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October 28, 2004

**VIA ECFS**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

**Re: Ex Parte Submission of National Cable & Telecommunications Association  
in WC Docket Nos. 03-211 and 04-36**

Dear Ms. Dortch:

Attached is an ex parte submission sent today to the Commission personnel listed on Attachment A, offering a factual and legal basis for the Commission to assert jurisdiction over cable VoIP service.

Pursuant to section 1.1206(b)(2) of the Commission's rules, the original and one copy of this letter are being filed with the Office of the Secretary.

Sincerely,

/s/

Howard J. Symons

cc: Daniel Brenner, NCTA  
Neal Goldberg, NCTA

**ATTACHMENT A**

Jeffrey Carlisle  
Christopher Libertelli  
Jon Cody  
Matthew Brill  
Stacy Robinson Fuller  
Jordan Goldstein  
Jessica Rosenworcel  
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## **ANY RULING ON FEDERAL JURISDICTION OVER VOIP SHOULD INCLUDE CABLE VOIP**

### **Overview and Summary**

Cable VoIP offers consumers an integrated package of voice and enhanced features that are unavailable from traditional circuit-switched service. The enhanced features, generally accessed via the Internet, enable customers to personalize the settings and service features best suited to their needs at any given time and are available from anywhere in the world. A cable company may have no idea whether a customer is accessing these features from home or from a remote location. The integral nature of these features and functions renders cable VoIP service an interstate offering subject to exclusive FCC jurisdiction.

The network architecture deployed by cable companies to provide VoIP also supports a finding that cable VoIP is interstate. Unlike traditional circuit-switched telephony, cable VoIP technology is built on a multistate or regional platform, with softswitches and other equipment deployed to serve subscribers in broad regions. Given this multistate architecture, most customer calls and signaling will cross state lines regardless of the physical location of the callers.

The Commission's traditional "end-to-end" analysis, which looks at the origination and termination points of a communication to determine the jurisdictional nature of a service, was designed for the circuit-switched world and cannot be applied to cable VoIP service. Cable VoIP networks have been built from the outset to function on an interstate basis in order to realize the economies of scale fundamental to the viability of the service and to allow subscribers the same user experience regardless of their location. The danger that networks will be designed to effect a particular jurisdictional result that exists for circuit-switched networks and caused the Commission to adopt the end-to-end analysis does not exist with regard to cable VoIP. Cable operators did not design cable VoIP to operate on an interstate basis to evade state regulation; rather, the interstate character of the network is integral to the provisioning of the service.

The unique capabilities of cable VoIP service and the architecture of cable VoIP networks render the entire service an indivisible interstate offering, regardless of whether each and every use of the service involves a communication between subscribers in different states. Not every cable VoIP service has the same mix of features and functionalities described below, but all cable VoIP offers the types of enhancements that render it an interstate service. Similarly, while the network architecture of each cable VoIP system will not be identical, they share the same centralized network design that impart an interstate nature.

The Commission should assert exclusive jurisdiction over cable VoIP to prevent the imposition of inconsistent state regulation that would impede the growth and development of this interstate service.<sup>1/</sup> To require cable VoIP providers to comply with numerous state regulatory

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<sup>1/</sup> Such a result also would be consistent with any later Commission determination that cable VoIP should be classified as an interstate information service. Even assuming arguendo that cable VoIP is deemed to be a jurisdictionally mixed telecommunications service, for the reasons discussed herein it is

regimes would undermine the most innovative aspects of the service and the cable VoIP network. Inconsistent state regulation would interfere with network architecture, which is designed to be free of geographic boundaries in order to achieve new transport efficiencies and cost savings, and with the ability to offer the same functionalities to all subscribers at any time without regard to location. Both of these attributes are fundamental to differentiating cable VoIP from traditional circuit-switched service.

### **Cable VoIP's Core Functionalities Render The Service Interstate**

The unique capabilities of cable VoIP render the service an inherently interstate offering. Cable VoIP integrates voice with enhanced functionalities that are not available in the circuit-switched environment, and that are presented not as “vertical features” but rather as an integral part of cable VoIP service. Further, these features are accessible via the Internet and are thus inherently interstate.

Inherent in cable VoIP is the capability for subscribers to manage information, retrieve stored information and customize their VoIP service to fit their individual needs. Significantly, many of these capabilities are often available to subscribers at any time from any geographic location using the World Wide Web. For instance, cable VoIP service may include the ability of customers to initiate call forwarding and specify a forwarding number in one easy step from any computer at any location.<sup>2/</sup> Interactive web portals may permit cable VoIP subscribers to access and organize their calling history in real time.<sup>3/</sup> Subscribers may be able to customize ring tones, activate simultaneous ring where inbound calls ring on up to four separate phone lines,<sup>4/</sup> screen calls using predetermined numbers, or activate a virtual “do not disturb” sign.<sup>5/</sup>

Cable VoIP also will provide subscribers with the capability to use the Internet to initiate and receive calls on their computers using desktop dialing and initiate or add users to a conference bridge with the click of a button.<sup>6/</sup> Multimedia conferencing, interactive gaming, video transmission, document transmission and display,<sup>7/</sup> and variable dial-tone features, through which callers can get immediate sports or weather updates, also may be available.<sup>8/</sup>

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predominantly an interstate offering from which it would be impossible to segregate any intrastate component.

