice telephone call from the end user's standpoint.[2]

Penetration of VoIP: Penetration by VoIP providers into the voice telephony market is growing rapidly. Our Telecommunications Division (TD) has projected the penetration of VoIP over the next five years. Based on conservative estimates, by 2008 TD projects that VoIP will account for 40 percent to 43 percent of total intrastate telecommunications revenues in California. These projections assume no change in the number of residential and business access lines, and assume conversion rates from conventional voice service to

[1] Cf. 47 U.S.C. §§ 153(46) & 706.

[2] The IP technology used to transport a voice transmission is completely transparent to the calling and called parties. And, from the end users' standpoint, there is no net change in the form or content of the voice communication sent and received. Any protocol conversion utilized is merely to facilitate the provision (i.e., call set-up, routing) of the basic, voice service. Cf. 47 U.S.C. § 153(20) exempting from the definition of "information service" capabilities "for generating, acquiring, storing, transforming, processing, retrieving, utilizing or making available information via telecommunications" used for "the management, control or operation of a telecommunications system, or the management of a telecommunications service."

VoIP service of 10 percent for cable / residential; 5 percent for ILEC / residential; and 10 percent for ILEC / business. A copy of TD's projections is attached.

Currently, both SBC and Verizon are offering VoIP service to customers. As noted, Time Warner filed an application for operating authority with the Commission in order to offer VoIP on a local, intrastate basis to customers in California. Other providers in California include Vonage, 8X8, and Level 3 Communications.

Current Regulatory Framework: To date we have not enforced the same regulatory regimen on VoIP providers as we have for those who provide telecommunications services which do not use the Internet as a primary component of call delivery. VoIP providers therefore have not generally obtained operating certificates nor have they filed tariffs governing the terms and conditions of service, including those requiring reasonable customer notice prior to discontinuance of service and those protecting the customer’s proprietary information. VoIP providers claim that they do not offer a public utility telephone service. As a result, VoIP providers also have not contributed directly to California’s universal service funds, have not provided E911 service, and have not compensated ILECs via access charges for their origination and / or termination of VoIP calls on the PSTN. VoIP providers moreover have not provided access to telephone traffic records for law enforcement. In addition, VoIP providers have not obtained telephone numbers as carriers from the NANP Administrator, but have instead acquired them as customers of regulated carriers as do end-users of telephone service. We discuss a few of these areas in more detail below.

Impact of IP Telephony on Universal Service Programs: TD projects that by 2008, given current VoIP penetration rates, between $183 and $407 million in revenue will no longer be available to support California's five statutorily mandated universal service programs if the support for these programs continues to rely on surcharges placed on regulated revenues. These "public purpose" programs are the California High Cost Funds A and B, the Universal Lifeline Fund, the Deaf and Disabled Telecommunications Fund, and the California Teleconnect Fund for schools, libraries, rural health clinics and community-based organizations. Attached are TD's projections of the dollar impact of VoIP penetration on each of these programs. As the attachment shows, nearly half of the funding base needed to supported the state's mandated universal service programs may be lost if VoIP providers do not contribute program funds.

Impact of IP Telephony on Access Charges: Access charge payments represent 30 percent to 50 percent of intrastate revenue for small, rural local exchange carriers in California. Further, access charge payments represent about 30 percent of revenues of large telephone companies in California, which are used to offset a portion of the cost of basic telephone services offered by those companies. Revenue from access charges helps maintain affordable rates for telephone service in high-cost rural areas of the state. Because VoIP providers do not currently contribute to the payment of access charges, and if the current regulatory access charge scheme remains unchanged, sharp increases in VoIP growth could result in:

1. an accelerated consumer transition from services subject to access charges, such as toll services, to VoIP services.
2. a diminution of access and toll revenues, thereby reducing regulated revenues.

3. increases in regulated service prices, such as basic service, to offset regulated revenue reductions.
4. steep increases in public program surcharges to ensure basic telephone service is affordable in rural, high-cost areas of the state, because these customers cannot afford broadband connectivity or are currently beyond the reach of broadband networks.

