

briefly explain why the remaining five elements would require a regulatory commission to undertake geographically-specific fact finding before it could conclude whether or not those elements meet the impairment standard of section 251(d)(2). Recall that in this subsection, we consider only *supply*-side substitution constraints on an ILEC's ability to exercise market power in the end-user services market.

a. Local Switching

137. The switch is a telephone company's central computer that processes cross-connections for telephone calls and makes routing decisions based on some parameter, such as the digits dialed by the customer.²¹⁸ The nature of costs for switches and the level of competition in their supply indicate, for at least three reasons, that switches should not be unbundled in any geographic market in the United States. First, switches are already competitively supplied. As of March 1999, over one-third of all RBOC and GTE rate centers in the United States were served by at least one CLEC voice switch, and 18 percent were served by at least two CLEC switches.²¹⁹

138. Second, even if one were to assume counterfactually that switches are not competitively supplied, the nature of their costs still indicates that switches should not be unbundled. In particular, switches are highly substitutable across wide geographic areas. If a local switch is combined with digital loop carrier equipment, the switch can provide service to distant customers. At a certain point, the cost of transporting calls to a distant switch becomes

218. See REGIS J. BATES & DONALD GREGORY, VOICE AND DATA COMMUNICATIONS HANDBOOK 31 (McGraw-Hill 1998).

219. PETER W. HUBER & EVAN T. LEO, UNE FACT REPORT, Submitted by United States Telephone

more costly than the benefits achieved from the scale economies of increasing the switch load. According to AT&T, such an arrangement is feasible within a 125-mile radius from the switch.²²⁰ Consequently, the relevant geographic markets for switching are large.

139. Third, it is economical for competitors to self-supply (buy and install) switches across a wide range of geographic areas. As long as a CLEC believes that it can serve the minimum number of access lines needed to operate the switch in an economic fashion, self-supply is a viable alternative. Because there are no barriers to exit in the switch industry, mandatory unbundling of switches would not increase competition and therefore could not improve consumer welfare.

b. Unbundled Loops

140. In general, loops are much less substitutable than switching because a large portion of the facility is dedicated to an individual customer, or at least to a specific street or neighborhood, and is costly to redeploy. But in many suburban areas there are facilities-based local competitors for business services. Indeed, unbundled loops for businesses in downtown areas and other areas where CLECs (or competitive access providers, as they were formerly known) provide service cannot satisfy the "necessary" or "impair" standard. Supply-side analysis shows that it cannot impair competition to decline to lease unbundled loops to those firms at TELRIC prices. Over time, those CLECs should spread their service to residential

Association, and prepared for Ameritech, Bell Atlantic, BellSouth, GTE, and U S West (May 26, 1999). Huber and Leo computed those figures on the basis of Bellcore's *Local Exchange Routing Guide*.

220. See Petition of AT&T Corp. to Deny Application, in the Matter of GTE Corp. & Bell Atlantic Corp. for Consent to Transfer of Control, CC Dkt. No. 98-184, at 24 (Nov. 23, 1998) [hereinafter *AT&T Petition to Deny*]. See also Memorandum of Robert H. Bork on behalf of AT&T Corp. at 10 (Apr. 7, 1999).

customers as well. In some geographic areas, facilities-based competitors already serve residential customers.

141. Given the pace of new technology deployment, suburban and even rural markets need to be analyzed on a case-by-case basis to determine whether and where unbundled loops are essential facilities. Even if one considers only the constraints on market power owing to CLEC supply opportunities, unbundled loops may be essential facilities in some markets but not in others.²²¹ The *Second Further Notice of Proposed Rulemaking*, however, presumes that loops must be unbundled: “It is our strong expectation that under any reasonable interpretation of the ‘necessary’ and ‘impair’ standards of section 251(d)(2), loops will be generally subject to the section 251(c)(3) unbundling obligations.”²²² If the Commission were to incorporate demand-side substitution possibilities, as we do in the following section, the agency would have to revise its expectation that mandatory unbundling of loops will be necessary.

c. Other Network Elements

142. As the preceding discussion shows, the question of whether or not to mandate unbundling of a network element depends on factual questions concerning the level of actual competition in the supply of the requested element and the degree to which the costs of the element are sunk or fixed. The answers to those questions are likely to vary from one geographic market to another for the reasons we have discussed earlier. For four of the five remaining elements—namely, network interface devices (NIDs), interoffice transmission

221. This section addresses only supply-side effects. With respect to demand-side constraints on market power, as soon as AT&T begins to supply cable telephony, unbundled loops should no longer meet the impairment test. At that time, an ILEC should no longer be compelled to supply CLECs unbundled loops at a TELRIC price.

facilities, signaling networks, and operations support systems—the regulatory commission would have to undertake geographically-specific fact finding before it could conclude whether or not those elements are competitively supplied, and if not, whether they could be competitively supplied in a reasonable period of time. Finally, we believe operator services and directory assistance, the remaining element, need not be unbundled in *any* geographic market because they are competitively supplied, as one state PUC recently concluded.²²³

2. New Technologies for Which the FCC Potentially Could Mandate Network Unbundling

143. In terms of broadband networks and the services they deliver, market evidence demonstrates that mandatory unbundling of the ILECs' networks is not required to permit competition. Because an ILEC does not have market power in the delivery of broadband services, the network elements that the ILEC uses to supply those services cannot be essential facilities. Competition in broadband services is well underway without any compulsory unbundling of the ILECs' network elements. Indeed, in its 1999 report to Congress on the deployment of advanced telecommunications capabilities, the Commission recognized the current state of broadband competition that exists without any use of ILEC network elements:

Numerous companies in virtually all segments of the communications industry are starting to deploy, or plan to deploy in the near future, broadband to the consumer market. Current providers include cable television companies, incumbent LECs, some utilities, and "wireless cable" companies.²²⁴

222. *SFNPRM*, *supra* note 1, at ¶ 32.

