

that is being marketed with bundled MSN Internet service in Radio Shack stores nationwide and through EchoStar which includes “a StarBand-branded ISP.”<sup>163/</sup> In addition, Hughes Network Systems has announced plans to launch a competing service later this year.<sup>164/</sup>

Perhaps most importantly, the Commission Report demonstrated that nearly all Americans have access to at least one high-speed access provider, and many have access to a choice of providers.<sup>165/</sup> And, as the Broadband Intelligence report shows, satellite companies, terrestrial broadcasters and fixed wireless services “are already providing (or will soon provide) even greater high-speed access choices to American consumers.”<sup>166/</sup> For these reasons, Charles River Associates has concluded that the “competition from other providers of broadband Internet access will place additional pressures on cable operators to offer a wide range of ISPs to their subscribers in order to prevent them from employing, or switching to, these alternatives. Consequently, government intervention to deal with any perceived market failure in this regard does not appear to be justified.”<sup>167/</sup> In these circumstances, there can be no doubt that the Commission’s policy of “vigilant restraint” was and continues to be the right course.

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<sup>163/</sup> See Monica Hogan & Ted Hearn, *StarBand Ads Back Market Launch*, at <http://www.Multichannel.com/weekly/2000/46/starb46.htm> (Nov. 13, 2000).

<sup>164/</sup> Peter S. Goodman, *Dishing Up a New Link to the Internet; Satellites Join DSL, Cable Wire as High-Speed Conduit for the Web*, WASH. POST, Nov. 6, 2000, at A1.

<sup>165/</sup> HIGH-SPEED SERVICES REPORT at 1 (“the presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, and Puerto Rico, and in about 70% of the zip codes in the United States”); *id.* at 3 (“[m]ultiple providers reported having subscribers in more than 40% of the nation’s zip codes”); *id.* at 4 (“about 95% of the country’s population lives in the 70% of zip codes where a provider reports having at least one high-speed service subscriber”).

<sup>166/</sup> BROADBAND INTELLIGENCE at 2.

<sup>167/</sup> CRA Report at 1.

**B. Unaffiliated ISPs Gain Access To The Cable Plant Without Government Mandate.**

The growth and vitality of competitive alternatives to cable modem service for high-speed Internet access service belies the need for regulatory intervention to ensure the continued deployment of advanced services. Through the operation of market forces, the services of unaffiliated ISPs are being made available on cable systems without government intervention. Cable operators that were restricted by agreements limiting their ability to provide additional Internet services have announced their intention to end those arrangements as soon as contractually possible, and to enter into commercially reasonable agreements with unaffiliated ISPs.

In December 1999, AT&T formalized its commitment to give consumers a choice of Internet Service Providers. In a joint letter with ISP MindSpring, AT&T agreed to provide cable modem users with a choice of ISPs, allow subscribers the ability to exercise that choice without having to subscribe to any other ISP, offer a choice of connection speeds and prices, and allow direct access to all content available on the World Wide Web without any AT&T-imposed charge to the consumer for such content.<sup>168/</sup> In November 2000, AT&T Cable Services launched “AT&T Broadband Choice,” a six-month trial in Boulder, Colorado to test how multiple Internet service providers can offer high-speed, always-on cable Internet service over a hybrid fiber-coaxial network.<sup>169/</sup>

As part of that trial, AT&T will offer up to 500 customers a choice of eight ISPs that are participating in the trial. The participating ISPs include ISPs of all sizes and specialties serving

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<sup>168/</sup> See MindSpring Letter.

<sup>169/</sup> See AT&T Boulder Trial.

varying geographic areas, nationally and locally.<sup>170/</sup> The consumer participants will be able to select one or more ISPs and specify the connection speed they want to match their device capability. The participating ISPs will share customer care processes and develop interfaces with AT&T to provide customer service. AT&T will study the operational and technical issues involved in sharing its cable lines, determine the costs involved, and explore consumer behavior (why people change ISPs and what services consumers use most often). In addition, AT&T has announced plans to conduct similar trials in Massachusetts in 2001.<sup>171/</sup>

Other cable operators have announced similar plans to negotiate with unaffiliated ISPs. Early in 2000, AOL and Time Warner announced a Memorandum of Understanding pursuant to which AOL Time Warner will make a choice of multiple ISPs available to consumers on its broadband cable systems.<sup>172/</sup> Time Warner thereafter reached a definitive agreement with EarthLink that allows EarthLink to offer its broadband Internet services on Time Warner cable systems that pass approximately 20 million homes.<sup>173/</sup> In addition, Time Warner has launched a trial in Columbus, Ohio to connect unaffiliated ISPs to Time Warner's cable system in that

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<sup>170/</sup> The participating national ISPs include EarthLink, Excite@Home, Juno, and WorldNet. Friendly Works, an ISP aimed at serving seniors, will also participate in the trial, as will RMI.net, a Denver-based regional ISP, and Winfire and Flashcom, two DSL ISPs. *See id.*

<sup>171/</sup> *See Massachusetts Coalition for Consumer Choice and Competition on the Internet and AT&T Agree on Plan for Consumer Choice of ISPs in Massachusetts*, at <http://www.att.com/press/item/0,1354,3037,00.html> (June 27, 2000) (noting that "AT&T will conduct a multiple ISP pilot in up to three Massachusetts communities, no later than October 31, 2001, and implement ISP choice statewide no later than July 1, 2002").

<sup>172/</sup> *See AOL/TW MOU.*

<sup>173/</sup> *See EarthLink and Time Warner Cable Announce Definitive Agreement to Offer EarthLink Broadband Internet Services Over Time Warner Cable Systems*, at [http://www.cgi.timewarner.com/cgi-bin/corp/news/index.cgi?template=article&article\\_id=200642](http://www.cgi.timewarner.com/cgi-bin/corp/news/index.cgi?template=article&article_id=200642) (Nov. 20, 2000).

area.<sup>174/</sup> Comcast also has announced a plan to offer Juno, the nation's third largest ISP, over its high-speed cable lines.<sup>175/</sup>

All of these developments happened without any government mandates, in response to a highly competitive marketplace. These commitments confirm that commercial agreements are the best means of encouraging the rapid deployment of high-speed Internet access services and customer choice.

