

Independent ISPs are asking for government protection in the broadband era.

Life Support for Unaffiliated ISPs?

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DURING THE FORMATIVE YEARS OF THE Internet, thousands of Internet Service Providers (ISPs) offered dial-up service to dispersed telephone subscribers over traditional telephone lines. Over time, the service became concentrated in a handful of large ISPs, including America Online, Juno, MSN, and EarthLink. Those carriers were successful for two reasons: they provided a higher-quality service (e.g., offering higher ratios of modems per subscriber) and they bundled premium content with their access service.

In the last several years, however, narrowband ISPs have been decimated by consumer migration to higher-speed broadband services. As of December 2004, 35.3 million U.S. residential and small business customers—or about one-third of Internet subscribers—subscribed to a broadband service. The shift to broadband has forced dial-up service providers to consolidate and exit the market unless they can find some way to provide broadband services over someone else's network.

Narrowband ISPs are now pressuring the Federal Communications Commission and other telecommunications regulators to implement policies that would breathe life back into their businesses. But the consumer welfare justifications that they offer for government intervention are dubious. Although the independent ISPs were instrumental in narrowband Internet access, the same cannot be said for their contribution to the growth of broadband. In this article, we explain that the dial-up model cannot be replicated in the broadband era—that is, independent broadband ISPs simply do not currently contribute to the value of the service. If those companies have valuable content to offer

broadband subscribers, they can make it available to subscribers without mandated access to the broadband service providers' networks. Currently, there is simply no reason to worry about access to unaffiliated content on the Internet. Broadband is thriving without independent ISPs.

Vertical integration of modern broadband network operations and the retail service offering is likely to generate societal benefits because of the economies of scope in delivering a quality service. Vertical relationships, whether through ownership or close contractual relationships, allow network providers to develop innovative products that complement current products in a manner that can be advantageous to platform providers (even duopolists) and consumers. Mandatory access for multiple unaffiliated ISPs to a broadband network—a local telephone network or a cable television system—simply creates unnecessary transactions costs, leaves upstream concentration intact, and decreases the incentives for a firm to invest in or develop alternative networks.

The issue of "open access" is intimately related to the standard antitrust concept of a "price squeeze," because mandatory access is meaningless without designating a regulated access price. The level of that access price has already become the major bone of contention between independent ISPs and network platform owners. Does the access price provide sufficient operating margins for rival ISPs or do the prices "squeeze" them because the resultant retail margins are too small? We conclude that an antitrust price squeeze test, while providing some information about the welfare of an equally efficient retailer of digital subscriber line (DSL) services, yields no information about consumer welfare.

Our conclusions are similar to those that emerge from the research on bundled loyalty rebates. In that context, consumer harm depends on whether the price of the tying product when it is purchased separately after the bundle is introduced exceeds the independent monopoly price of the tying product, not on

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whether firms selling only one product or service can survive. The conditions under which consumers are harmed as a result of a price squeeze are similar. Consumers may not benefit from a policy that ensures an unaffiliated ISP earns a profit.