223. In the Matter of Petition of U S WEST Communications, Inc. for Competitive Classification of Directory Assistance Services, Order Granting Petition, Dkt. UT-990259 (Wash. Utils. & Transp. Comm'n Apr. 29, 1999).

224. Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of

Because cable companies currently pass more than 95 percent of U.S. homes, it follows that mandatory unbundling of the ILECs' broadband networks is not necessary for competition in broadband services, nor would competition be impaired if the ILECs' broadband networks were not unbundled.

144. Furthermore, although the ILECs' loops in certain geographical areas may be subjected to mandatory unbundling under the impairment standard, as we discussed above, the ILECs' broadband backbone facilities should not be unbundled. Again, the Commission recognized in its 1999 report to Congress that competition is proceeding without mandatory unbundling of the ILECs' broadband networks: "We consider investment in both backbone facilities and the 'last mile.' We find that broadband backbone facilities are being deployed in a reasonable and timely manner."²²⁵ In the same report to Congress, the FCC also observed:

Deployment of broadband, both backbone and last mile, is occurring on a major scale, for both business and consumer markets. American business and the capital markets are obviously betting that broadband will be successful in the business and consumer markets and many companies are rushing to seize part of that success. We expect that this sizeable investment by numerous companies will translate in the near future into significant deployment of broadband capability.²²⁶

Regulatory intervention is not required when competition is thriving, and unnecessary regulation can distort otherwise competitive markets. Thus, if the Commission applies to section 251(d)(2) a competition-based consumer-welfare standard as we have urged, and not a competitor-welfare standard, the factual findings in the Commission's own 1999 report to

the Telecommunications Act of 1996, Report, CC Dkt. No. 98-146, ¶ 12 (released Feb. 2, 1999) [hereinafter *Advanced Telecommunications Capability*].

225. *Id.* at ¶ 13 (footnote omitted).

226. *Id.* at ¶ 36.

Congress demonstrate that no unbundling of the ILECs' broadband networks should be required.

145. Furthermore, mandatory unbundling of the ILECs' broadband networks at TELRIC-based costs would very likely decrease innovation and the introduction of new broadband services to consumers for the reasons that we discussed previously. An ILEC is unlikely to invest in a new broadband service if it knows that the FCC will compel it to sell to its competitors at TELRIC prices the network elements used to supply that service if it proves to be commercially successful. The Commission seems to be oblivious to the impact of mandatory unbundling on ILEC investment in advanced services:

We also see nothing in the statute or the Supreme Court's opinion that would preclude us from requiring that loops that must be unbundled must also be conditioned in a manner that allows requesting carriers supplying the necessary electronics to provide advanced telecommunications services, such as digital subscriber line technology (xDSL).²²⁷

The Commission's gift of a free option to CLECs is not costless to society as a whole, for it will decrease innovation and thereby harm consumers, contrary to the explicit goals of the Telecommunications Act of 1996.

3. Combinations of Elements

146. Our test can be adapted to treat combinations of elements. The Commission stated in its *Second Further Notice of Proposed Rulemaking* that "[t]he ability of requesting carriers to use unbundled network elements, including combinations of unbundled network elements, is integral to achieving Congress' objective of promoting rapid competition in the local telecommu-

227. *SFNPRM*, *supra* note 1, at ¶ 32. *See also id.* at ¶ 34 (seeking comment on whether to "modify the

nications market.”²²⁸ Our proposed impairment test, as described earlier, supposes that all but a single network element are competitively supplied to CLECs. If the CLEC can demonstrate that the ILEC’s restriction of unbundled access to the remaining element at a TELRIC price would allow the ILEC to exercise market power in the output market, then that element should be unbundled at its TELRIC price. Stated differently, our impairment test is conducted on a “stand-alone basis.” One may argue, however, that our test does not consider cases where sets of network elements are not competitively supplied. In those circumstances, would competition in the output market be impaired? Two cases need to be considered.

147. First, suppose two network elements failed to meet the impairment test on a stand-alone basis. If it would not impair the competitive supply of telecommunications services for the FCC to refrain from mandating the unbundling of a nonproprietary element, then it necessarily follows that such an element is one that, when assembled with other elements that failed to pass the impairment test on a stand-alone basis, produces a competitive service that the FCC should forbear from regulating entirely. In those cases, the set of network elements should not be unbundled at TELRIC-prices.

148. Second, suppose that one network element, *A*, failed to meet the impairment test on a stand-alone basis, while the restriction of access to another network element, *B*, was shown to impair competition at the output level. The Commission might reason in the following way: Element *A* only failed the impairment test because the CLEC could rely on

definition of ‘loops’ or ‘transport’ to include dark fiber”); *id.* at ¶ 35 (seeking comment on mandatory unbundling of DSLAMs and packet switches).