Cable operators' restrictive arrangements with affiliated Internet services were designed when cable modem service was a risky concept. Those Internet services and their cable partners jointly invested in networks and other infrastructure, support capabilities, and programming in order to develop the service. The cable operator invested in the necessary network reconfigurations to accommodate the new service, and educated subscribers about the benefits of subscribing to cable modem service, and the Internet service developed the technology, services, and backoffice functions for a cable modem environment, and constructed the necessary network for Internet access. Because Internet-related technology was (and in many ways, still is) untried, the services consumers would demand were (and are) uncertain -- indeed, the uses to which the Internet might be put are still uncertain. In these circumstances, coordinated efforts by the cable operator and the Internet service increased the likelihood that the investment would be profitable, and thus may have enhanced incentives for the development of new technology.<sup>176/</sup> The exclusivity encouraged coordination because once the investments were made, the cable operator

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<sup>174/</sup> Alec Klein, *AOL, Time Warner Plan ISP Deals*, WASH. POST, Nov. 15, 2000, at E1.

<sup>175/</sup> See *Comcast to Test Offering Juno on High-Speed Cable Lines*, at <http://interactive.wsj.com/articles/SB975475253146072440.htm> (Nov. 29, 2000) (discussing a trial that will offer Juno in the first quarter of 2001 beginning in Philadelphia). Comcast said it is its intention to move to commercial deployment of third-party ISP service upon successful completion of the trial.

<sup>176/</sup> CRA Report at 13-14.

could not then “free ride” on the Internet service’s investments by contracting with an alternative ISP that was willing to accept a lower fee than the investing Internet service.<sup>177/</sup>

In contrast with those early days, however, the advent of competition among broadband providers creates strong economic incentives for cable operators to give their subscribers a choice of Internet services offering features, functions, and content that subscribers want. As the Charles River Report concludes:

Because they face competition from competing forms of Internet access, both developed and perhaps yet to be developed, and because most would-be customers of broadband Internet access have not yet purchased such access, cable operators have strong incentives to offer their customers the packages of services promising the largest net benefit. . . . the more IPSs the operator provides to its subscribers, the more customers will be attracted to the system, and thus, the greater profits the cable operator will earn . . . the opportunity to earn these profits continues to create strong incentives for the operator to provide its subscribers with multiple ISP choices even if the cable operator is affiliated with an ISP.<sup>178/</sup>

In the current competitive environment, customers will choose among competing access providers based on the value of service they provide. Cable operators, therefore, have no economic incentive to artificially limit the availability of multiple unaffiliated ISPs to their subscribers, because limiting choice in this way would reduce the value of the cable services offered, and thus would increase the likelihood that these customers would choose high-speed access from a competing provider.<sup>179/</sup> In these circumstances, the cable operator would lose the profits it would have earned from those customers. In addition, when customers choose to receive service from another high-speed service provider, the cable operator likely also incurs additional losses, since it loses the opportunity to sell that customer other available services like

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<sup>177/</sup> *Id.*

<sup>178/</sup> *Id.* at 2-3.

<sup>179/</sup> *Id.* at 6-8.

video or cable telephony service.<sup>180/</sup> Given these circumstances, “there are strong reasons to believe that DSL and other access methods will provide sufficient competition to eliminate any incentives cable operators might have to limit ISP availability in a way that harms consumers.”<sup>181/</sup>

A government policy that mandates a minimum number or type of ISPs that are entitled to access amounts to the selection of economic winners and losers that would likely be different parties than the market would select. Picking winners and losers is a particularly inappropriate role for the government in the dynamic Internet marketplace. For instance, an environment preserving thousands of small ISPs may be unnecessary to ensure responsive customer service, technological advancements, and innovative content.<sup>182/</sup>

The marketplace is the best forum for determining whether customers value access to a choice of ISPs (and how many ISPs constitute sufficient “choice”), and what ISP attributes are most important to them. The attributes customers value most in an ISP are reliability, speed, customer service, and price.<sup>183/</sup> Several of those characteristics, however, are not enhanced by

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<sup>180/</sup> *Id.* at 3.

<sup>181/</sup> *Id.* at 7.

<sup>182/</sup> *See, e.g.,* United States General Accounting Office, Report to the Subcommittee on Antitrust, Business Rights and Competition, Committee on the Judiciary, U.S. Senate, “Technological and Regulatory Factors Affecting Consumer Choice of Internet Providers” (October 2000) at 30 (noting that experts interviewed felt that “a highly competitive ISP market [is] not very important” and that “a reduction of consumer choice at the ISP layer is not a concern as long as there is adequate competition among companies providing physical transport to the Internet”) Walter Mossberg, who follows Internet and technology issues for the *Wall Street Journal*, has a similar view: “I don’t think the ability to choose an Internet Service Provider matters much to people who aren’t techies or internet junkies. Most ISPs provide similar services at similar prices.” “Tech Journal,” *Wall Street Journal*, Nov. 2, 2000.

<sup>183/</sup> *See J.D. Power and Associates Reports: AT&T WorldNet Ranks Highest in Customer Satisfaction Among Largest National Subscription Internet Service Providers*, at <http://www.Jdpower.com/global/jdpaawards/releases/091200te.html> (Sept. 12, 2000) (noting that factors that determine overall customer satisfaction in an ISP include “cost/billing/image;” “speed/availability;” “customer care/technical support;” and “ease of use”).

unlimited customer choice, and could even be impeded if infinite numbers of ISPs were competing for space on the cable modem platform. ISPs in a multiple-ISP environment will distinguish themselves to consumers through their content and pricing plans.