THE ROLE OF REGULATION

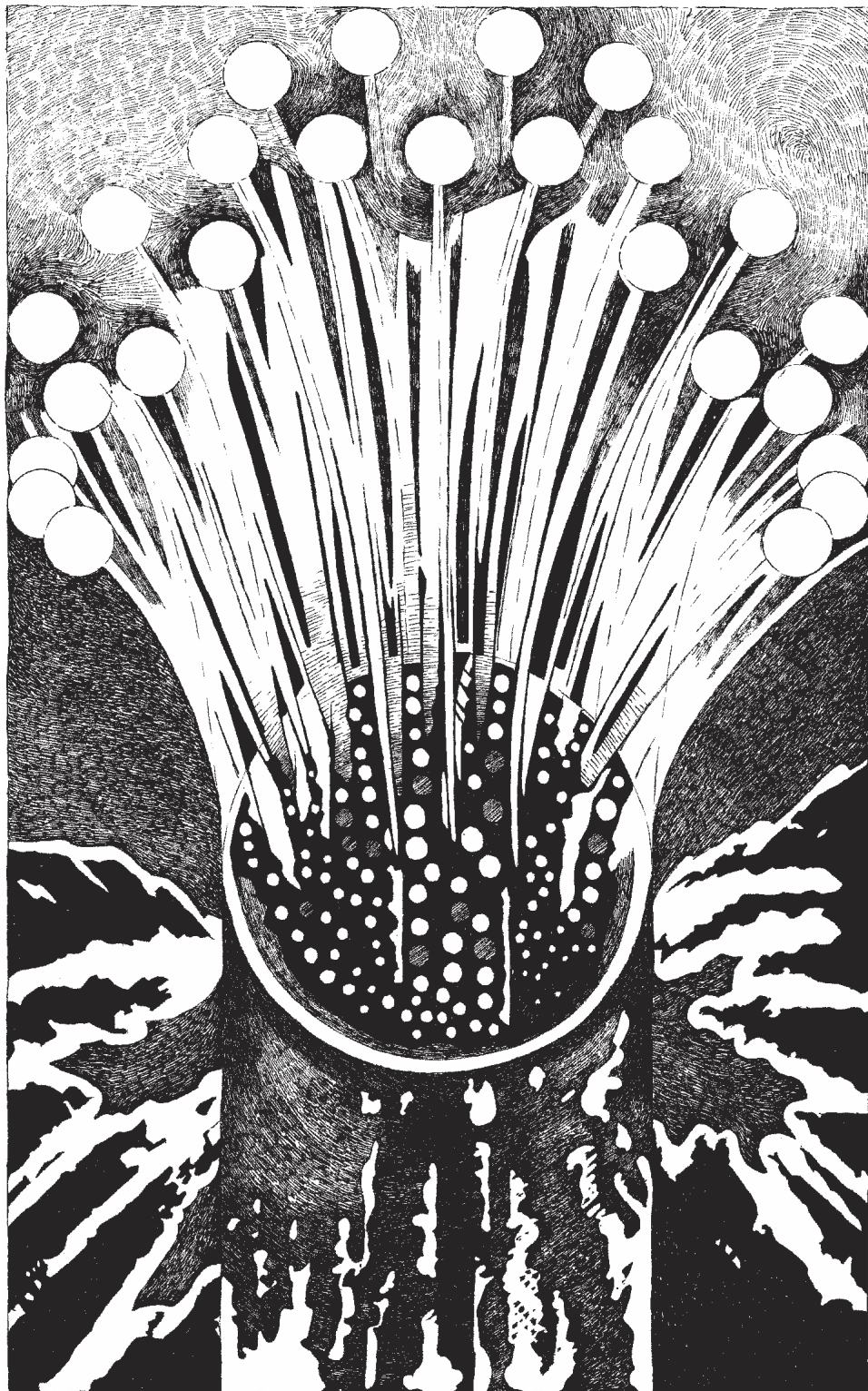
Internet service providers did not begin to grow significantly until late 1994 with the birth of the World Wide Web. The confluence of the Internet and the growth of personal computers gave rise to a new business of providing Internet access to the mass market. Although regulators did not create unaffiliated ISPs, they indirectly created the structure of the ISP industry and thereby heavily subsidized entry. In particular, regulators determined that certain network functions should not be provided by the owners of local networks, and that the ISPs' connections to the network should be priced at ordinary, generally flat-rated business service rates. This subsidized pricing of access allowed ISPs to be treated like end users as opposed to rival carriers. In contrast to the broadband era, investment in new infrastructure was not needed for narrowband access. Hence, the coordination problem between infrastructure development and access provision was postponed, allowing for greater segmentation.

The rise of ISPs coincided with a number of other favorable regulatory decisions that conferred special advantages upon ISPs, such as the exemption of ISPs from payment of access charges, arbitrage opportunities created by asymmetrical reciprocal compensation regulations, and the limitations placed on the local Bell telephone companies by the AT&T decree. Therefore, the widespread growth of unaffiliated ISPs was not entirely a product of free-market forces, but was rather the product of strong regulatory intervention.