<sup>2/</sup> Comments of Cablevision Systems Corp., WC Docket No. 04-36, at 4 (filed May 28, 2004) (“Cablevision Comments”).

<sup>3/</sup> *Id.*

<sup>4/</sup> *Id.*

<sup>5/</sup> Comments of Cox Communications, Inc., WC Docket No. 04-36, at 7 (filed May 28, 2004) (“Cox Comments”).

<sup>6/</sup> Cablevision Comments at 4.

<sup>7/</sup> Cox Comments at 7.

<sup>8/</sup> Statement of Kevin Leddy, Senior Vice President, Strategy and Development, Time Warner Cable before the House Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet (May 19, 2004) (“Leddy Testimony”).

Cable VoIP also permits customers to customize the manner in which they receive and process messages. Subscribers can receive text notification of voice mail messages, listen to voicemail messages as sound (or .wav) files on their computers, send copies of voicemail to different email addresses, or receive notifications of urgent messages via live calls to any telephone number designated by the subscriber.<sup>9/</sup> They can access their voice mail via the Web and click on a link to download and save the voice mail in order to maintain a record of the voicemail for the future.<sup>10/</sup> Cable VoIP subscribers can access and manage these features and functionalities at any time from any computer via an interactive web portal.<sup>11/</sup> Moreover, cable VoIP subscribers can access their voicemail via the Internet, access their text messages via the telephone, and soon will be able to access video messages on their television or computer screens.<sup>12/</sup> Circuit-switched-based voicemail service does not and cannot offer this highly personalized functionality.

### **Cable VoIP's Unique Network Architecture Renders The Service Interstate**

Cable VoIP service, whether providing local or interstate connectivity, utilizes an interstate platform vastly different from the highly decentralized network used to provide circuit-switched telephone service. The differences between VoIP and circuit-switched networks are critical when considering how to determine the jurisdictional nature of the service. The Commission's traditional "end-to-end" analysis, which looks to the origination and termination points of a communication, rather than where network facilities are located, to determine whether a particular service is interstate or intrastate, cannot be applied to cable VoIP.

Cable companies provide VoIP using regional and national network architectures that utilize centrally-located routers and softswitches to route calls irrespective of whether the call is traveling across town, across the country, or beyond.<sup>13/</sup> Functions integral to every call, such as CALEA compliance, voicemail recording, storage and retrieval, call record detail, and other vertical features such as three-way calling, caller ID, and call waiting are provided from these central facilities.<sup>14/</sup> Many "back office" functions typically performed locally in decentralized circuit-switched markets can be consolidated at the regional level.<sup>15/</sup> A handful of VoIP

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<sup>9/</sup> Cablevision Comments at 5.

<sup>10/</sup> *Id.*

<sup>11/</sup> *Id.* at 4-6; Cox Comments at 7.

<sup>12/</sup> Comments of Comcast Corporation, WC Docket No. 04-36, at 12 (filed May 28, 2004); *see also* Leddy Testimony (cable VoIP can provide unified messaging features, where emails and voice mails are accessed via the subscriber's television).

<sup>13/</sup> Statement of Glenn A. Britt, Chairman and CEO, Time Warner Cable, before the Senate Committee on Commerce, Science and Transportation (Feb. 24, 2004) (Time Warner Cable has deployed softswitches on a regional basis).

<sup>14/</sup> *Id.*

<sup>15/</sup> *Whitepaper: Voice over Internet Protocol: Ready for Prime Time*, at 10 (May 2004), appended to Comments of Cox Communications, Inc., WC Docket No. 04-36 (filed May 28, 2004) ("*VoIP Whitepaper*").

softswitches will provide critical redundancy in the case of outages for the entire network -- a functionality that is not available in traditional circuit-switched networks but that is made possible by a packet-switched architecture -- regardless of where the switches are located.<sup>16/</sup>

Cable VoIP facilities are often located in a state different from that where the call originates. While circuit switches are usually geographically restricted based on serving distance, and therefore are installed and maintained within each local circuit-switched market, cable VoIP providers install and maintain softswitches at the national level, serving multiple markets with only limited equipment and operations required locally.<sup>17/</sup> A cable operator will need only a handful of softswitches to provide local and long distance service throughout the country.