Impact of IP Telephony on Public Safety: In California, years of state funded improvements have been made to 911 service to enable telecommunications providers and first responders to ensure the safety of California customers. In addition, law enforcement utilizes its right under federal law to monitor telecommunications services to combat criminal activity. Exempting VoIP providers from regulation raises concerns about public safety and law enforcement activities in local communities. On the other hand, VoIP technologies offer the possibility to provide more detailed emergency information about some user locations, e.g. PBX users, than available with current technology.

Impact of IP Telephony on Consumer Protection: Regardless of the type of telecommunications service they use, customers expect that basic consumer protections will be in place to safeguard their interests. For example, consumers expect clear and legible bills, access to live representatives to discuss billing and other questions, reasonable advance notice for termination of service, protection of proprietary information, and protection against cramming. VoIP providers are currently not being required to comply with Commission adopted regulations.

In addition, VOIP service relies on customer premises equipment which depends on a continuous power supply to remain reliable. Thus, to the extent that customers replace their conventional voice service with VoIP service, customers may not be aware that VoIP service could be terminated during a power outage, absent power back-up systems present on the PSTN.

Impact of VoIP on Numbering Resources: Federal and state regulators have been successful in slowing the explosive growth of new area codes. Each new area code places additional costs on businesses, adds complexity to the lives of residential consumers, and is inconvenient for all telephone customers. Under Federal Communications Commission (FCC) leadership, California has developed an effective set of rules that ensure that telecommunications providers receive the number they need and makes telecommunications providers efficiently utilize the number they have. VoIP providers currently utilize telephone numbers, but under FCC rules, they do not currently have to comply with protocols under the NANP, thereby potentially undercutting the concerted effort of regulators and carriers subject to the plan to manage scarce numbering resources.

In many ways, the issues presented by VoIP mirror those once presented by wireless providers. Wireless providers, like VoIP providers, offer nationwide service that is portable to the subscriber. Wireless providers, however, register with the California Public Utilities Commission, contribute to state (and federal) universal service programs, pay access charges for interconnection with the PSTN, are required to provide E911 service, and must comply with NANP protocols.

We have adopted different regulatory frameworks for various types of public utility communications services. These include:

1. The traditional cost of service approach applied to the regional carriers, such as Evans, Pinnacles or Volcano, which ties rates to costs, imposes close scrutiny of operations, and limits profits,
2. The "New Regulatory Framework" price cap approach applied to the larger incumbent carriers, including SBC, Verizon, Surewest and Frontier, which severs the link between operating costs and prices, shares profits and generally eliminates overview of operations,
3. The light handed approach we have applied to competitive carriers, such as AT&T, MCI and Sprint, which entails no downward price regulation and under which a carrier applies for and is granted authority to enter the marketplace, files pro forma tariffs (unless it elects not to do so in some cases), alerts the Commission and its customers if it expects to discontinue service, and like other carriers more rigorously regulated, submits annual reports with basic information comparable to that filed with the Securities and Exchange Commission,
4. The oversight approach applied to wireless carriers, such as Cingular, Verizon Wireless, AT&T Wireless and Sprint, under which the carrier submits a short registration form with the Commission, does not file tariffs, experiences no economic regulation, and makes no financial reports.

All carriers follow our rules for consumer protection, collect and remit public program surcharges, and comply with all other applicable statutes.

We are mindful of the fact that all of these regulatory frameworks impose some level of costs but they also confer benefits. Some of these costs and benefits may easily be quantified, but we recognize that many may not be.

<u>Scope of OII</u>: VoIP promises to offer great benefits to many Californians. At the same time, VoIP presents major public policy issues that require further examination. We must carefully consider the impact that VoIP will have on the

funding base for universal service programs that serve California's low-income customers and customers in high cost and rural areas, and on programs that ensure reasonable access to disabled customers. We must also consider the impact if VoIP does not pay access charges, thus not offsetting the network costs otherwise borne by customers who lack access to VoIP due to the absence of high-speed Internet access service in their regions. We are further concerned about public safety and reliability issues that VoIP presents by not offering ubiquitous E911 service, and by not remaining functional during power outages. In addition, given the depletion of scarce numbering resources in California in the past several years, particularly in Southern California, we must consider the impact of VoIP providers not being subject to NANP protocols. VoIP also presents issues of customer privacy, customer notice for discontinuance of service, cramming and slamming.