COMPUTER I AND II In 1971, the FCC issued a decision on the regulation of telecommunications operators engaging in data processing services. The decision, which is referred to as "Computer I," ordered that those services that were purely data pro-

cessing would not be regulated, and those services that were purely telecommunications would continue to be regulated. As for those services that were a mixture of both, the decision allowed the FCC to make "ad hoc evaluations" with respect to 'hybrid services' to determine on which side of the line [the services] fell." The final decision and subsequent appellate court decision prohibited telephone companies from providing data processing services except through separate subsidiaries.

After *Computer I*, advancements in technology, such as digital telephone networks, forced the FCC to make a great number



MORGAN BALLARD

of ad hoc determinations. As a result, the FCC issued another decision on the matter, *Computer II*, nine years later. This decision limited telephone operators from engaging in “enhanced services,” which were defined as anything other than “basic services” such as switching and transmission. To engage in the enhanced services, a telephone operator (primarily AT&T) would have to establish a separate subsidiary with separate accounting, employees, equipment, and facilities. As a result, regulators artificially provided an opportunity for ISPs by protecting them from competition with the logical and efficient providers of such services—namely, integrated telephone companies. The structural separation requirements of *Computer II* were relaxed in 1986 when the FCC ruled that telephone operators did not have to structure an affiliated ISP as a separate subsidiary. Under *Computer III*, a telephone operator who elected to integrate an ISP into its operations, however, had to generate and follow a detailed “comparatively efficient interconnection” plan that ensured unaffiliated ISPs would have access to everything the affiliate received at the same terms and conditions.

Subsequently, when AT&T was broken up, the resulting Bell companies were barred from offering services across Local Access and Exchange Areas (LATAs). The AT&T decree confined them to “IntraLATA” services, but even those services were subject to *Computer III*’s comparatively efficient interconnection requirements. By the FCC’s own admission, this regulation placed a “substantial burden” on the Bells and “has sometimes hampered” the Bells in “their introduction of new intraLATA information services.”

THE 1996 TELECOM ACT Section 271 of the Telecommunications Act of 1996 continued the AT&T decree’s restriction on the ability of the regional Bell telephone companies to provide interLATA and information services until they were declared to be in compliance with the “checklist” of market opening requirements detailed in Section 251 of the act. In 1999, the FCC classified the service provided by regional Bell telephone companies to ISPs as an “interstate” service. As a result, the Bell companies that had not obtained Section 271 approval had to rely on separate global service providers (GSPs) to provide the interLATA portions of their dial-up Internet service in that state. The Bell companies were thus required to allow their Internet customers to choose their own GSPs, and the Bells had to pay the GSPs to carry their customers’ data traffic to the Internet backbone. Those requirements prevented the Bell companies from providing customers with end-to-end Internet access services and Internet backbone capacity. By artificially preventing the Bell companies from realizing efficiency gains from the end-to-end provision of Internet access, regulators destroyed a natural competitive advantage of the Bells vis-à-vis ISPs in the provision of Internet services. That broadened the scope of opportunity for ISPs beyond what would exist in a freely competitive market.

RECIPROCAL COMPENSATION The 1996 Telecommunications Act requires local carriers to compensate one another for terminating calls through a system of “reciprocal compensation.” In particular, whatever carrier A charges for terminating a call that originates on carrier B’s network would also be paid by carrier A for terminating a call on B’s network.

An efficient or market-based framework for reciprocal cost recovery would likely be based on cost causation. That is to say, the carrier or service provider who generates the cost of a call would be responsible for paying that cost. As a result, when an ISP customer dials in to the Internet, he is acting as a customer of the ISP, and it is the ISP that is generating the cost of carrying the customer’s data traffic over the local telephone company network.

