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October 1, 2007

VIA ECFS

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, S.W.
Washington, DC 20554

Re: Written Ex Parte Presentation in Connection With the Consolidated
Application for Authority to Transfer Control in Connection With the
Sirius/XM Merger, as Amended
(MB Docket No. 07-57)

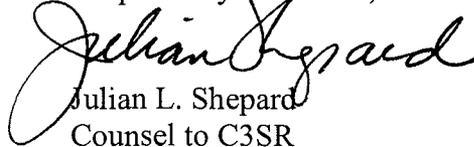
Dear Ms. Dortch:

The Consumer Coalition for Competition in Satellite Radio ("C3SR") hereby submits the attached "Third Supplemental Declaration of J. Gregory Sidak" ("Third Declaration") for inclusion in the public record of the above-referenced proceeding.

Among other things, the Third Declaration conclusively demonstrates that the analysis submitted by CRA International on behalf of XM and Sirius relies upon arguments that are far outside the mainstream of legal and economic theory and practice in antitrust law. Sirius and XM have failed to meet their burden of proof, heavily relying instead on supply-side information to support their overly-broad market definition.

This declaration is submitted via ECFS for inclusion in the public record of this proceeding pursuant to Section 1.1206 of the Commission's Rules, 47 C.F.R. § 1.1206, and DA 07-1435.

Respectfully submitted,


Julian L. Shepard
Counsel to C3SR

Attachment

cc: Chairman Kevin J. Martin
Commissioner Michael J. Copps
Commissioner Jonathan S. Adelstein

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cc (continued):

Commissioner Deborah Taylor Tate
Commissioner Robert McDowell
Sam Feder, Esquire
Monica Desai, Esq.
Ms. Marcia Glauberman

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
XM Satellite Radio Holdings Inc.,)	
<i>Transferor</i>)	MB Dkt. No. 07-57
)	
and)	
)	
Sirius Satellite Radio Inc.,)	
<i>Transferee</i>)	
)	
Consolidated Application for Authority to)	
Transfer Control of XM Radio Inc. and Sirius)	
Satellite Radio Inc.)	

**THIRD SUPPLEMENTAL DECLARATION
OF J. GREGORY SIDA**

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INTRODUCTION

1. I have been asked by counsel for the Consumer Coalition for Competition in Satellite Radio (C3SR) to give my expert opinion on the report submitted by Professor Steven C. Salop, Dr. Steven R. Brenner, Dr. Lorenzo Coppi, and Dr. Serge X. Morisi

of CRA International on behalf of XM and Sirius in support of their proposed merger (“CRA Report”).¹ My qualifications are presented in my first declaration in this proceeding, filed March 16, 2007.²

2. The CRA Report is deficient in the same way that the two previous economic reports commissioned by XM and Sirius are deficient. It fails to offer any direct demand-side evidence that alternative audio services *constrain the price of satellite digital audio radio services (SDARS)*. The best inference that CRA can offer consists of alleged supply-side responses among providers of alternative audio entertainment services. But as the *Merger Guidelines* make clear, supply substitution generally—and supply substitution that occurs in different industries in response to non-price factors in particular—cannot inform market definition.³ Like Professor Thomas Hazlett⁴ and Dr. Harold Furchtgott-Roth⁵ before them, the CRA team is hostile to the fundamental analytical approach to market definition established in the *Merger Guidelines*, presumably because following the *Guidelines* does not produce their

1. Steven C. Salop, Steven R. Brenner, Lorenzo Coppi & Serge X. Morisi, Economic Analysis of the Competitive Effects of the Sirius-XM Merger, July 24, 2007 [hereinafter *CRA Report*].

2. Expert Declaration of J. Gregory Sidak Concerning the Competitive Consequences of the Proposed Merger of Sirius Satellite Radio, Inc. and XM Satellite Radio, Inc. (Mar. 16, 2007), ¶¶ 10-15, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=977318 [hereinafter *Original Sidak Declaration*].

3. U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines § 1.0 (1992, revised 1997) (“Market definition focuses *solely* on demand substitution factors—i.e., possible consumer responses. Supply substitution factors—i.e., possible production responses—are considered elsewhere in the Guidelines in the identification of firms that participate in the relevant market and the analysis of entry.”) (emphasis added) [hereinafter *Merger Guidelines*].

4. Professor Hazlett argues that the consumer welfare standard should be replaced by a total welfare standard. See Thomas W. Hazlett, *The Economics of the Satellite Radio Merger*, June 14, 2007, at 4 [hereinafter *Hazlett Report*]. CRA fails to provide an economic basis for the FCC’s deviating from the *Merger Guidelines* in this fundamental way. As I explain in Part IV.A., *infra*, doing so would be unprecedented.