228. *Id.* at ¶ 2.

element *B* in the hypothetical. Recall that all other network elements are assumed to be competitively supplied in the stand-alone test. In those cases, the burden of proof should be on the CLEC to demonstrate that the cost of supplying element *A conditional* on supplying element *B* is sufficiently less than the cost of supplying element *A* alone. If the CLEC could not demonstrate significant cost synergies, then element *A* could not be reclassified as essential.

149. Finally, consider the case of the “UNE platform,” where all of the ILEC’s network elements are considered simultaneously as an “element” unto itself. The logic developed earlier implies that, as long as any one element of the UNE platform fails to meet the impairment test on a stand-alone basis, then the UNE platform as whole should not be unbundled at TELRIC. The only condition under which the UNE platform should be unbundled at TELRIC prices is when *each* of the elements of the UNE platform individually passes the impairment test on a stand-alone basis. For the reasons discussed above, that condition cannot hold in the face of the clearly competitive supply of elements such as switching and directory assistance.

B. Demand-Substitution Effects Influence the Unbundling of All Network Elements

150. In contrast to the supply-side effects articulated above, the demand-side effects do not influence each network element on an individual basis. From a demand-side perspective, the correct way to assess whether an ILEC has the ability to exercise monopoly power is to ascertain the following: If the ILEC attempted to raise prices for end-user access while restricting its supply to CLECs of a given network element, would *customers* find an

alternative source of acceptable end-user service? Consumers could make that choice without considering whether a particular network element or set of network elements was competitively supplied to CLECs. Any consumer substitution in response to an increase in the price of end-user services constrains the ILEC's market power across all network elements. Demand elasticity at the output level does not differentially affect individual network elements at the input level. Thus it would be unproductive for the Commission to attempt to apply this portion of the impairment test at an element-specific level.

151. It is well known that the price elasticity of demand for any good increases with the availability of suitable substitutes.²²⁹ In recent years, credible substitutes to traditional landline service have begun to emerge, which should increase the price elasticity of demand for traditional voice telephony services. For example, Cox Cable is offering local telephone service over its coaxial cable plant in parts of Orange County and San Diego, California; Phoenix, Arizona; Omaha, Nebraska; Hampton Roads, Virginia; and parts of New England.²³⁰ AT&T's recent purchase of TCI, its bid for Media One, and its alliance with Time Warner would give the firm access to 55 percent of homes in the United States.²³¹

152. In addition to cable, wireless technologies are being deployed in an increasing number of geographic areas. For example in Plano, Texas, AT&T's "Wireless Home Phone Option" is designed to compete directly with the local exchange service of the wireline

229. See, e.g., STIGLER, *supra* note 18, at 24.

230. Alex Best, Senior Vice President of Engineering, Cox Communications, *New Service Rollout-1999: Presentation Before the Fifth Annual Goldman Sachs Communications Technology Retreat* (Mar. 1, 1999) (available at Cox website, Investor Center, <http://www.cox.com>).

231. Paul Farhi, *AT&T: Too Big Once Again?*, WASH. POST, Apr. 27, 1999, at E01. AT&T would pass a much higher percentage of homes.

incumbent, GTE. The plan offers unlimited airtime within the fixed local calling area (that is, the home cell site) at a comparable price to GTE's basic service. Also, AT&T is testing a fixed wireless local loop, known as "Project Angel," that is designed to fill in coverage gaps in AT&T's cable network. AT&T can provide users with up to four phone lines, each capable of carrying voice, high-speed data, and video through an antenna-like device installed outside one's house.²³² Wireless local loops are likely to be the preferred access technology in rural areas because they are a cost-effective way to transmit signals to remote residences. For example, in Regent, South Dakota, fixed wireless services from Western Wireless allow customers to connect regular home phones into wireless base station units to get competitively priced local and long-distance services while effectively bypassing the wireline local loop.²³³ Such developments in the demand substitutability of alternative access technologies provide a clear answer when the Commission, asks in the *Second Further Notice of Proposed Rulemaking*, what is "the relevance, if any, to the interpretation of the 'necessary' and 'impair' standard, that we are reexamining these issues today, more than three years after passage of the Act."²³⁴

153. The first competitive constraint on any exercise of ILEC market power is cable telephony. Wireless telephony is an additional constraint on market power. Barring any coordinated interaction among firms providing competitive technology platforms, competition in voice telephony should be robust, demand substitutability should be high, and thus little regulatory intervention is warranted.

232. Rebecca Blumenstein, *AT&T Plans to Enter Some Areas Using 'Fixed Wireless' Technology*, WALL ST. J., Mar. 19, 1999, at B6.

233. Joe Gardyasz, *Phone Co-Op Pulls Plug on Wireless Competitor*, BISMARCK TRIB., Jan. 13, 1999, at 5.

154. Demand substitution constraints on the ILEC's ability to exercise market power also may come from consumers' demand for bundles of services that include local voice telephony. As the FCC pursues a belief that competition requires extensive mandatory unbundling at TELRIC prices, competitors of the ILECs pursue a business strategy of acquiring (through the capital market) network elements at market prices on the presumption that consumers demand bundled services.