Regulators, however, structured the reciprocal compensation system in a manner that allowed ISPs to benefit from artificially high termination charges negotiated between incumbents and the new competitive local exchange carriers (CLECs). Incumbent telephone company subscribers who enrolled in an ISP service and dialed their ISP’s number were considered to be originators of calls on the incumbent local exchange carrier (ILEC) network. If the ISP established a CLEC solely for the purpose of “terminating” the calls that originated on the ILEC network, it could reap huge revenues from the unbalanced traffic routed to it. ILECs were thus forced to pay large sums of money to CLECs that provided no real function. Those carriers were simply transit points through which Internet-bound traffic from an ILEC’s network moved to ISPs. In a more rational world, an ISP would have been required to compensate the ILEC for the burden placed on the incumbent’s switching systems by the ISP customers’ Internet traffic, which was considerable because Internet “calls” are much longer than the typical voice call. Instead, the regulators mandated that ILECs pay the ISPs’ related local carriers for terminating the ISP traffic.

This economically illogical regulatory framework forced ILECs to subsidize the provision of Internet service by ISPs. When this form of regulatory arbitrage was subsequently brought to an end by regulators who began to understand what they had created, the ISPs’ days were numbered.

The amount of money that flowed to the ISPs through reciprocal compensation payments was staggering. The *Wall Street Journal* reported that in 2001 alone, BellSouth paid \$300 million in reciprocal compensation payments, SBC paid \$800 million, and Verizon paid \$1 billion. Had those charges instead been levied on ISPs to compensate the ILECs for having to increase their switching capacity, the ISPs would have paid the carriers \$2.1 billion instead of receiving \$2.1 billion.

DO ISPs ADD VALUE?

Whatever the reason for the evolution of independent or “unaffiliated” ISPs, they may have contributed substantial value added in the narrowband era. However, the primary source of that added value has been rendered obsolete in the broadband age. The ISPs’ own lobbyists have long conceded that the business models of many, if not most, ISPs could not survive in the absence of regulatory intervention. For example, in 2000, when Illinois was preparing to rewrite its telecommunications laws, American ISP Association executive director Sue Ashdown argued that a law that freed Ameritech from traditional state regulation would destroy Illinois-based ISPs.

DIAL-UP ERA Dial-up ISPs perform three basic functions: installation of the modem banks that allow subscribers to connect to the Internet through the telephone network, provision of the

connections from the modem banks to the Internet backbone, and provision of content and Web hosting.

First, ISPs established points of presence (POPs) in geographic service areas. A POP is a large bank of modems at a central location. POPs are connected to other POPs by fiber optic connections to form a backbone. Although some ISPs run their own fiber optic lines between POPs, most simply lease capacity on the backbone to interconnect their own POPs and to connect to the larger Internet. Consumers dial into their ISP's local POP over their ILEC's telephone lines, and from there are connected to the Internet. POPs can thus be thought of as mini-networks of Internet users. The modem bank is typically the only telecommunications infrastructure operated by the ISP.

Second, ISPs provided connections to the Internet backbone. Providing consumers with connections to the Internet backbone is a very basic process that does not require significant specialized knowledge or advanced technical skill. As a result, the provision of connections to the Internet backbone is a commoditized service that should, in a freely operating market, generate

upstream and downstream capacity, and connected the modem banks to the Internet backbone.

Once those modifications are deployed, there is no need for an ISP to connect the customer to the Internet. As a result, ISPs are largely confined to dial-up services, unless regulators mandate that network carriers share their broadband networks with the ISPs. Although a number of ISPs have attempted to provide broadband access over the local carriers' networks through various regulatory regimes, there is little opportunity for ISPs to add any real value (other than marketing) in such broadband provision. Indeed, in early 2005, AOL began advertising its anti-spam software as the most compelling reason why cable modem and DSL customers should subscribe to "AOL over Broadband" on top of the Internet service that is already provided as part of their high-speed connection.

Although the points of interface between broadband customers and the carrier networks are created by modem banks, DSL modems are often installed directly into the high-frequency portion of DSL-capable copper loops. In such situations, the need

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no more than a competitive return on capital for any business that engages in it.

Third, ISPs provided content and Web hosting. In addition to basic access to the Internet, numerous ISPs provide their own content and advanced services. AOL, for example, offers exclusive news and sports content to subscribers, as well as parental controls. Many ISPs offer services such as free Web hosting and multiple e-mail addresses. An ISP will typically offer such services as a means to provide additional value to consumers and to distinguish itself from other ISPs and carriers.