Industry analysts have predicted that the “plain vanilla” ISPs offering only a straight link to the Internet with no accompanying value added in the form of proprietary content are not likely to survive in the new environment.<sup>184/</sup> The goal of public policy is to protect competition, not competitors.<sup>185/</sup> If customer needs are met and served by the cable operator-ISP relationships that are developing in the marketplace, the government should not intervene to support ISPs that do not deliver features, functionalities, or services that consumers do not value. Further, cable operators would have every incentive to offer their cable modem subscribers those unaffiliated ISPs offering unique content and value, since customers would follow the ISP they prefer to another high-speed distributor that offered that ISP.<sup>186/</sup>

The availability of broadband alternatives to cable also checks the potential for anticompetitive behavior by cable operators far more effectively than government regulation. For instance, in light of the expansive growth of DSL -- its rate of growth has been nearly three times that of cable -- complaints about a “first mover” advantage for cable modem services are wholly unjustified.<sup>187/</sup>

Likewise, there is no truth to the argument that cable modem subscribers will be “locked

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<sup>184/</sup> See, e.g., “Speculated Time Warner-AOL Consent Decree is Least of Many Evils for Cable,” Bank of America Securities, Montgomery Division (Nov. 6, 2000).

<sup>185/</sup> See *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477, 488 (1977), quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962).

<sup>186/</sup> CRA Report at 5.

<sup>187/</sup> See BROADBAND INTELLIGENCE at 1, 5-10.

in” due to the allegedly prohibitive cost of switching to other carriers.<sup>188/</sup> First, since relatively few Internet users currently purchase broadband service -- from cable operators or any other providers -- there could only be very few “locked-in” customers even if a lock in effect were important ex post. In that situation, because the vast majority of potential broadband access customers will be “in play” for a long time, cable operators would not be able to exploit their putatively locked-in customers without severely reducing their ability to compete for customers that are not locked-in.<sup>189/</sup>

Second, there could be no lock-in problem in any event, because the costs of switching services are low or non-existent. The biggest upfront cost of subscribing to cable modem service is the acquisition of cable modems, and those can be leased from the operator. Even for those customers who choose to buy a modem, costs will decline as the devices become more widely available at retail. The costs of subscribing will be further reduced as computers already equipped with the necessary Ethernet cards become more prevalent.

The costs of remaining a subscriber likewise belie any claim of lock-in. Subscribers are not bound to long-term contracts, but rather pay monthly charges pursuant to short term service agreements that are cancelable by the subscriber at will. Those cable modem subscribers that do decide to switch to another broadband provider do not face substantial additional costs. DSL modems and “self-install” kits are available at retail outlets for under \$300. Even where the DSL provider installs the service, the modems are often provided without charge to encourage subscriptions.<sup>190/</sup> In the competitive broadband marketplace, consumers will be able to find

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<sup>188/</sup> A “lock-in effect” occurs when a customer has purchased one good or service and will have to undergo a large sunk cost in order to switch to a competing good. CRA Report at 12.

<sup>189/</sup> *Id.*

<sup>190/</sup> *See, e.g., ADSL Acceleration, WASH. POST, Oct. 15, 1999 at E11* (noting that Bell Atlantic is waiving its set-up costs and offering a full rebate after 60 days of service on its DSL “Home

service providers that do not impose high initial subscription costs or require long-term service commitments.

**C. Cable Modem Service Customers Have Access To All Internet Content.**

Like speculation about first mover and lock-in problems, concerns that cable modem service customers will somehow be denied access to Internet content in the absence of forced access are unfounded. Cable modem service users have always had access to any content available over the Internet. Indeed, customers would never subscribe to a service that restricted their ability to access available content. At a time when cable modem service is attempting to attract customers away from traditional dial-up ISPs, imposing such restrictions would be contrary to their own best interests, since subscribers would quickly turn to one of the many other high-speed alternatives.

The idea that cable modem service operators could “control” Internet content by directing subscribers to preferred content through caching similarly does not comport with market realities. Many cable modem service operators, as well as dial-up ISPs, cache content locally in order to reduce network congestion and allow customers to access content much more quickly than having to download the content from the public Internet. But caching does not give affiliated content any unique advantage over other content. Content from third party websites is generally cached on the basis of customer traffic patterns, rather than on any affiliation with the cable operator. Websites that customers visit more often stay in the cache while websites that customers do not visit on a regular basis exit the cache. Content providers retain control over how frequently their cached content is refreshed through instructions sent electronically along

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Connection Kits,” thereby enabling consumers to obtain for free a \$229 package that includes setup, “an all-in-one PCI card from 3Com to plug into a Windows-compatible computer, a CD-ROM of installation software and five “filters” that plug into existing phone jacks” to prevent DSL interference).

with the content. A content provider that does not wish its content to be cached at all (so that users always have real-time access to its website) can likewise communicate that request.

Further, website operators and unaffiliated ISPs now have alternatives to the caching services of the cable operators, because they can employ the services of an independent caching company.<sup>191/</sup> Companies such as Akamai and Digital Island provide a network of servers with dedicated housing that host content from customers around the world, keeping browsers from having to cross between ISP networks.<sup>192/</sup> Several other companies, such as Cidera, use satellite-based technology to distribute cached content, particularly streaming media, to their clients.<sup>193/</sup> In fact, these independent caching companies often can offer ISPs and website operators greater flexibility than can a cable operator.<sup>194/</sup> At the very least, however, these independent caching companies serve as an alternative to any ISP or site operator that may feel dissatisfied with the cable operator's caching performance. With caching alternatives firmly in place, arguments that cable operators have the opportunity to discriminate in their caching services are clearly overstated and should be dismissed by the Commission as mere rhetoric. Internet users will continue to be able to access as much of the Internet as they choose.