5. Dr. Furchtgott-Roth argues that the standard two-year window for entry analysis should be extended so that nascent services like mobile Internet radio can have time to develop. See Harold Furchtgott-Roth, *An Economic Review of the Proposed Merger of XM and Sirius*, June 27, 2007, at 11. Of course, this argument is an admission that the demand-side alternatives put forth by the merger parties in fact do not exist today and will not exist for years, if at all. CRA fails to provide an economic basis for the FCC’s deviating from the *Merger Guidelines* in such a fundamental way.

desired result. CRA argues that the sheer dynamism of the satellite radio industry defies traditional market definition analysis.

3. That view is far outside the mainstream of legal and economic theory and practice in antitrust law. The suitability of applying the *Merger Guidelines* to high-tech products such as satellite radio was affirmed in the April 2007 report to Congress by the Antitrust Modernization Commission (AMC), which found that “[n]o substantial changes to merger enforcement policy are necessary to account for industries in which innovation, intellectual property, and technological change are central features.”⁶ Professor Salop gave testimony to the AMC and submitted papers and models on the merger approval process. However, he did not offer any of the suggestions for rewriting merger law that now appear in the CRA Report.

4. Indeed, the CRA Report constitutes the *fourth* time that XM and Sirius have failed in filings before the FCC to proffer evidence needed for the critical first stage of merger analysis—market definition. The first was the merger application itself, which invented the “audio entertainment” market definition from whole cloth. The second was the report by Professor Hazlett, and the third was the report by Dr. Furchtgott-Roth. Now, in more than 100 single-spaced pages, XM and Sirius continue to evade the dispositive question before the FCC and the Department of Justice: To what extent, if at all, do other services constrain the pricing of SDARS? The reason for this evasion is obvious. The only intellectually honest conclusion under existing antitrust jurisprudence standards is that the proposed transaction is a merger to monopoly that would give the combined firm significant power to raise price above what XM or Sirius could charge absent the merger. XM and Sirius have repeatedly failed to meet their burden of proving, by a preponderance of the evidence, that the proposed merger would not harm the

6. Antitrust Modernization Commission, *Report and Recommendation* 9 (Apr. 2007), available at http://www.amc.gov/report_recommendation/amc_final_report.pdf.

public interest by tending to lessen competition in the relevant market, in violation of section 7 of the Clayton Act.⁷

5. This report is organized as follows. Part I analyzes CRA's argument that SDARS customers perceive alternative "audio entertainment" devices to be close substitutes to SDARS. The vast majority of CRA's inferences are based on supply-side information, which is barred by the *Merger Guidelines* when defining product markets, except in rare cases in which decisions by sellers can serve as a proxy for how buyers would react to a relative change in prices.⁸ The fact that entrepreneurs may be designing new audio devices in their garages does not inform the ultimate question of whether, over the next two years, SDARS customers would substitute away from SDARS to another audio device in response to a relative change in prices. CRA tries to pass off this *potential* supply-side information as a proxy for evidence of demand responses among SDARS subscribers to price changes. The scant demand-side evidence presented by CRA also fails to inform the relevant question of substitution away from SDARS in response to a relative change in prices. SDARS customers activate or deactivate their subscriptions for specific reasons, none of which is a change in the relative price of SDARS to some alternative audio device.

7. It is well established by FCC precedent that the applicants (the merging parties) bear the burden of proving, by a preponderance of the evidence, that their proposed merger will serve the public interest. *See* AT&T Inc. & BellSouth Corp., Application for Transfer of Control, 22 F.C.C.R. 5662, 5672 (2007); SBC Communications, Inc., & AT&T Corp., Applications for Approval of Transfer of Control, 20 F.C.C.R. 18,290, 18,292 (2005); Verizon Communications, Inc., and MCI, Inc., Applications for Approval of Transfer of Control, 20 F.C.C.R. 6293, 6296 (2005); Applications of AT&T Wireless Services, Inc. & Cingular Wireless Corp., 19 F.C.C.R. 21,522, 21,542-44 (2004) (citing, *e.g.*, General Motors Corp. & Hughes Elec. Corp., Transferors, & The News Corp. Ltd., Transferee, 19 F.C.C.R. 473, 483 (2004)); Applications for Consent to the Transfer of Control of Licenses from Comcast Corp. and AT&T Corp., 17 F.C.C.R. 23,246, 23,255 (2002); Application of EchoStar Communications Corp., General Motors Corporation, and Hughes Electronics Corp. and EchoStar Communications Corp., 17 F.C.C.R. 20,559, 20,574 (2002).