Although the first two functions are essential to the provision of dial-up Internet services, neither is particularly difficult. Unaffiliated ISPs do not possess an efficiency advantage in fulfilling those functions. The services provided by dial-up ISPs could surely be provided at least as efficiently by vertically integrated telephone operators. ISPs deliver little, if any, incremental value in the provision of dial-up access beyond that which could be delivered by the Bells.

BROADBAND ERA In the broadband world, the local network companies—incumbent telephone companies and cable television companies—generally provide the physical connection to the Internet. The local network companies have modified their network architecture so as to provide two-way high-speed connections to the Internet—cable modem services on cable networks or DSL services on telephone networks. In so doing, they have deployed their own modem banks, provided the requisite

for modem banks is eliminated. Given that the second function of ISPs (providing a connection from the modem banks to the Internet backbone) is little more than a standardized "commodity" service that can be provided by the telephone company, and that consumers attach little value to the ISPs' third function (providing content and Web hosting) when so much content is available on the Internet, it is all but impossible for unaffiliated ISPs to generate any real incremental value in the provision of broadband Internet access. Moreover, the proliferation of the "bring your own access" models by AOL and other large ISPs suggests a lack of significant economies between providing content and providing access, and implies that stand-alone content providers are not impaired without subsidized access to DSL transport.

CABLE EVOLUTION In the early days of broadband, many cable television operators tried to replicate the narrowband model by using ISPs that were separate from the network provider. Having an affiliated ISP proved to be of little value, as demonstrated by the case of Excite@Home, the affiliated ISP of broadband cable network owners AT&T, Comcast, and Cox. All three cable television firms originally owned and used Excite@Home exclusively to supply their customers with broadband Internet connectivity. The firms paid Excite@Home 35 percent of the monthly access fees paid by subscribers for their broadband Internet service.

In August 2001, however, Comcast and Cox announced that they planned to terminate their distribution agreements with Excite@Home the following year. One month later, in Septem-

ber 2001, Excite@Home filed for bankruptcy. In December 2001, AT&T terminated its relationship with Excite@Home and began to provide high-speed cable access directly to consumers. AT&T, Comcast, and Cox abandoned Excite@Home because they determined that its large investments in content were not highly valued by consumers, and the cable companies simply decided that they could offer broadband connectivity at a lower cost than Excite@Home was able to provide it.

What went wrong with Excite@Home? The first answer is that providing Internet content and high-speed Internet services together is not necessarily subject to the synergies that many had anticipated. @Home had purchased Excite.com, a Web portal, for \$6.7 billion in 1999. By late 2001, the online advertising market had declined severely and Excite@Home found that Excite.com's Web portal was virtually worthless. Indeed, Excite@Home eventually sold Excite.com in November 2001 for \$10 million, less than 0.2 percent of the \$6.7 billion @Home had paid to acquire it.

The second reason for Excite@Home's failure is the relatively uncomplicated nature of provision of high-speed Internet service by cable operators or telephone companies. Although agreements with ISPs may have appeared to make sense when there was a belief that unaffiliated ISPs had a comparative advantage in developing content, once that belief was exposed to be false, much of the perceived value of having an unaffiliated ISP develop that content simply evaporated. Over time, an increasing share of broadband customers began to install their own modems, further simplifying the task of delivering broadband connectivity.

If unaffiliated ISPs truly added significant economic value to end users of the Internet, one would expect cable companies to contract freely with unaffiliated ISPs for the provision of cable modem service. Yet cable firms have traditionally either offered Internet service themselves or affiliated with a single ISP, such as Roadrunner or Excite@Home, to provide Internet service.

Cable firms have been reluctant to open their networks to multiple ISPs, but they have begun to respond to the potential threat of federally mandated open access. The FCC has yet to address the issue in a general regulatory proceeding because of litigation that recently ended up before the Supreme Court. Before the Court's decision in *Brand X*, cable companies were clearly concerned that they may be subject to mandatory open access policies, much as telephone companies have been subject to "unbundling" requirements for their facilities. In June 2005, however, the Court upheld a cable company's right to restrict rival Internet service providers from their networks, and it affirmed the FCC's authority to decide which services it needs to regulate.