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<sup>191/</sup> See Corey Grice, *Akamai to Face New Rival in Start-up Axient*, at <http://news.cnet.com/news/0-1004-200-2417540.html> (Aug. 2, 2000) (“[d]ozens of companies, notably Akamai Technologies, Digital Island and Mirror Image Internet, provide similar services, storing Web pages and streaming multimedia content in systems strategically located in various regions across the country. By storing content closer to Web surfers on their own networks, these companies hope to speed Web downloads”).

<sup>192/</sup> See John Borland, *Akamai Aims to End Web Waits*, at <http://news.cnet.com/category/0-1004-200-343683.html> (June 15, 1999).

<sup>193/</sup> See Karen J. Bannan, *Why Caching is Hot Now -- And Will Be in the Broadband Future*, at [http://www.internetworld.com/article\\_bot.asp?inc=080100/8.01.00Feature1&issue=8.01.00](http://www.internetworld.com/article_bot.asp?inc=080100/8.01.00Feature1&issue=8.01.00) (Aug. 1, 2000).

<sup>194/</sup> For instance, “[o]ne of the main benefits of satellite [caching and] delivery is that providers can manipulate the streams to drop in targeted advertising and other value-added applications.” *Id.*

**D. Forced Access Regulation Would Impose Significant Burdens And Complexities That Will Deter Investment And Innovation.**

Any forced access scheme would entail substantial continuing government oversight in order to resolve the disputes that would surely ensue. Indeed, the tremendous number of disputes and litigation surrounding interconnection and access to unbundled network elements of the local telephone networks confirms that instituting forced access will not be a simple task.

For example:

- Since passage of the Telecommunications Act, the Common Carrier Bureau has had to assume responsibility for implementing the substantive rules designed to promote the core nondiscriminatory provisions of Sections 251 and 252 of the Act, which fill hundreds of pages in the FCC Record.
- In 1999, the Common Carrier Bureau dedicated 175 full time equivalents (staff hours equivalent to 175 full time employees) to common carrier complaint and enforcement activities.
- Since the Telecommunications Act was passed, telephone-related complaints at the federal level have increased by almost 100%. In 1996, the Common Carrier Bureau received over 28,000 complaints; in 1998, that number increased to over 53,000 complaints.
- The FCC, with its attendant resources, has had little success in allocating the costs of integrated plant between video and other services.

While not exhaustive, this list demonstrates that substantial regulatory and commercial resources would have to be devoted to resolve similar concerns regarding access to the cable plant. Such resources would necessarily include the establishment of a regulatory infrastructure with engineers, lawyers, accountants, economists, tariff specialists, policy experts, scientists, and technologists whose primary, if not sole, responsibility would be to develop, implement, and enforce such a regime over a number of years. It would be a substantial burden for the FCC to bear the significant costs and responsibilities of developing, implementing, and enforcing a forced cable access framework.

The Canadian experience demonstrates the fallacy of arguments that forced access can be accomplished with only "light touch" regulation. The Canadian Radio-Television and Telecommunications Commission ("CRTC") adopted an "open access" policy in 1996,<sup>195/</sup> and in 1998 expressly applied it to cable operators.<sup>196/</sup> But mandating access and making it work are not the same thing. In September 1999, the CRTC acknowledged that there still was no agreement between the CRTC and cable operators on technical issues or the rates, terms, and conditions for access, and rejected the ISPs' request for immediate access to cable facilities.<sup>197/</sup> Most recently, in an August 2000 Order setting the rates and terms for the provision of high-speed Internet access services by the four large cable carriers (Cogeco, Rogers, Shaw and Videotron) to ISPs, the CRTC recognized that the complicated technical issues raised by allowing multiple ISPs access to the cable facility still existed, and it directed cable carriers and ISPs to work together to address these technical issues to implement the order.<sup>198/</sup>

As the Canadian experience illustrates, the imposition of a forced access requirement would inevitably embroil regulators and industry in ongoing and contentious proceedings. Indeed, the Cable Services Bureau has recognized that the type of regulatory delay that has

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<sup>195/</sup> See Regulation of Broadcasting Distribution Undertakings that Provide Non-Programming Services, Telecom Decision CRTC 96-1, at [www.crtc.gc.ca/ENG/NEWS/RELEASES/1996/tel300le.htm](http://www.crtc.gc.ca/ENG/NEWS/RELEASES/1996/tel300le.htm) (Jan. 30, 1996); see also CRTC Announces New Access Rules for Broadcasting Undertakings, at [www.crtc.gc.ca/ENG/NEWS/RELEASES/1996/r96426ae.htm](http://www.crtc.gc.ca/ENG/NEWS/RELEASES/1996/r96426ae.htm) (Apr. 26, 1996).

<sup>196/</sup> See Regulation under the Telecommunications Act of Certain Telecommunications Services Offered by "Broadcast Carriers," Telecom Decision CRTC 98-9 (July 9, 1998); see also CRTC Calls for Comments on Proposed New Broadcasting Distribution Requirements, at [www.crtc.gc.ca/ENG/NEWS/RELEASES/1997/r97072e2.htm](http://www.crtc.gc.ca/ENG/NEWS/RELEASES/1997/r97072e2.htm) (July 2, 1997).

<sup>197/</sup> Telecom Decision CRTC 99-11 (Sept. 14, 1999).

<sup>198/</sup> See section III.B., *infra*.

occurred in Canada, and its resulting uncertainty, "threatens to slow down the nascent broadband industry and would be inimical to the intent of the 1996 Act."<sup>199</sup>

Once in this regulatory briar patch, there is no way out as long as government continues to impose forced access and attendant pricing obligations on cable operators. Existing regulatory models are extremely complicated and demand considerable oversight to implement. For these reasons, they are typically used where the market has failed. In a competitive environment, they are wholly inappropriate.