Interstate signaling also is an integral part of cable VoIP.<sup>18/</sup> VoIP signaling occurs between the call origination point and the distant softswitch rather than the recipient endpoint.<sup>19/</sup> Unlike a circuit-switched call, a VoIP call is likely to involve interstate signaling even where the content of the call follows an intrastate path.<sup>20/</sup> Cable VoIP service does not function without the use of interstate signaling and other interstate activities.<sup>21/</sup>

Given the fundamental differences between cable VoIP networks and traditional circuit-switched networks, the Commission's traditional end-to-end analysis is inapplicable to cable VoIP. The end-to-end analysis was predicated on a highly decentralized circuit-switched architecture in which nearly every community or market area had its own switch or switching hierarchy. Concerned that determining jurisdiction based on the geographic presence of some network facilities would give rise to potential for abuse -- strategic placement of a switch in a neighboring state could render otherwise intrastate calls interstate -- the Commission determined that it should look just at the beginning and end points of an entire transmission to determine jurisdiction.<sup>22/</sup> The Commission similarly rejected attempts to divide communications at intermediate switching points.<sup>23/</sup> The end-to-end analysis was a workable distinction for circuit-switched services in light of the fact that network facilities (*e.g.*, local switches) were clustered around those beginning and end points of a transmission.

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<sup>16/</sup> Cox Comments at 6.

<sup>17/</sup> *VoIP Whitepaper* at 12.

<sup>18/</sup> *Ex Parte* Presentation of Cox Communications, Inc., WC Docket Nos. 03-211, 04-36, at 2 (filed Oct 5, 2004) ("*Cox Oct. 5 Ex Parte*").

<sup>19/</sup> *VoIP Whitepaper* at 2.

<sup>20/</sup> *See Cox Oct. 5 Ex Parte* at Attachment 1.

<sup>21/</sup> *See id.* at 7-8.

<sup>22/</sup> *See, e.g., In the Matter of Annual 1985 Access Tariff Filings*, 1985 FCC LEXIS 2519 ¶ 102 (1985)(internal citations omitted) ("a call which originates in one state and terminates in another is jurisdictionally interstate under the Communications Act. . . . The physical location of the facilities employed in transmitting a communication is not dispositive of the jurisdictional status of a communications service. . . . Thus, regardless of how LECs draw the boundaries, the termination of interstate FGA traffic constitutes an interstate service.").

<sup>23/</sup> *See, e.g., In the Matter of Teleconnect Company*, 10 FCC Rcd 1626, 1629 (1995).

This rationale does not extend to cable VoIP services. Cable VoIP networks are being constructed on an interstate basis specifically to capitalize on the capability of IP technology to deliver service more efficiently than circuit-switched networks. Cable VoIP calls are not necessarily routed through local equipment, but rather are sent wherever the system determines it can best handle the data packets. Even local cable VoIP transmissions may pass through several states. The dispersion of critical functionalities, including switching and other intelligent features, throughout IP networks promotes cost and system efficiencies and is more economic than the circuit-switched model of numerous local switches. Cable VoIP networks are designed without regard to geographic or jurisdictional boundaries to take advantage of these efficiencies, not to artificially convert an intrastate call into an interstate one. Indeed, the interstate nature of cable VoIP networks is essential to capturing the scale economies that make it possible for cable operators to offer the service at all.<sup>24/</sup> Forcing cable VoIP services into an “end-to-end” analysis would produce strained results that do not reflect the reality of how the service is provisioned. As the Commission noted in its *pulver.com* Order, there is no point in “adhering to a regulatory analysis that serve[s] another network.”<sup>25/</sup>

In fact, the Commission itself recognized in the *pulver.com* Order that the end-to-end analysis reflects assumptions unique to circuit-switched networks and so is not appropriately applied to all services. As the Commission described, the end-to-end analysis assumes both defined beginning and end points of transmissions and a “continuous path of communications, beginning with the inception of a call to its completion.”<sup>26/</sup> Such an analysis is inapplicable to cable VoIP. Just as the Commission concluded that end-to-end could not be used to classify *pulver.com*’s Free World Dialup service because it has no definable “end points,” there is no single, “continuous” communications path for cable VoIP transmissions. As discussed above, VoIP signaling, which is an integral part of the communication, often occurs between the call origination point and a distant softswitch, not the recipient endpoint. Because content and signaling do not follow the same path or terminate and originate in the same locations, there is no identifiable “single continuous path” on which to base an end-to-end analysis. As such, the end-to-end analysis has little or no relevance for cable VoIP.

### **Cable VoIP Is Interstate Without Regard To The Content Of A Particular Call**

Cable VoIP service is interstate in its entirety and is not severable for jurisdictional purposes into interstate and intrastate components, regardless of the fact that it can be used to make a local telephone call. The Commission has recognized in the past that when a service is generally interstate in its critical aspects, the whole service is interstate. It has rejected arguments that it should divide a single service into separate parts for jurisdictional purposes, or

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<sup>24/</sup> See also *Cox Oct. 5 Ex Parte* at 11-12.