For example, as a condition for gaining approval of the AOL-Time Warner merger, Time Warner was forced to open its cable networks to unaffiliated ISPs. When the FCC finally approved the merger in January 2001, the order required "that AOL Time Warner shall not restrict the ability of any current or prospective ISP customers to select and initiate service from any unaffiliated ISP which, pursuant to a contract with AOL Time Warner, has made its service available over AOL-Time Warner's cable facilities." Following the merger, AOL-Time Warner reluctantly opened its network in cities across the United States to EarthLink and other unaffiliated ISPs.

The efforts of some cable firms to open their networks "voluntarily" to multiple ISPs have been slow and sporadic, suggesting that they are primarily motivated by current political considerations rather than any compelling economic rationale. Speaking of the various access agreements between ISPs and cable operators, Bruce Leichtman, president and principal analyst of Leichtman Research Group, has noted that "in general the agreements are for political reasons." The threat of federal open-access mandates and merger conditions appears to have played a major role in the decisions of AT&T Broadband and Comcast to open their networks to selected ISPs. AT&T Broadband reached a "multiple Internet service provider agreement" with EarthLink in March 2002 for the launch of EarthLink high-speed service over AT&T Broadband's network in Seattle and New England. AT&T Broadband also signed agreements with NET1Plus in New England and Internet Central in Seattle. AT&T Broadband's decisions to offer multiple ISPs over its cable lines, however, occurred only after it entered into merger discussions with Comcast in November 2000, which ultimately resulted in Comcast's acquisition of AT&T's cable assets.

REGULATORY ISSUES

As broadband Internet services proliferate and replace their slower dial-up antecedents, the ISPs are threatened with extinction unless they can persuade regulators to allow them to connect to customers through the country's telephone and cable networks. Last year, the FCC decided to terminate its policy of forcing local telephone networks to allow ISPs access to the upper frequencies of the telephone companies' copper loops at regulated rates. It also ruled out mandatory access to the new fiber-optic lines being deployed by some telephone carriers. Although no ISP had succeeded in developing a profitable business in offering broadband over the telephone companies' facilities, several companies were trying to do so. In France and Japan, ISPs that have wholesale access to telephone company copper loops are growing rapidly, but even they have not demonstrated that such a business can be sustained in the long run.

PRICE SQUEEZE? The economics of unaffiliated broadband ISP services depend in part on the price at which network access is provided to the ISPs by the network companies. Some ISPs have alleged that incumbent telephone companies have engaged in "price squeezes" so as to preserve their market power in the downstream market.

Do the incumbents have downstream market power that they could exercise against consumers? Unless they do, there is little reason to regulate the wholesale access price to telephone company networks. We have shown that the value-added provided by independent ISPs is limited. To the extent that unaffiliated ISPs have no plans to evolve into facilities-based providers, a lower wholesale access price would not increase facilities-based competition at the margin. And to the extent that unaffiliated ISPs have no cost advantages over incumbents in marketing broadband services, lowering the wholesale rate will not lead to lower end-user prices. Finally, neither DSL providers nor cable modem providers have attempted to monopolize broadband content, which suggests that even less restrictive policies, such as nondis-

crimination rules for access to content, might not be necessary.

In 2002, PacWest, DirecTV Broadband, and XO Communications complained to the FCC that SBC's monthly rate for its DSL-based Internet access service in California had fallen to a level that was below the wholesale rate that SBC charged independent ISPs for access to its loops and ATM transport. Therefore, the complainants said, this relationship created a price squeeze.

Whatever SBC's wholesale price, its low DSL retail rate clearly generated consumer welfare gains in the short run. To understand this allegation, we must analyze the factors that influence a DSL provider's retail rate and its wholesale rate for DSL transport. If a DSL provider is setting its wholesale rate according to a variant of the efficient component pricing rule—that is, if the access price is chosen such that the margin from providing wholesale access is equal to the margin from serving the end user directly—then it is fairly straightforward to show that its wholesale access price is equal to the difference between its retail price and its marginal cost of providing retail service. It is also straightforward to see that, unless the retail cost savings generated by the unaffiliated ISP retailer exceed the reduction in retail price needed to lure the customer away from the incumbent DSL provider, there is no room for profit at the retail level for the entrant. Hence, a pro-competitive pricing rule like efficient component pricing can expose a vertically integrated DSL provider to a price squeeze allegation.