A survey of the number and complexity of demands for regulation that have been presented to the Commission over the past two years, largely in the context of the AT&T/TCI, AT&T/MediaOne, and AOL/Time Warner mergers, demonstrates the breadth of government involvement needed should the Commission abandon its policy of "vigilant oversight." Such requests have ranged from issues of pricing and access to requests that entities other than unaffiliated ISPs be granted access to the cable modem plant.<sup>200/</sup> They include:

- requests that the Commission not only implement forced access but require cable companies to offer "high-speed data transport capabilities . . . at wholesale prices;"<sup>201/</sup>

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<sup>199</sup> BROADBAND TODAY at 45.

<sup>200/</sup> Ironically, Earthlink, one of the loudest voices for forced access just entered into an arrangement with Sprint's fixed wireless service as the preferred ISP. Sprint subscribers who want a different ISP must "pay twice." See *Oh the Hypocrisy: Sprint's Fixed Wireless Service Offers Only One ISP*, Cable Fax Daily (Oct. 30, 2000).

<sup>201/</sup> *In the Matter of Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor, to AT&T Corp., Transferee, ("AT&T/TCI Merger")*, Comments of SBC at 15-16. Similarly, U S WEST sought unbundled access to the cable modem service under total element long-run incremental cost ("TELRIC") pricing, which allows a new entrant to purchase elements of an incumbent's network and pay only for the incremental costs that the incumbent incurs. *AT&T/TCI Merger*, U S West Comments at 29; see also *In the Matter of Applications of America Online, Inc. and Time Warner, Inc. for Transfers of Control*, CS Docket No. 00-30, ("AOL/Time Warner Merger"), Ex Parte Presentation of NorthNet, Inc. at 12-13 (filed Oct. 30, 2000) ("NorthNet 10/30 Ex Parte") (stating that the Commission must establish a "cost basis for the establishment" of wholesale rates for interconnection).

- requests that the Commission adopt “a national range of discount percentages to be applied to local retail rates for cable services;”<sup>202/</sup>
- requests that the Commission conduct a “cost proceeding” for determining wholesale rates to the cable network, or in the alternative “rates should be set as a percentage of the *lowest* price for broadband Internet service offered to the public, not to exceed \$10 per month;”<sup>203/</sup>
- requests that the Commission require separate ownership of content and conduit;<sup>204/</sup>
- requests that the Commission require interconnection at a technically feasible point that most suits the needs of the unaffiliated ISP;<sup>205/</sup>
- requests that the Commission institute “non-discriminatory access to caching and other methods used by [cable operators] to get information quickly to consumers;”<sup>206/</sup>
- requests that the Commission should mandate that cable operators make network modifications to accommodate new functionalities provided by unaffiliated ISPs;<sup>207/</sup>
- requests that the Commission take steps to regulate how the cable operator displays information on the end user’s screen;<sup>208/</sup>
- requests that the Commission take steps to regulate how cable operators address privacy issues;<sup>209/</sup>
- requests that the Commission regulate how cable operators institute Internet navigation devices.<sup>210/</sup>
- requests that the Commission prevent a cable operator “from using more than 40 percent of its broadband cable pipeline’s total bandwidth capacity for content” owned by the cable operator or an affiliate.<sup>211/</sup>

<sup>202/</sup> Comments of SBC at 15 n.50.

<sup>203/</sup> NorthNet 10/30 Ex Parte at 13.

<sup>204/</sup> *AOL/Time Warner Merger*, Ex Parte Presentation of The Walt Disney Company at 54 (filed July 27, 2000) (“Disney 7/27 Ex Parte”). Disney states that such action “would avoid protracted antitrust litigation that almost certainly would be necessary to mitigate” any consumer harm stemming from ownership of both content and conduit. *See id.* But Commission regulation should not be based on purely speculative consumer harm. Instead, the Commission “should favor antitrust application to actual, substantial harms to consumers.” Powell 6/15 Remarks.

<sup>205/</sup> *See* NorthNet 10/30 Ex Parte.

<sup>206/</sup> *AOL/Time Warner Merger*, Ex Parte of The Walt Disney Company at 4 (filed Sept. 14, 2000) (“Disney 9/14 Ex Parte”).

<sup>207/</sup> *See* NorthNet 10/30 Ex Parte.

<sup>208/</sup> *See AOL/Time Warner Merger*, Ex Parte of National Broadcasting Company, Inc. at 2 (filed Sept. 29, 2000); *see also* Disney 9/14 Ex Parte at 2-3.

<sup>209/</sup> *See* NorthNet 10/30 Ex Parte at 13-14.

<sup>210/</sup> *See* Disney 9/14 Ex Parte at 4.

- requests that the Commission regulate the amount of technical information that a cable operator can request from an ISP for network management purposes;<sup>212/</sup>
- requests that the Commission impose restrictions on the cable operator's "packaging and marketing of MVPD services together with advanced and telephone service,"<sup>213/</sup>
- requests that the Commission impose forced access on cable operators to allow all MVPDs to access the cable infrastructure.<sup>214/</sup>

This is not an exhaustive list. But it is chilling evidence that the Commission's implementation of any sort of forced access regime would be a regulatory nightmare that will quickly spill over into regulation of the Internet itself. Efforts to enforce such regulations, adjudicate the innumerable disputes over their meaning and application, and keep them current with technology would overwhelm an already overburdened Commission. The regulatory uncertainty that would ensue would have the effect of stopping the development of broadband over the cable modem platform in its tracks -- and those emerging industries that intend to use broadband to initiate new data-intensive services over wide pipes.

Further, there is no logical reason for mandatory access regulation to stop at the cable platform. Many other technologies and providers also are or will shortly be deploying broadband capability, including broadcasters, wireless, and satellite. For example, several broadcasters are using digital spectrum to deliver broadband services to end-users.<sup>215/</sup> EchoStar

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<sup>211/</sup> Disney 7/27 Ex Parte at 74. Disney proposes that the Commission "should apply that 40 percent limit by programming genre, including news, sports and entertainment" content, forcing the Commission to regulate the content sent over the conduit. *See id.*

<sup>212/</sup> *See* NorthNet 10/30 Ex Parte at 11.