155. It would seem to have been an unstated premise of the FCC's interpretation of the mandatory unbundling provisions in section 251 and 252 of the Telecommunications Act of 1996 that those statutory provisions should be read in a demand-substitution vacuum. Although the Telecommunications Act of 1996 ostensibly removed artificial regulatory distinctions based on the particular technology employed to produce a communications service, the administrative rulemakings and federal court litigation that dominated the first three years of experience under the new statute focused on the traditional narrowband wireline access network. Indeed, developments in cable telephony and wireless local loops may soon make the entire exercise of wireline unbundling irrelevant. Yet, from considering the relevance of demand substitution to interpretation of section 251(d)(2), the *Second Further Notice of Proposed Rulemaking* asks whether the FCC should truncate its analysis of all relevant sources of supply substitution.²³⁵ The FCC evidently does not contemplate *any* evaluation of demand substitution whatsoever.

234. *SFNPRM*, *supra* note 1, at ¶ 14.

235. *Id.* at ¶ 28 (asking "whether and the extent to which the language of the statute and the Supreme Court's opinion constrain the factors that we can or should consider in evaluating the availability of elements outside the incumbent's network").

156. It is inconsistent for the FCC to emphasize forward-looking TELRIC costs for pricing unbundled network elements and yet retain a backward-looking view of product definitions and demand substitution for telecommunications services. Put differently, it is not “forward-looking” for the Commission to presume that a current product definition for telecommunications service will remain constant over time, especially when there is strong evidence that the bundling of services may redefine the relevant product market for purposes of competitive analysis. In discussing the problems created by TELRIC pricing for unbundled network elements, one of us observed in 1997:

Like Janus, regulators alternate between past and future perspectives on markets as doing so serves their purpose. The result, which we call the Janus artifice, is an inconsistent economic analysis of competition and pricing. When evaluating the prospects for competition, regulators often look to the past, emphasizing the sunk costs of the incumbent LECs and past market share. For pricing purposes, however, regulators look to the future, promoting their notion of forward-looking costs. Regulators can only compound the fallacies inherent in the forward-looking cost approach when they engage in shifts in perspective that are meant to facilitate desired policy outcomes.²³⁶

In contrast, antitrust analysis implies that the relevant product markets for an end product or an essential facility must be continually revised over time. Given those considerations and given the growth of bundled services successfully offered by the ILECs’ competitors, the FCC runs the risk that its unbundling policy will be irrelevant to competition before it is even fully implemented—and thus obsolete and harmful to consumer welfare.

236. SIDAK & SPULBER, *supra* note 7, at 425.

C. The Relationship between an “Efficient-Competitor” Standard and the Consumer-Welfare Standard

157. We have argued at length that the FCC should use consumer welfare, not competitor welfare, at the touchstone for interpreting the “impairment” standard of section 251(d)(2). That said, suppose that the Commission nonetheless inclined toward a competitor-welfare approach, but attempted to mitigate the harm that such an approach would impose on consumers by mandating unbundling only if the CLEC were deemed to be an *efficient* competitor. In other words, the FCC would ask whether the ILEC’s failure to unbundle the network element at a TELRIC-based price would impair an efficient competitor’s ability to provide telecommunications services to end users. What would be the practical difference between an efficient-competitor standard and the consumer-welfare test that we propose? How would the FCC or a reviewing court reconcile the two seemingly disparate techniques?

158. To compare the two approaches, it is useful first to articulate the circumstances under which both standards would produce the same result for a given unbundled network element. Recall that our five-part consumer-welfare standard asks whether the ILEC can exercise market power in the *output* market for end-user services. That is, can the ILEC raise prices in the output market in a nontrivial way for a nontransitory period of time? In contrast, the efficient-competitor standard focuses on competition in the *input* market and asks whether there is a competitive supply of network elements. It is critical to recognize, however, that competition in the output market does not depend solely on the level of competition for one of

the inputs. Competition in the input market is a sufficient, *but not necessary*, condition for competition to be effective in the output market.

159. Thus, whenever competition is apparent in the input market for a particular network element, both the efficient-competitor and consumer-welfare standards will indicate that mandatory unbundling would be inappropriate. According to the efficient-competitor standard, a CLEC could, under those conditions, self-supply the network element or purchase it at competitive rates and thereby effectively compete against the ILEC. Similarly, the consumer-welfare standard would indicate that, under those conditions, the ILEC would be constrained from exercising market power in the end-user services market through an attempt to deny a CLEC access to the competitively supplied network element in question.

160. Under other conditions, however, the two standards would produce divergent outcomes. Suppose that within a well-defined geographic market the ILEC is the sole supplier of the network element requested by a CLEC. Suppose further that, within the same geographic market, the ILEC faces intense competitive pressure in the end-user services market from AT&T in the form of voice telephony provided over TCI's coaxial and fiber-optic infrastructure. Under those circumstances, the efficient-competitor standard would indicate mandatory unbundling of the requested network element. To the contrary, the consumer-welfare standard would indicate that no mandatory unbundling of the network element in question would be warranted. That example highlights the major shortcoming of the efficient-competitor standard—*it ignores that alternative sources of supply in the output market constrain the ILEC's ability to exercise market power*. It is clear from the *Second Further Notice of Proposed Rulemaking* that, consistent with an efficient-competitor standard, the FCC's

approach to interpreting section 251(d)(2) incorrectly focuses on competition in the input market while ignoring competition in the output market.²³⁷ Table 1 summarizes, for various scenarios, the differences in outcomes that would result, under TELRIC prices, from the Commission's use of the consumer-welfare standard, the efficient-competitor standard, and the original standard in the *Local Competition First Report and Order* (namely, any unbundling that is "technically feasible").