<sup>25/</sup> *In the Matter of Petition for Declaratory Ruling that pulver.com’s Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, 19 FCC Rcd. 3307, ¶ 21 (2004) (“*pulver.com*”).

<sup>26/</sup> *pulver.com* ¶ 21, citing *Petition for Emergency Relief and Declaratory Ruling Filed by the BellSouth Corporation*, 7 FCC Rcd 1619, 1620 (1992) (“*BellSouth Memory Call*”); *In the Matter of GTE Telephone Operating Cos.*, 13 FCC Rcd 22466, 22475-78 (1998), recon. denied, 17 FCC Rcd 27409 (1999) (“*GTE ADSL Order*”).

that it should analyze each use of a service to determine whether that use is an interstate or intrastate use.

In *BellSouth MemoryCall*, the Commission held that a voice messaging service was jurisdictionally mixed and therefore subject to the Commission's interstate jurisdiction because it was used to access messages from interstate callers. The Commission refused to divide calls made using the service into interstate and intrastate groups.<sup>27/</sup> Similarly, in *GTE ADSL*, the Commission found that ISP traffic is one continuous transmission from the end user to a distant Internet site, and that the entire DSL service was interstate, regardless of whether some uses of the service may be between end users and local sites, as long as the service was not specifically targeted at local uses (*e.g.*, a service that enabled only a home to local office connection).<sup>28/</sup> The Commission has also held that a nationwide network paging service "is an interstate service which, although divisible into three different technical components, functions as an integrated communications system and, therefore, must be viewed as a whole for regulatory purposes," regardless of whether it "may involve intrastate communications in a few instances".<sup>29/</sup> Under these precedents, cable VoIP, too, is wholly interstate, regardless of whether it is used to make calls within a local geographic area.

### **State Regulation Would Impede the Growth and Development of Cable VoIP**

The interstate character of cable VoIP service would make complying with numerous state regulatory regimes impracticable, if not impossible. As described, cable VoIP networks are not designed to follow state boundaries, and large geographic areas are often served through facilities in distant states. It therefore would be extremely difficult to engineer the networks to meet different requirements on a state-by-state basis. Complying with inconsistent regulatory schemes, such as varying requirements for service quality and reliability, could require the installation of additional switches or other facilities locally, and perhaps additional personnel. All of these changes would undermine the efficiency of the cable VoIP network and the cost savings that accompany an efficient service, making the service less valuable to the public.<sup>30/</sup> It would also be contrary to key policy objectives of Congress and the Commission to protect VoIP offered by non-facilities-based providers from state regulation while failing to do the same for

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<sup>27/</sup> *BellSouth Memory Call*, 7 FCC Rcd at 1620-21; *see also Southwestern Bell Tel.*, Order Designating Issues for Investigation, 3 FCC Rcd 2339, 2341 (1988) (a call made by credit card is a single call and should not be broken into separate call segments for jurisdictional purposes); *New York Tel. Co. v. FCC*, 631 F.2d 1059, 1066-67 (2d Cir. 1980) (upholding the Commission's refusal to divide FX/CCSA service into interstate and intrastate portions for jurisdictional purposes, even though separable technologically).

<sup>28/</sup> *GTE ADSL Order*, 13 FCC Rcd at 22476-81.

<sup>29/</sup> *See In the Matter of Amendments of Parts 2 and 22 of the Commission's Rules to Allocate Spectrum in the 928-941 MHz Band and to Establish Other Rules, Policies, and Procedures for One-Way Paging Stations in the Domestic Public Land Mobile Radio Service*, 97 F.C.C.2d 900 ¶ 15 (1984).

<sup>30/</sup> *See* Comments of Time Warner Inc., WC Docket No. 04-36 (filed May 28, 2004) at 26 ("Having fifty potentially inconsistent and changing sets of regulations at the state level might hamper entry to the point of stifling it."); *id.* at 27 n.86 (describing state rules, such as those regulating installation intervals or service quality, that would be "difficult to apply to IP-based platforms").

VoIP offered by cable operators, who have made enormous investments -- precisely as Congress intended -- in constructing and upgrading distribution facilities to be able to provide this innovative service.

The imposition of inconsistent state regulatory regimes also would interfere with or even prevent cable companies from efficiently providing various messaging, call management, and other capabilities without regard to location. Tailoring these requirements to meet the particular requirements of each state would be impossible, given their accessibility via the Internet. Cable companies would be forced to remove these capabilities from the Internet in order to ensure compliance, depriving customers of one of the most innovative aspects of VoIP.

For all of these reasons, any ruling on federal jurisdiction over VoIP should include cable VoIP, and should conclude that VoIP is an interstate service subject to exclusive Commission jurisdiction.