<sup>213/</sup> *See AT&T/TCI Merger*, Comments of EchoStar Communications, at 7 (filed Oct. 29, 1998).

<sup>214/</sup> *See id.* at 5-7.

<sup>215/</sup> BROADBAND INTELLIGENCE at 14-15. *See also Granite Broadcasting Leases Digital Signal to Geocast Network Systems*, at <http://webonline.com/html/2000/May/Articles/granite.htm> (June 12, 2000) (noting that Granite has agreed to "extend[] and expand[] its arrangement with Geocast Network Systems, Inc. to lease part of the digital signal of Granite's two San Francisco Bay Area stations" which will allow Geocast to distribute, over Granite's digital spectrum, "news, weather, sports and technology information"); *iBlast Networks Expands to 225 Stations*, at

Communications and Geocast Network Systems have entered into an agreement “to deliver personalized broadband services to PC users via EchoStar’s DISH Network™ satellite TV service.”<sup>216/</sup> Once the Commission starts down the path of access regulation, mandatory access obligations can and should extend to all broadband technology. Even wireless Internet handheld devices like the Palm Pilot could be subject to access regulation. There will be no foreseeable end to the process, which will eventually culminate in regulation of the Internet itself. The ramifications of such a decision would be potentially fatal to the myriad newly developing industries that have sprung up in the absence of regulation. As Commissioner Powell has observed:

[e]very common carrier staffer knows the litany and the expense in terms of man-hours, litigation, cost of compliance, and most importantly in this new Internet world, LOSS OF TIME! Mandating open access to cable could unleash a never-ending regulatory exercise to catch up with change.<sup>217/</sup>

**E. Business Models For Providing Multiple ISPs To Customers Should Evolve Naturally, Not By Government Mandate.**

The Notice’s suggestion that the Commission should select a particular business model for ISP-cable operator access relationships<sup>218/</sup> would also harm the innovative development of

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<http://www.iblast.com/press.php3?aid=5> (July 6, 2000) (stating that “iBlast Networks, a broadcaster-owned company and the nation’s largest digital network for over-the-air-distribution of popular content” provides, through 19 major television station groups and 225 local television stations, “popular content such as music, video games, movie trailers, newspapers, magazines, e-books, computer software and other application [that] will be broadcast at high speed to personal computers and other receiving devices that are iBlast enabled”).

<sup>216/</sup> *EchoStar Communications Corporation and Geocast Network Systems Align to Deliver New Personalized Interactive Broadband Services to PC Users Via Satellite*, at <http://www.electronichouse.com/news101600echostar.html> (Oct. 16, 2000).

<sup>217/</sup> Powell 6/15 Remarks; BROADBAND TODAY at 44-45.

<sup>218/</sup> Notice ¶ 30.

the broadband industry. “Open” access means different things to different consumers,<sup>219/</sup> and cable operators and ISPs will develop commercial relationships that mirror their unique understanding and needs. The Commission should avoid micromanaging the development of “open” infrastructures, because the effort would be futile and doomed to failure. None of the three models suggested in the Notice, and no other model, will be appropriate for everyone. Rather, as discussed above, the Commission can best promote broadband deployment by letting the market decide what works.

The costs to consumers for broadband services, whether provided by cable operators or ISPs, will be much higher if operators are forced to conform to a predetermined model rather than design networks and services that both satisfy consumer demand and meet the needs of both the operator’s and ISP’s business plans. One clear lesson that can be taken from the dynamic Internet marketplace is that business models come in all shapes and sizes and will continuously evolve to meet consumer’s needs. ISPs and other Internet content providers have attempted to provide service to the end user through a multitude of business models.

For example, some Internet service providers, such as AltaVista, offer free access to the Internet and rely on advertising for revenue. Other ISPs, such as Earthlink, charge their subscribers a monthly fee to access the Internet, providing little, if any, content of their own. AOL offers both Internet access and content through a similar subscription fee basis. Some

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<sup>219/</sup> Indeed, in BROADBAND TODAY, the Cable Services Bureau observed that “despite a flurry of national and grass roots activity concerning ‘open access,’ our panelists [the business, government, and public interest advocates that the FCC consulted] were not able to agree on a single workable definition of the term, much less recommend an appropriate regulatory classification and enforcement mechanism.” BROADBAND TODAY at 38. The report concluded that the inability of forced access proponents to agree on what “open access” means “speaks volumes about the difficulties and appropriateness of establishing a regulatory regime at this early stage in broadband’s history.” *Id.*

entities offer specific Internet services at no charge, such as MSN's "Hotmail," an e-mail-only service.

In addition to the different price and service offerings of these entities, companies have taken different approaches to getting content to the end user -- some "push" content to the subscriber, while others require the consumer to "pull" content from their sites. For instance, PointCast was one of the first free services to "push" content (and advertising) onto the end user's Internet terminal. Others, such as Yahoo, require its visitors to pull the content of the web user's choosing off of its site by providing various links to information. Finally, some have decided to use a hybrid "push/pull" model, for example, CNBC, which pushes the information contained in the stock ticker to visitors, while allowing these visitors to simultaneously access stored information from its site.

The marketplace, not government regulation, has led to the proliferation of these various business models as companies determine how best to meet consumer demand, and determines whether each of these, and the countless other, Internet business models thrives or wilts under the heat of competition.<sup>220/</sup> It is now established, without much question, that free markets work better than any other economic form ever tried to allocate resources, to inspire innovation, to maximize public welfare, and even to protect and empower individuals.<sup>221/</sup> Forcing multiple ISPs to subscribe to any particular business model will only serve to stifle competition and innovation as these companies struggle to differentiate their service offerings. As the District Court in *Broward County* recognized, a forced access regime that dictates which business model a particular company must follow "distorts and disrupts the integrity of the information market

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<sup>220/</sup> See *Broward County* at 16 (recognizing that "[t]he business plan adopted by the cable operators is not the only one possible and may not succeed").