**TABLE 1: COMPARISON OF THE OUTCOMES
RESULTING FROM THE APPLICATION OF THREE DIFFERENT
STANDARDS FOR MANDATORY UNBUNDLING AT TELRIC PRICES**

Scenario (Is unbundling feasible? Is the network element competitively supplied? Is the output competitively supplied?)	Technical-Feasibility Standard	Efficient-Competitor Standard	Consumer-Welfare Standard
Unbundling is not technically feasible, UNE is competitively supplied, output is competitively supplied (N, Y, Y)	Do Not Unbundle	Do Not Unbundle	Do Not Unbundle
Unbundling is not technically feasible, UNE is competitively supplied, output is not competitively supplied (N, Y, N)	Do Not Unbundle	Do Not Unbundle	Do Not Unbundle
Unbundling is not technically feasible, UNE is not competitively supplied, output is competitively supplied (N, N, Y)	Do Not Unbundle	Do Not Unbundle	Do Not Unbundle
Unbundling is not technically feasible, UNE is not competitively supplied, output is not competitively supplied (N, N, N)	Do Not Unbundle	Do Not Unbundle	Do Not Unbundle
Unbundling is technically feasible, UNE is competitively supplied, output is competitively supplied (Y, Y, Y)	Unbundle	Do Not Unbundle	Do Not Unbundle
Unbundling is technically feasible, UNE is competitively supplied, output is not competitively supplied (Y, Y, N)	Unbundle	Do Not Unbundle	Do Not Unbundle
Unbundling is technically feasible, UNE is not competitively supplied, output is competitively supplied (Y, N, Y)	Unbundle	Unbundle	Do Not Unbundle
Unbundling is technically feasible, UNE is not competitively supplied, output is not competitively supplied (Y, N, N)	Unbundle	Unbundle	Unbundle
Unbundling Results	4 of 8	2 of 8	1 of 8

Note: We assume that the efficient-competitor standard, like the consumer-welfare standard, incorporates a technical-feasibility requirement.

237. *SFNPRM*, *supra* note 1, at ¶ 42 (“[W]e seek comment on whether the existence of a competitive market for a network element is necessary to demonstrate that an element is sufficiently available outside the incumbent’s network so that failure of the incumbent to provide the element would not be ‘necessary’ or would not ‘impair’ a carrier’s ability to provide service.”).

As Table 1 shows, the FCC's original rule of "technically feasible" unbundling would mandate unbundling in half of the possible scenarios. With respect to its outcomes (as opposed to its intellectual grounding), the efficient-competitor standard more resembles the FCC's original "technically feasible" unbundling rule than our proposed consumer-welfare standard.

161. The preceding comparison of the efficient-competitor standard with our proposed consumer-welfare standard presupposes that it would be feasible for the FCC to define in the abstract, and identify in the concrete, an "efficient" CLEC. There are multiple reasons, however, to expect that such an exercise would be daunting. There is no reason to expect CLECs to be homogeneous firms, such that the FCC could make uniform assumptions about production technologies. CLECs vary in size, lines of business, regulatory burdens or advantages, brand name recognition, and so forth. AT&T, for example, has cable television and wireless businesses with which to offer local access for voice telephony, as well as a brand name that is immediately recognizable to consumers. MCI WorldCom, as of May 1999, had neither cable television nor wireless, and the company presumably still faces challenges in uniting the separate corporate identities of MCI and WorldCom. Meanwhile, Sprint has wireless, no cable television, and extensive operational experience as a traditional ILEC in a number of geographic markets. Which of those three firms would the FCC deem the most "efficient" for purposes of an efficient-competitor standard for section 251(d)(2), and why? Furthermore, how would the FCC evaluate the efficiency of smaller CLECs, such as Winstar or Teligent or RCN, relative to the efficiency of the large IXCs?

162. The FCC, of course, could undertake engineering cost modeling of a hypothetically efficient CLEC. But that prospect cannot be regarded as appealing or promising. By

comparison, the Commission undertook to model the costs of a hypothetically efficient ILEC for purposes of generating TELRIC estimates with which to establish proxy rates for UNEs. That exercise generated controversy and litigation.²³⁸ More fundamentally, as a matter of both jurisdiction and economic policy, the FCC would tread shaky ground if, in the name of implementing its policy of mandatory unbundling, it was resorted to creating ersatz cost-of-service regulation for *unregulated* CLECs.

163. In short, if the FCC were to interpret section 251(d)(2) under an efficient-competitor standard, it would invariably be compelled to make precisely the kinds of predictions about “best” technologies that Congress resolved, in the Telecommunications Act of 1996, that the market is better suited to supply. The Commission emphasized shortly before its issuance of the *Second Further Notice of Proposed Rulemaking* that it would not hazard to make such predictions.²³⁹ Clearly, such intervention would not “reduce regulation” in the pursuit of “lower prices and higher quality services for American telecommunications consumers.”²⁴⁰

238. See Hausman, *Regulation by TSLRIC*, *supra* note 138; SIDAK & SPULBER, *supra* note 7, at 421 (discussing the Hatfield model).

239. In early 1999, the FCC stated: “Our role is not to pick winners and losers, or to select the best technology to meet consumer demand. We intend to rely as much as possible on free markets and private enterprise.” *Advanced Telecommunications Capability*, *supra* note 225, at ¶ 5.