Should this necessary condition for ISPs to profit from broadband make the vertically integrated broadband provider liable for harming the competitive process? The answer to this question depends on the extent to which a vertically integrated DSL provider wields power over its retail price of DSL, or its retail costs, or both. Clearly, the incumbent DSL provider has some influence over its retail costs. It could choose to advertise less, or it could choose to invest in technologies that would decrease its retail costs in future periods, but such considerations seem small compared to the potential effects of the incumbent's power over price. If the incumbent is a pure price taker in the end-user market, then it would have no interest in manipulating its access pricing formula to make it impossible for unaffiliated ISPs to make a profit. By contrast, if the incumbent is a price setter in the end-user market, then it has some degree of freedom in foreclosing rivals.

Of course, one could argue that the integrated broadband provider, even if it lacks market power in the downstream market, is always free to cut its end-user prices in such a way that unaffiliated ISPs cannot earn a profit. But a firm without market power in the downstream market has no incentive to set its wholesale prices (equal to the retail price minus its retail costs) so that unaffiliated retailers will be price-squeezed from the market unless there are economies of scope in delivering other services to the retained customer.

Hence, it would be irrational for an incumbent broadband provider that lacked market power in the downstream market to employ a price squeeze. Such a tactic, even if successful in discouraging retail-based DSL competition, could not induce exit by cable television companies, the incumbent's major competitors, and other facilities-based providers. Therefore, the incumbent could not recoup its short-term losses in future periods by raising its retail price. Competitors would remain, depriving the incumbent DSL provider of any ability to raise the price of its service.

Finally, the assumption of efficient component pricing requires that the access price and the retail price move in the same direction. Indeed, the change in access price with respect to a change in the retail price is unity. If one relaxes that access pricing assumption, however, then it is possible to conceive of a strategy whereby the vertically integrated DSL provider increases its access price but maintains or even decreases its retail price. As Damien Geradin and Robert O'Donoghue explain in a recent *Journal of Competition Law and Economics* article, the profitability of such a strategy depends on whether the reduction in revenues from wholesale access can be offset by additional downstream customer revenues. This calculus depends on several factors:

- The relative profitability of the wholesale and retail divisions of the vertically integrated DSL provider.
- The extent to which the vertically integrated provider can capture the displaced customers.
- The value of other services that the firm offers those customers.

With respect to the second factor, because U.S. cable modem firms and other facilities-based downstream rivals would capture a large share of the displaced customers—as of December 2004, the market share of U.S. cable providers was 56 percent—the incentive to increase the access price while decreasing the retail price is severely attenuated.

SQUEEZING CONSUMERS In the previous section, we explained why it is doubtful that incumbent broadband providers are refusing to deal with unaffiliated retailers with an anticompetitive intent. If the unaffiliated retailer can provide the retail service at a lower cost, then the incumbent should consider entering into an agreement with the ISP. Setting aside the issue of intent, it is still theoretically possible that the access pricing decision by the incumbent DSL provider, which might appear as a refusal to deal from the entrant's perspective, somehow weakens competition in the retail sector and thereby generates higher prices. Hence, we must evaluate whether the conditions for consumer harm are satisfied—even if the anticompetitive intent is lacking.

Industrial organization economists have studied vertical restraints for several decades. Vertical restraints include several potentially anticompetitive strategies, including refusals to deal, exclusive territory contracts with buyers, tie-ins, exclusionary covenants not to sell to rival producers, and incompatibility of complementary products. Because a price squeeze is a special case of a general refusal to deal, the conditions under which a price squeeze might decrease consumer welfare are no different than the conditions under which a general refusal to deal might decrease consumer welfare.