8. This point is explained in detail in Part I, *infra*.

6. Part II reviews CRA's critique of my declarations in this proceeding. In particular, I review the following claims that:

- Supply responses were ignored when defining product markets;
- Market definition was based on the different business models used by terrestrial radio providers and satellite digital radio providers;
- Switching costs faced by *potential* SDARS customers were ignored;
- The commercial-free nature of satellite radio was given too much emphasis;
- The sound quality for satellite radio customers was assumed to be superior to the sound quality of iPods installed in cars;
- iPods were assumed to be a complement to SDARS;
- Additional commercials on satellite radio were assumed to be profitable and to reduce welfare.

Having reviewed the logic and the information that CRA presents in support of these claims, I conclude that none of them is correct. In its critique, CRA reveals some fundamental misunderstandings of the application of the *Merger Guidelines*. For example, according to CRA, the relevant switching costs are not those of *existing* SDARS customers, but instead the switching costs of *potential* SDARS customers. There can be no doubt that the cross-price elasticity of demand of *potential* SDARS customers is more sensitive than that of *existing* SDARS customers. But the only class of customers whose elasticity matters for defining the relevant product market under the *Merger Guidelines* is *existing* SDARS customers.

7. Part III analyzes CRA's novel and wholly theoretical concept called "dynamic demand," which is explained in a seven-page appendix filled with six equations. Because SDARS providers face this so-called "dynamic demand," CRA argues that the traditional small-but-significant-and-nontransitory increase in price (SSNIP) test for market definition must be altered to account for long-run profit considerations. Despite its extensive experience in merger

cases, CRA fails to cite a single instance in which a court or an agency altered the SSNIP test in this way. Indeed, in the last six high-profile mergers reviewed by the Commission, the SSNIP test was applied without any alterations. CRA also relies on the concept of “dynamic demand spillover” to salvage an unprecedented efficiency justification that is not cognizable under the *Merger Guidelines*, including the erroneous claim that the proposed merger of XM and Sirius would accelerate investment in interoperable radios (which XM and Sirius say will not be available for years, even with the merger). However, as explained below, it is not consistent to argue on the one hand that the other types of audio entertainment compete with SDARS, but on the other that the merger solves the problem of “dynamic demand spillover.”

8. Combined with CRA’s attempt to use supply-side information to drive market definition, these “dynamic demand” arguments are nothing more than an attempt to evade conventional merger analysis. Presumably, CRA would have taken a more mainstream approach to its merger review had the requisite evidence been available. Why repudiate the SSNIP test unless a hypothetical monopoly provider of SDARS could profitably raise prices? Why introduce supply-side information unless demand-side evidence reveals that SDARS customers are reluctant to substitute away from SDARS in response to relative changes in price?

9. Part IV explains how CRA’s preferred approach to merger analysis in this case conflicts with Professor Salop’s opinions in previous antitrust proceedings. For example, Professor Salop’s previous endorsement of the “true” consumer welfare standard contradicts his position on the welfare effects of the proposed merger. It is also evident that Professor Salop’s previous endorsement of the “true” consumer welfare standard contradicts Professor Hazlett’s previous declaration in this proceeding. Finally, Professor Salop’s position on the role of

behavioral remedies in merger analysis is inconsistent with the pricing and content commitments offered by XM and Sirius.

10. Part V shows that CRA failed to prove the erroneous claim that the á la carte offerings that XM and Sirius have proposed are merger-specific efficiencies. So long as they are not merger-specific, any alleged benefits associated with á la carte offerings cannot offset the demonstrated consumer welfare losses from higher prices or more commercials or both. Moreover, the public statement jointly made by XM and Sirius that they will *not* provide satellite radio channels on an á la carte basis unless the Commission approves the merger is a breathtaking admission of critical antitrust significance: *It is a price-fixing agreement between horizontal competitors*. It is an agreement not to compete over the pricing and unbundling of currently bundled content. Rarely do price-fixing cases contain such conclusive evidence of a meeting of the minds between two competitors to refrain from competing with one another. Such price fixing is a *per se* violation of section 1 of the Sherman Act for which it is unnecessary for a court to split hairs over market definition or alleged efficiencies from agreement to restrain trade. It is no defense to price-fixing among two currently separate competitors that they are in the process of seeking government approval of a proposed merger to monopoly. This serious antitrust violation will remain even if the Commission rejects this proposed merger, and it justifies investigation by the Antitrust Division.