240. Telecommunications Act of 1996, Pub. L. No. 104–104, 110 Stat. 56, 56 (preamble).

V. EFFICIENT PROCEDURES FOR ADMINISTERING THE IMPAIRMENT TEST

164. Economic analysis should guide the Commission in establishing evidentiary rules for mandatory unbundling proceedings and in allocating fact-finding responsibilities between the state public utility commissions and the FCC itself.

A. Evidentiary Burdens and Sunset Mechanisms

165. Through its design of evidentiary rules, the FCC should create efficient incentives for ILECs and CLECs to discover and reveal information about optimal network design, usage, and investment. Here, the Commission should apply the legal scholarship on economic analysis of evidentiary law.²⁴¹ Evidentiary presumptions and burdens of proof under section 251(d)(2) should be assigned to the party (ILEC versus CLEC) that is the most efficient producer of the information sought. In most cases, that party will be the CLEC. The rebuttable presumption, therefore, should be that mandatory unbundling of any given network element at a

241. In a 1998 symposium on the economics of evidentiary law, Professor Richard Friedman of the University of Michigan summarized the economic questions posed by the allocation of evidentiary burdens in terms that are directly pertinent to questions posed in the *SFNRPM*, *supra* note 1, at ¶ 12:

[C]osts and burdens [of producing evidence] must be allocated between the parties. Here, I think we can see a strong connection between a basic concept of evidentiary analysis, the best evidence principle, and one of the keystones of economic analysis of law, the concept of the cheapest cost avoider. Under the best evidence principle, evidence that is beneficial to the truth-determining process can be excluded in hopes of inducing the proponent to produce evidence that is better yet; the better evidence may include the originally proffered evidence but with a supplement, such as a foundation. Suppose, however, that the opponent is at least as able to produce the better evidence, or the supplement necessary to make it better. Then perhaps it is better to allow the proponent to introduce her evidence, leaving it to the opponent to introduce the better or supplemental evidence. Similarly, differential ability to produce evidence is a factor in allocating the burden of production.

Richard D. Friedman, *Economic Analysis of Evidentiary Law: An Underused Tool, an Underplowed Field*, 19 CARDOZO L. REV. 1531, 1533 (1998) (citations omitted). For further applications of economic analysis to evidentiary allocations, see Bruce L. Hay, *Allocating the Burden of Proof*, 72 IND. L.J. 651 (1997); Jason S. Johnston, *Fact-Finding and Efficiency: Toward an Economic Theory of Liability Under Uncertainty*, 61 S. CAL. L. REV. 137 (1987); Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399,

TELRIC price is *not* required by section 251(d)(2). That allocation of evidentiary burden would be analogous to the plaintiff's burden of proof in an essential facilities doctrine case.²⁴²

166. If CLECs are currently the most efficient producers of the information sought regarding the competitive justifications for mandatory unbundling, then it is even more likely CLECs will also be the most efficient producers of information in the future. In the *Second Further Notice of Proposed Rulemaking*, the Commission "seek[s] comment on an approach that would allow sunset or modification of the unbundling obligations as technology and market conditions evolve over time."²⁴³ At the end of a finite time horizon, or upon the entry of a facilities-based competitor, the unbundling order should sunset automatically. Specifically, the passage of two years (the time horizon used in the *Merger Guidelines*) or the entry of a facilities-based competitor of the stature of AT&T, MCI WorldCom, or Sprint should provide the Commission the requisite "passage of time or occurrence of certain events" after which the mandatory unbundling obligations for the ILEC's elements should sunset "without any subsequent action by the Commission."²⁴⁴ The CLEC should bear the burden of proving that *continued* mandatory unbundling of the element is indispensable for consumer welfare.

410 (1973).

242. *Apartment Source of Pa., L.P. v. Philadelphia Newspapers, Inc.*, 1999-1 TRADE CAS. (CCH) ¶ 72,502 (E.D. Pa. 1999).

243. *SFNPRM*, *supra* note 1, at ¶ 11; *see also id.* at ¶ 36 ("whether the Commission should adopt a mechanism by which network elements would no longer have to be unbundled at a future date"); *id.* ("whether affirmative steps by the parties or the Commission should be necessary to remove a particular element from unbundling requirements, or whether affirmative action should be necessary to continue requiring the unbundling of particular elements").

244. *Id.* at ¶ 39.

B. The Proper Role of State Commissions in Administering the Proposed Test

167. The state public utilities commissions (PUCs) should play an active role in administering the “necessary” and “impair” requirements. The FCC is capable of announcing a general standard for determining whether a network element is subject, under section 251(d)(2), to mandatory unbundling at TELRIC prices. But the FCC correctly noted in its *Second Further Notice of Proposed Rulemaking* that “application of the ‘necessary’ and ‘impair’ standards that we develop pursuant to section 251(d)(2) may be relatively fact-intensive.”²⁴⁵ More important, many of the critical facts are likely to be unique to a particular geographic market and are thus directly “relevant to a decision to impose minimum national unbundling requirements.”²⁴⁶