<sup>221/</sup> Powell 6/15 Remarks.

by interfering with the ability of market participants to use different cost structures and economic approaches based upon the inherent advantages and disadvantages of their respective technology.”<sup>222/</sup>

**F. Concerns For “Regulatory Parity” Do Not Justify A Forced Access Requirement.**

Because Congress deliberately regulated cable and telephone companies differently, concerns about “regulatory parity” cannot justify the imposition of common carrier-like requirements on cable operators. Parity policy has a place in communications regulation, but it has never been the only guide to FCC decision-making. Video programming delivered by broadcast, cable, MMDS, and DBS looks the same to the viewer -- it may be the exact same programming -- but the delivery of programming by each of those distributors is subject to different rules for different reasons.

With respect to public interest obligations, for instance, the FCC declined to impose upon the DBS industry the multitude of regulations imposed on cable operators, despite requests by the cable and OVS industries for “regulatory parity.”<sup>223/</sup> The FCC explained that “DBS and cable are separate and distinct services, warranting separate and distinct obligations.”<sup>224/</sup> In particular, the FCC noted DBS was then a “relatively new entrant attempting to compete with an established, financially stable cable industry.”<sup>225/</sup> Conversely, cable and OVS do not have a percentage of channels dedicated to educational service, as DBS does, although they may

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<sup>222/</sup> *Broward County* at 16-17.

<sup>223/</sup> *Implementation of Section 25 of the Cable Television Consumer Protection and Competition Act of 1992; Direct Broadcast Satellite Public Interest Obligations*, 13 FCC Rcd 23254, 23276-79 ¶¶ 56-61 (1998).

<sup>224/</sup> *Id.* at 23278 ¶ 59.

<sup>225/</sup> *Id.* ¶¶ 59-60.

generally be required to set aside channels for public, educational and governmental access. Not all local exchange carriers are regulated in an identical fashion,<sup>226/</sup> and even incumbent local exchange carriers are subject to different levels of regulation if they serve rural areas<sup>227/</sup> or fewer than two percent of the nation's subscriber lines in the aggregate.<sup>228/</sup>

The very different regulatory histories of the cable and telephone industries make different regulatory obligations appropriate. ILECs face a clear differential in risk in deploying broadband services as compared to cable companies. Cable companies have virtually no phone or Internet customers. In stark contrast, ILECs today have nearly all telephone and dial-up Internet access customers. The basic infrastructure used by ILECs to provide high-speed services was deployed by ILECs under a regulatory regime that shielded them from competition and funded their investments with captive ratepayer charges. And the ILECs faced no research and development risk with regard to the use of DSL technology – it was developed by Bell Labs in the 1980s. By contrast, cable companies must bear the full risks of developing and deploying cable modem services in a vigorously competitive market.

Additionally, telephone networks and cable networks have important physical differences that must be taken into account. Unlike the shared facilities of cable systems, telephone services are provided over networks in which transmission wires and facilities are dedicated to each individual telephone subscriber and are designed to provide service to any person or entity, including firms providing online services. Congress and the Commission took all of these differences into account and carefully designed regulatory obligations to ensure that each industry was regulated fairly.

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<sup>226/</sup> See section I.D.1.b., *supra*.

<sup>227/</sup> 47 U.S.C. § 251(f)(1).

<sup>228/</sup> *Id.* § 251(f)(2).

Regulatory parity is particularly inappropriate where it would mean the failure to recognize disparate market power of competitors. And it is particularly inappropriate where it is implemented by *adding* a layer of regulation on a competitor for whom no such regulation would otherwise be appropriate. There are good reasons why incumbents and new entrants are regulated differently, and the adoption of disparate policies governing seemingly similar services is often grounded in efforts to promote particular policy goals. And to the extent a reluctance to engage in a substantial restructuring of the policy framework helps keep legacy regulation away from new technologies that do not require regulation, that reluctance serves the public good. Sound public policy is founded on careful consideration of an industry's individual circumstances, not blind notions of "regulatory parity."

**G. Set-Top Box And Other Interactive Television Issues Are Not Related To The Issue Of High Speed Access To The Internet.**

The Notice raises a number of questions about set-top boxes and interactive television.<sup>229/</sup> Despite the efforts of some cable competitors to tie the two together, interactive television raises a different set of issues than does ISP access to the cable modem platform. These issues are more appropriately addressed in a separate proceeding. First, the interactive television service to which proponents of regulation seek access is readily distinguishable from access to online services and Web sites that has been the subject of this debate to date. Second, set-top box interactivity has barely developed and has hardly been implemented. Even discussing mandatory "access" in the context of interactive television is vastly premature. Access to set-tops also raises complicated technical issues that are farther from resolution than accommodating multiple ISPs.

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<sup>229/</sup> Notice ¶ 31.

Interactive television is more properly considered as an extension of video programming services rather than Internet access. Although some interactive aspects of set-top boxes may involve the Internet -- *e.g.*, ordering a product advertised on television -- many capabilities will be wholly unrelated to the Internet. Ordering a movie from the operator's available video warehouse, using an interactive program guide, or playing an interactive video game will all be possible through set-top boxes.<sup>230</sup> None of those capabilities will involve "Internet access" in the sense of connecting to third party online services. Thus, even if the Commission determines that multiple ISP access to the cable plant is warranted in order to allow ISPs to offer Internet access, that decision would not implicate -- and should not include -- access to the cable operator's set-top box.

In any case, it is premature to address "access" to set-tops, given the nascent stage of interactive television. Cable operators have just begun to develop their advanced set-top box implementation plans. In many cases, they have not fully determined what interactive capabilities will be offered through the set-top box. It is virtually certain that different cable operators will incorporate different interactive capabilities into the set-top box, based on their different business strategies and customer bases. Given that set-top box interactivity is yet in its infancy, it is plainly premature for the Commission to talk about mandatory access to those capabilities. It is wholly unwarranted for the Commission to consider imposing such a burden on cable operators in connection with a service that has not even been launched.