By this Order Instituting Investigation (OII) we wish to explore these issues in more depth and determine the appropriate regulatory framework that should apply to VoIP. We therefore seek information on the following issues:

1. Whether VoIP providers should be required to contribute directly to state universal service programs.
2. Whether VoIP providers should be required to provide E911 service at this time, and, if so, how.
3. Whether VoIP providers should be required to pay access charges to interconnect with the Public Switched Telephone Network.
4. Whether to recommend to the FCC that VoIP providers should be required to comply with the NANP protocols.
5. Whether VoIP providers should be subject to basic consumer protection rules, such as those governing disclosure of terms and conditions of service, billing information, customer privacy, service termination, and slamming / cramming.

6. Whether exempting VoIP providers from requirements otherwise applicable to traditional providers of voice telephony creates unfair competitive advantages or whether the introduction of competition via VoIP requires, in a future proceeding, modification of existing regulations to promote fair competition.
7. Whether the regulatory framework that governs the provision of VoIP should vary based on the particular market served. Specifically, some VoIP providers target large enterprise and some target residential customers seeking the equivalent of a "second line." Some VoIP services may be designed to be a complete replacement for conventional telephone service and others may not.
8. The costs and benefits of any regulatory framework that we might apply to VoIP providers.
9. To what extent, if any, would Commission regulation of VoIP providers serve the public interest.
10. Whether, in a future proceeding, the Commission should change the current system for financially supporting telecommunications universal service programs to prevent the erosion of revenues possible with the introduction of VoIP and other new technologies, and if so, how.
11. Whether the Commission should require VoIP providers to be subject to the current system of intercompany compensation arrangements or whether, in a future proceeding, the Commission should revise the current intercompany compensation arrangement scheme

Scoping Memo: We here announce preliminary determinations and scoping, as required by Rule 6(c)(2). This proceeding is preliminarily categorized as quasi-legislative. We see no need for evidentiary hearings, and will provide for the submission of written comments. Any interested party who believes that hearings are required shall make a request for hearings in their opening comments and indicate the nature of any evidence they would present were hearing to be held. Failure to make such a request in opening comments will be deemed a waiver of any request for hearings. Comments will be submitted on the following schedule:

Persons shall indicate their intention of being interested parties by notifying the Commission's Process Office	On or before 20 days after the mailing date of this OII
Concurrent opening comments and requests for hearing filed and served	On or before 45 days after the mailing date of this OII
Concurrent reply comments filed and served.	On or before 75 days after the mailing date of this OII
Draft decision published for comment	On or before 90 after the due date for concurrent reply comments
Final decision issue by Commission	First commission meeting at least 30 days after the draft decision is published for comment

The scope of the investigation is to consider the questions set forth above.

The ex parte rules applicable to this proceeding shall be those set forth in Rule 7(d) of the Commission's Rules of Practice and Procedure (Rules). As a quasi-legislative proceeding, ex parte communications are allowed without restriction or reporting requirement.

We anticipate that this proceeding will be resolved on the schedule set forth above and in no event will it conclude later than 18 months after the issuance of the scoping memo in this investigation, pursuant to Public Utilities Code Section 1701.5.

The determination only as to category is appealable pursuant to Rule 6(c)(1).

Findings of Fact

1. In offering ubiquitous real-time, point-to-point voice service, VoIP competes with traditional providers of voice telephony, including ILECs, and cable telephony providers.

2. Incumbent local exchange carriers and cable operators have also deployed, or have announced plans to deploy, VoIP on a commercial basis to business and / or residential customers in the next few years.

3. VoIP delivers voice and other related services using IP technology. Voice using IP is a substitute for voice using traditional digital protocols, such as TDM.

4. Many VoIP transmissions interconnect with the PSTN and utilize telephone numbers.

5. VoIP requires a customer to have a high-speed connection to the Internet.

Conclusion of Law

We tentatively conclude that VoIP that is interconnected with the Public Switched Network qualifies as a public utility telecommunications service.