168. To apply our five-part test for “impairment,” regulators should examine data on the network facilities and equipment that competitors have actually deployed, or intend to deploy or are capable of deploying over the relevant time horizon, to supply service in a relevant product market and geographic market. Regulators should examine as well the implications for facilities-based entry in that geographic market of the substantial acquisitions, by AT&T and other telecommunications carriers, of the nation’s largest competitive access providers, cable television multiple system operators, and wireless carriers. AT&T’s expenditure of (or commitment to spend) more than \$100 billion on acquisitions of cable television networks, which has all occurred in the three years since the enactment of the Telecommunica-

245. *Id.* at ¶ 12.

tions Act, calls into question whether it is necessary for competition that AT&T receive unbundled access at TELRIC prices to ILEC network elements in areas where it now owns cable networks or has joint ventures with other cable network owners. Furthermore, it is extremely unlikely that competition would be impaired in those areas if AT&T did not have access to unbundled elements at regulated prices, because those cable networks pass over 95 percent of households and AT&T has announced that the networks will be used to provide telephone and internet services. Thus, application of our impairment test to the areas in which AT&T has cable networks would likely yield different conclusions from those for areas where AT&T does not own cable networks or have joint ventures with other cable partners.

169. The sheer volume of unbundling proceedings that can be expected, and the numerous questions that those proceedings will necessarily present regarding competitive conditions in particular geographic markets, will severely tax the FCC's resources, particularly because the Commission has properly committed itself to "resolving these fact-intensive questions . . . in an expedited time frame."²⁴⁷ That administrative burden may prove to be especially great because the FCC acknowledged in late 1998 that "it does not yet possess the detailed information necessary to evaluate the current state of local telephone competition on a market-by-market basis."²⁴⁸ Because markets create and process vast quantities of information, it is challenging enough for regulators to digest all of the pertinent economic facts concerning competition in a particular service in a particular geographic market. Surely it would

246. *Id.* at ¶ 14.

247. *Id.*

248. See 1998 LOCAL COMPETITION REPORT, *supra* note 182, at 3.

overwhelm even the most indefatigable regulatory staff to try to digest, simultaneously and centrally from Washington, the salient facts in *all* of the relevant product markets and geographic markets for local telecommunications services in the United States.²⁴⁹ Yet, the FCC has no alternative to undertaking such geographically specific analysis—unless, of course, the agency’s economic analysis of optimal unbundling principles (as opposed to the application of those principles to specific cases in specific geographic markets) would enable the FCC to conclude that a particular network element could not satisfy the “necessary” or “impair” requirement in *any* geographic market in the United States and thus should be removed altogether from the list of potential network elements subject to mandatory unbundling at TELRIC prices.²⁵⁰

170. Fortunately, the state PUCs have the resources and fact-finding experience to assist the FCC in conducting the analysis that is essential to administer the “necessary” and “impair” standards with the requisite degree of geographic specificity. Indeed, Congress already recognized that state regulators have the comparative advantage in compiling and analyzing facts regarding local competition in particular geographic markets. Congress did so through its design of both the local competition provisions²⁵¹ and the interLATA entry provisions²⁵² of the Telecommunications Act of 1996. Between the fall of 1996 and the Supreme Court’s issuance of its decision in *Iowa Utilities Board* in January 1999, the state

249. See generally Friedrich A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519 (1945).

250. Cf. *SFNPRM*, *supra* note 1, at ¶ 36 (discussing “whether the Commission should adopt a mechanism by which network elements would no longer have to be unbundled at a future date”).

251. See 47 U.S.C. § 252(b).

252. See *id.* at §§ 271(c)(1)(A) (state approval of the RBOC’s generic interconnection plan), 271(c)(1)(B) (alternative procedures if no requests for interconnection are forthcoming), 272(b) (competitive checklist).

PUCs held *hundreds* of local arbitration proceedings to set the prices for unbundled network elements and the discounts for wholesale services.²⁵³ Similarly, the checklist process under section 271 directly involves the state commissions in precisely the kind of geographically specific fact-finding that would properly inform the implementation of the “necessary” and “impair” requirements of section 251(d)(2).

171. In short, Congress concluded in 1996 that the states are competent to conduct the fact-intensive arbitration proceedings envisioned in section 252 and the equally fact-intensive analyses of local telecommunications markets envisioned in the competitive checklist of section 271. It is reasonable to expect that those same state commissioners are competent as well to apply a general rule enunciated by the FCC, pursuant to its *Second Further Notice of Proposed Rulemaking*, to the specific facts concerning the relevant product markets and geographic markets within those commissioners’ respective states. Uniform national *outcomes* are neither necessary nor conducive to consumer welfare.

172. It is therefore appropriate to conclude that the “states may, consistent with the Supreme Court’s decision, apply [the FCC’s] interpretation of section 251(d)(2) to determine in the first instance that a network element need not be unbundled in light of the availability of that element outside the incumbent’s network in that state.”²⁵⁴ Basic principles of the economics of information support the conclusion that Congress intended, through its enactment of the Telecommunication Act, for the states to play an active role in determining whether a particular network element in a specific geographic market is subject to mandatory unbundling

253. See, e.g., Sidak & Spulber, *The Tragedy of the Telecommons*, *supra* note 5, at 1082-83.

at arbitrated (which is to say, regulated) prices. If, as seems most reasonable to infer, Congress already gave the states that authority, then it would be unnecessary for the FCC to adopt rules purporting “to delegate to the states responsibility for removing network elements from any national unbundling requirements” that the FCC promulgated.²⁵⁵ Economic reasoning counsels that Congress already commended that power to the states, such that the Commission in fact has no “opt out” authority to delegate to them. Like the unbundling rules themselves, the extent of the states’ participation in the implementation of section 251(d)(2) should not be regarded by the FCC as being conditional on its exercise of “regulatory grace.”²⁵⁶

173. As we discussed above, separate local telecommunications markets exist with different degrees of competition throughout the United States. For the FCC to attempt to establish rules for each of those local telecommunications markets would be extremely time consuming if the proper fact-intensive investigation were performed for each telecommunications market. If the FCC instead were to take a broad-brush approach without considering and analyzing the market-specific factors, the agency would likely err in many of its decisions. In turn, those errors would reduce both innovation in and the quality of telecommunications services available to consumers, a result that would frustrate the objectives of the Telecommunications Act.