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<sup>230</sup> *See, e.g.*, "And the Winners Are . . .," *CTAM Magazine*, Fall 2000, p.14 ("Digital technology is enabling an incredible array of new consumer capabilities, such as playing a video on demand (VOD) movie, competing with friends in a networked game, chatting on-screen during a sit-com, and time-shifting a sporting event").

### **III. THE PROVISION OF MULTIPLE ISPS ON CABLE SYSTEMS RAISES A NUMBER OF TECHNICAL, OPERATIONAL AND LOGISTICAL ISSUES THAT THE GOVERNMENT IS ILL-EQUIPPED TO RESOLVE**

Providing multiple ISPs will require a substantial commitment of cable operator time and resources. Issues such as bandwidth management, service provisioning, billing, and operations support are complex and do not readily lend themselves to government regulation. Because each cable operator-ISP relationship will be unique, these issues are best resolved through negotiations that can take the individual characteristics of each relationship into account. Government regulation that dictates a particular means of establishing the relationship will likely stifle the emergence of creative, innovative solutions in the marketplace.

#### **A. Providing Multiple ISPs Raises Substantial Technical And Operational Issues That Are Best Addressed By Individually Negotiated Business Arrangements Rather Than Government Fiat**

##### **1. Providing Multiple ISPs Raises Unique And Complex Technical And Operational Issues.**

Today, subscribers have access to any ISP they choose, and any ISP has, or can have, access to any subscriber of any other ISP. This is true for any means of Internet access – dial-up, DSL or cable modem. The most visible example of this is AOL’s “Bring Your Own Access” functionality. As long as an AOL subscriber is connected to the Internet through any means, the subscriber can access the AOL server. Nothing (other than firewalls) prevents any other ISP or portal from the same subscriber access.

In spite of already having functional access, proponents of “open access” seek physical interconnection with the cable modem platform, presumably so they can exercise more control over the customer experience and retain a direct business relationship with the customer. Cable networks, however, were not originally engineered to provide this arrangement. The complexities of doing so come into sharp focus when one considers the technical backdrop of

how cable companies connect their subscribers to the Internet. This backdrop is described in seven topics: Establishing a Connection to the Internet, Accommodating Multiple ISPs, Connection Locations, Bandwidth Management, Traffic Management, Operational Issues and Billing/Office Support Issues.

**Establishing a Connection to the Internet.** To launch a high-speed data service, a cable operator must first have an operational two-way cable plant. The operator must install in the headend network devices, including what is referred to as a Cable Modem Termination Systems (“CMTS”). The CMTS manages information flowing from the network to the individual consumers and vice versa. Each CMTS serves about 500 or more homes.

At the CMTS, data from the homes are passed to routers, which connect to a metropolitan area fiber network, which is connected to a national backbone. The backbone network carries the data packets between the metropolitan regions and is where data are interconnected with other ISP networks.

Cable operators usually allocate one dedicated downstream channel and varying amounts of upstream spectrum for connection with the Internet. The amount of available bandwidth connecting homes to the CMTS, which as discussed below, is shared by all ISPs accessing the cable plant, and is one determinant of a cable network’s capacity to provide multiple ISP access. Modern HFC cable plant designs attempt to have sufficient downstream spectrum to support anticipated future needs. Unanticipated requirements, such as multiple ISP access, could severely squeeze the downstream capacity. In addition, the upstream spectrum is now and will be increasingly scarce.

**Accommodating Multiple ISPs.** Because all ISPs will share the available bandwidth, when multiple ISPs are available, there must be a method by which data are routed between

customers and their chosen ISPs. The majority of industry participants today are considering “policy-based” routing using the source address (also sometimes called “source based routing”).<sup>231/</sup> Under source based routing, the CMTS reads the “from address” (rather than the “to address”) on any message coming from a consumer. Each consumer, as identified by the from address, is then paired in a table with an ISP, and the router sends the packet to the corresponding ISP, which forwards the message or data to its ultimate destination. This method of routing provides the technical basis for multiple ISPs to share the same bandwidth. Even with source-based routing, however, there is a limit to the number of ISPs that can be accommodated by a single cable operator. Tests of the “policy routers” used for this purpose indicate that if there are more than seven to ten ISPs, the process of using the source address to match each incoming packet with the appropriate ISP introduces unacceptable levels of delay and degradation into the routing process.<sup>232/</sup>

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<sup>231/</sup> Another method, “packet tunneling,” has thus far proved unworkable in tests. Tunneling would have used software installed on a customer’s computer to “wrap” data traveling from the consumers’ computer to a chosen ISP in a header identifying the consumer’s ISP. That data would then have been routed from the CMTS to the designated ISP, which would have unwrapped and distributed the messages/data to their ultimate destinations. This approach, however, was undesirable for several reasons. It imposed major inconveniences upon the customer, who would have been required to install (and continually update) the necessary software upon his or her PC. The “tunneling” software was also likely to result in performance degradation, and the wrapping and unwrapping process was expected to create extra delay and overhead. Tunneling also inhibits IP Multicast service. Industry participants, therefore, have concluded that tunneling in its current form is impracticable.

Indeed, GTE, one of the strongest proponents before the Commission of open access in general and of tunneling in particular, never demonstrated the feasibility of tunneling in any practical trial and appears to have abandoned it entirely. Had the Commission acted upon GTE’s early predictions of tunneling as a viable supporting technology for forced access and mandated its use, the industry, customers, and the Commission would have spent the past few years (and the foreseeable future) attempting to un mire the industry from an unworkable standard.

<sup>232/</sup> See “Third Party Internet Access, Point of Interconnect Acceptance Test Phase 2 Results (abridged version),” Videotron Itee, revision 1.0 (April 3, 2000).