IT IS ORDERED that:

1. Any interested person may request inclusion in the service list for this order instituting investigation (OII) by sending a letter or an e-mail (noting the docket number in the subject line), not later than 20 days after the mailing date of this OII to the Commission's Process Office (process_office@cpuc.ca.gov) located at 505 Van Ness Avenue, San Francisco, California 94102, requesting that the person or representative's name be placed on the service list. The Process Office

will promptly create the service list and post it on the Commission's web site, www.cpuc.ca.gov as soon as is practicable.

2. Parties and the Commission may serve documents in this proceeding using the procedures in proposed new Rule 2.3.1 and proposed revised Rule 2.3, which are appended to this OII, and are encouraged to do so. Those parties not using the proposed new rules must serve their comments in accordance with our existing Rule 2.3. All documents must be filed with the Docket Office in accordance with Rules 2, 2.1, 2.2, 2.5, and 3. The Commission 's Rules of Practice and Procedure can be found at the Commission's web site www.cpuc.ca.gov.

3. Comments shall be filed in accordance with the schedule set forth in the body of this order. The Assigned Commissioner or the Assigned Administrative Law Judge may modify any of the dates, other than the requirement to complete this proceeding within 18 months, as appropriate for the proper conduct of the proceeding.

4. The ex parte rules applicable to this proceeding, unless modified by the Assigned Commissioner, shall be those set forth in Rule 7(d) which allows such communications without restriction or reporting requirement.

5. This OII shall be served on the following, serving a notice of availability containing a uniform resource locator hyperlink for this OII on all those for which e-mail addresses are available. All others shall be served by mailing a copy of the OII and its attachment:

a. All certificated carriers including incumbent local exchange carriers, competitive local exchange carriers and interexchange carriers and all registered wireless carriers.

b. All known providers of Voice Over Internet Protocol service in California who are identified by the Telecommunications Division and do not otherwise have a certificate of public convenience and necessity.

c. Consumer and other intervenor groups identified by the Commission's Public Advisor.

d. Parties in the following dockets:

Rulemaking (R.) 95-04-043/Investigation (I.) 95-04-044 (local competition) and R.03-04-003 (Senate Bill 1563, Advanced Telecommunications Technologies).

This order is effective today.

Dated February 11, 2004, at San Francisco, California.

MICHAEL R. PEEVEY
President
CARL W. WOOD
LORETTA M. LYNCH
GEOFFREY F. BROWN
SUSAN P. KENNEDY
Commissioners

I will file a concurrence.

/s/ SUSAN P. KENNEDY
Commissioner

Concurring Opinion of Commissioner Susan P. Kennedy: I support the initiation of this investigation. I cast this vote, however, with considerable reservation because I believe that the resolution, as drafted, prejudges the outcome of the investigation.

We have not taken any testimony or done any diligence on the matter, yet the resolution boldly states that we have "tentatively" concluded that VoIP service is telecommunication subject to our regulatory jurisdiction. I believe this statement is wrong, both as a matter of fact and as a matter of policy.

Factually, VoIP telephony is not one thing, but many. Some versions of VoIP telephony interconnect with the PSTN, others do not. Since it relies on the internet, it is unclear whether the service is a voice or data service, or whether it is an intrastate or interstate communication.

From a policy standpoint, and in the absence of a record, I fail to see how we can even tentatively conclude that interconnection with the PSTN is an appropriate regulatory threshold, or that all VoIP communications interconnect with the PSTN.

Despite these reservations, I vote for this resolution because I believe our investigation must proceed right away. California cannot afford to delay; we must acquire the information necessary to make intelligent policy decisions in this area. Internet telephony is arriving at breathtaking speed. With it, come policy implications for such things as universal service, telephone devices for the deaf, and other programs that are currently funded by fees imposed on regulated telephone service.

The challenge for us as regulators is to devise new mechanisms for guaranteeing the continuation of these valuable programs – without hampering the growth of this exciting new technology.

The advent of VoIP presents California with an opportunity to be a national leader in developing a model for telecommunications regulation in a new IP-world. I believe this OII can be the means to accomplish that goal, but only if we conduct the investigation in a truly open-minded and unbiased way, and let the chips fall where they may.

/s/ SUSAN P. KENNEDY
Susan P. Kennedy
Commissioner

Dated: February 11, 2004, San Francisco, California