254. *SFNPRM*, *supra* note 1, at ¶ 14.

255. *Id.* at ¶ 38.

256. *Iowa Utilities Board*, 119 S. Ct. at 736.

CONCLUSION

174. Even after the Supreme Court's remand in *Iowa Utilities Board*, the FCC continues to interpret its authority to mandate the unbundling of the local telecommunication network at regulated, cost-of-service prices in a manner that is at war with the antitrust laws. The agency's interpretation of "necessary" and "impair" for purposes of section 251(d)(2) cannot find support in sound economic analysis because no responsible economist could defend subordinating the welfare of consumers to the welfare of individual competitors. The proper interpretation of section 251(d)(2) would give primacy to consumer welfare and would use the competitive analysis of demand and supply substitutability, as the long-established tools of economic analysis of competition and of antitrust jurisprudence, to ensure, as Congress directed, that the unbundling rules successfully "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunication technologies."²⁵⁷

175. Our impairment test is necessarily stated in the abstract—namely, it asks whether the ILEC could exercise market power in the end-user services market by restricting access to a particular network element. Regulators attempting to employ our standard, however, may require simple, objective market characteristics that would serve as proxies for constraints on an ILEC's ability to exercise market power in the end-user services market. In particular, three market characteristics should be incorporated into the decision-making process:

257. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, 56 (preamble).

- (1) whether a CLEC is self-supplying the element in question in the relevant geographic market. As long as one CLEC is supplying the element in question, the ILEC cannot exercise market power in the end-user services market by restricting access to that element;
- (2) whether fixed (as opposed to sunk) costs represent a large share of the total costs of the element in question. As long as the asset is redeployable, the CLEC will not face barriers to exit, which in turn, implies low entry barriers. Thus the ILEC cannot exercise market power in the end-user services market by restricting access to that element; and
- (3) whether AT&T or any other firm offering cable telephony has established a presence in the relevant geographic market. As long as one firm is offering cable telephony service, the ILEC cannot exercise market power in the end-user services market by restricting access to that element.

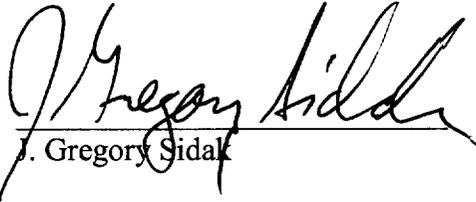
The first two conditions represent supply-side substitution constraints, while the third condition is a demand-side substitution constraint on the exercise of market power in the end-user services market.

176. With respect to the Telecommunications Act's goal of "promoting competition," our analysis and proposed test of "impairment" are rooted in economic analysis of competition

and antitrust law, which are designed to promote consumer welfare. Our proposed test for “impairment” would follow Congress’s directive to “reduce regulation.”²⁵⁸ In contrast, the competitor-welfare approach of the *Second Further Notice of Proposed Rulemaking* and the *Local Competition First Report and Order* would maximize regulation because any CLEC could trigger regulatory intervention by its assertion that its profitability would be diminished by the inability to lease the ILEC’s unbundled elements at TELRIC prices. Our approach requires that the CLEC’s request for a particular unbundled network element satisfy the four existing requirements of the essential facilities doctrine and then also pass a fifth requirement, based on critical share, that examines whether an attempt by the ILEC to deny the CLEC access to the element in question would decrease competition in the output market for telecommunications services. In so doing, our impairment test advances consumer welfare and provides the “limiting principle” that the Supreme Court demanded in *Iowa Utilities Board*.

258. *Id.*

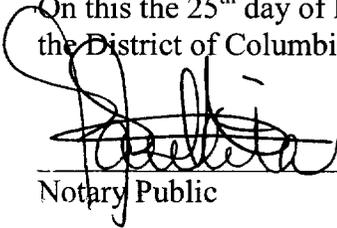
I declare, under penalty of perjury, that the foregoing is true and correct, to the best of my knowledge and belief. Executed on May 25, 1999.


J. Gregory Sidak

Washington
District of Columbia

On this the 25th day of May, 1999, before me,
the District of Columbia.

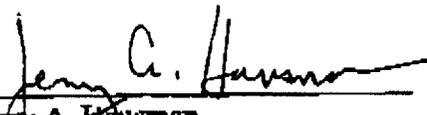
, a Notary Public for


Notary Public

PAULITA F. ROSS
NOTARY PUBLIC STATE OF MARYLAND
My Commission Expires October 12, 1999

My commission expires

I declare, under of penalty of perjury, that the foregoing is true and correct, to the best of my knowledge and belief. Executed on May 25, 1999.



Jerry A. Hausman