There are two specific cases in which the current analysis indicates that the need may exist, on grounds of consumer welfare maximization, for regulatory intervention to compel a vertically integrated firm to deal with a rival: market preservation or market extension. With respect to market preservation, in addition to a demonstration of market power in some relevant market, consumer harm depends on the existence of network effects in the consumption of complementary goods and the possibility that the unaffiliated downstream provider might eventually

compete directly or indirectly in the upstream market. With respect to market extension, in addition to a demonstration of market power in the upstream market, consumer harm from market extension depends on significant scale economies in the production of the complementary good. This condition could be generalized to include other economies such as economies of learning.

As explained earlier, most DSL providers do not possess market power in the market for broadband Internet access services and therefore cannot possess market power in any purported market for broadband transport. According to the FCC's own data, incumbent telephone companies accounted for a 37 percent market share in the provision of broadband Internet access services as of December 2004. This serves as a valid proxy for a Bell company's in-region market share in the provision of broadband transport, given that competitors accounting for more than 60 percent of the market (mainly cable operators) do not rely on the Bell's broadband transport. Although a large market share does not necessarily imply market power, a small market share surely implies the lack of market power. In particular, a telephone company provider of DSL does not have a sufficient base of customers to leverage infra-marginal gains from a price increase to offset the losses from marginal customers that would substitute to an alternative broadband network. Moreover, some ISPs such as EarthLink also purchase broadband transport from cable companies such as Time Warner and Comcast, and are pursuing other alternatives such as fixed wireless networks. Hence, ISPs do not have to purchase broadband transport from the incumbent telephone company and are not without a marketplace remedy for any excessive transport price. Because this market power condition is necessary for either case (market extension and market preservation), the ISPs' claims of predation, even if true, would not result in consumer harm.

Even assuming, contrary to fact, that a telephone company DSL provider did possess market power in the provision of (wholesale) broadband transport, the facts still do not satisfy the necessary conditions for consumer harm for either market extension or market preservation. With respect to market preservation, an ISP is unlikely to try to leverage its position into the provision of broadband transport by investing in the requisite network infrastructure. Hence, eliminating those ISPs would not assist a telephone company provider of DSL in preserving any alleged market power in the provision of broadband transport services on a wholesale basis.

With respect to market extension, there is no evidence that there are significant economies of scale in the resale of DSL service to end users. Unless some minimum viable scale is proven to exist—that is, a scale of operations below which an unaffiliated broadband ISP would be driven out of business—it would be impossible for one of the Bells to induce exit by reducing the output of a broadband ISP.

In summary, because none of the conditions for consumer harm are satisfied in the instant case, there is no legitimate economic concern. Refusing to deal with unaffiliated ISPs would neither protect a Bell's market position in the provision of broadband transport nor enable it to acquire market power in the provision of broadband Internet access service.

CONCLUSION

In a purely deregulated, competitive environment, unaffiliated broadband ISPs would likely suffer the same fate as other intermediaries in the Internet age. ISPs have existed, in large part, because DSL providers were obligated to sell critical economic inputs below cost, forced to comply with costly and burdensome regulations, and prevented from offering certain valuable services to customers. The removal of those obligations should not create an antitrust obligation for DSL providers to keep unaffiliated ISPs on economic life support in the broadband era.

We have demonstrated that a price squeeze might occur even when incumbent DSL providers lack any anticompetitive intent or market power. Because the conditions for consumer harm are not satisfied in the case of broadband Internet access, and because ISPs do not offer any value added in the broadband era, regulators should not be overly concerned with generating synthetic retail competition. Competition between facilities-based high-speed Internet providers should be sufficient to maximize consumer welfare. Lowering the wholesale rate for DSL transport would not stimulate facilities-based entry by ISPs, nor would it lower end-user prices, because unaffiliated ISPs cannot afford to decrease prices given their customer acquisition costs and, even if they lowered their prices, DSL providers would not likely respond. Finally, less invasive approaches such as nondiscrimination provisions are likely unnecessary, as neither DSL providers nor cable modem providers appear interested in monopolizing broadband content. **R**

READINGS

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