* * *

11. Groucho Marx once said: “Those are my principles. If you don’t like them, I have others.”⁹ The market-definition principles of the *Merger Guidelines* are entirely uncontroversial. They have received the widespread endorsement of antitrust enforcers, regulators, practitioners,

9. See, e.g., <<http://www.quoteworld.org/quotes/10008>>.

academics, judges—and economic consultants. The Supreme Court has not needed to take a merger case for years because the economic framework of the *Merger Guidelines* has dramatically reduced legal uncertainty for merging parties. If it is to render credible expert economic testimony in its other merger cases, CRA cannot plausibly start from the proposition that the market-definition principles of the *Merger Guidelines* are fundamentally flawed. In short, on any other day of the week the market-definition principles of the *Merger Guidelines* are, of necessity, CRA’s principles also. But now CRA has other principles to offer the Commission.

12. CRA’s strategy is simple but disingenuous: Evade any answer to the critical questions posed by the *Merger Guidelines* (because they inescapably lead to the wrong result for XM and Sirius) and, further, argue—on the basis of economic theories hitherto unrecognized by antitrust enforcers, regulators, practitioners, academics, or judges—that the principles underlying the *Merger Guidelines* are so injurious to consumer welfare that the Commission must recalibrate them so the merger of XM and Sirius would just squeak by. CRA’s strategy of economic argumentation is a monument to sophistry. The Commission should reject it.

13. Section 7 of the Clayton Act and the judicial decisions embracing the *Merger Guidelines* are the alternative to concocting *ad hoc* “principles” to permit the latest merger to pass muster. They also have the dual virtues of being the law and being correct. As the Department of Justice and the Federal Trade Commission confirmed as recently as March 2006: “The core concern of the antitrust laws, including as they pertain to mergers between rivals, is the creation or enhancement of market power The Guidelines set forth the analytical framework and standards, *consistent with the law and with economic learning*, that the Agencies use to assess whether an anticompetitive outcome is likely. The unifying theme of that

assessment is ‘that mergers should not be permitted to create or enhance market power or to facilitate its exercise.’”¹⁰ In that regard, the “Guidelines’ analytic framework has proved both robust and sufficiently flexible to allow the Agencies properly to account for the particular facts presented in each merger investigation.”¹¹ Indeed, “leading antitrust practitioners and economists” agree that “*the analytical framework set out in the Guidelines is effective in yielding the right results in individual cases and in providing advice to parties considering a merger.*”¹²

QUALIFICATIONS

14. My name is J. Gregory Sidak. I am Visiting Professor of Law at Georgetown University Law Center; founder of Criterion Economics, L.L.C., an economic consulting firm in Washington, D.C.; and founding U.S. editor of the *Journal of Competition Law & Economics*, an international peer-reviewed journal published by the Oxford University Press. My work concerns antitrust policy, the regulation of telecommunications and other network industries, intellectual property, and constitutional issues regarding economic regulation. At Georgetown, I teach courses on antitrust law and telecommunications regulation.

15. I was Deputy General Counsel of the FCC from 1987 to 1989, and Senior Counsel and Economist to the Council of Economic Advisers in the Executive Office of the President from 1986 to 1987. As an attorney in private practice with Covington & Burling in Washington, D.C., I worked on numerous antitrust cases and federal administrative, legislative, and appellate matters concerning telecommunications and other regulated industries. From 1992

10. U.S. Department of Justice and Federal Trade Commission, Commentary on the Horizontal Merger Guidelines, Introduction (Mar. 2006), available at <http://www.usdoj.gov/atr/public/guidelines/215247.htm> (emphasis added) (hereinafter *Merger Guidelines Commentary*).

11. *Id.*

12. *Id.* (emphasis added).

through 2005, I was a resident scholar at the American Enterprise Institute for Public Policy Research (AEI), where I directed AEI's Studies in Telecommunications Deregulation and held the F.K. Weyerhaeuser Chair in Law and Economics. From 1993 to 1999, I was a Senior Lecturer at the Yale School of Management, where I taught a course on telecommunications regulation with Dean Paul W. MacAvoy.

16. I have written numerous books.¹³ I have also published approximately seventy scholarly articles in journals including the *American Economic Association Papers and Proceedings*, *Antitrust Law Journal*, *Berkeley Technology Law Journal*, *California Law Review*, *Columbia Law Review*, *Contributions in Economic and Policy Research*, *Harvard International Law Journal*, *Journal of Competition Law & Economics*, *Journal of Network Industries*, *Journal of Political Economy*, *Minnesota Law Review*, *New York University Law Review*, *Review of Industrial Organization*, *Stanford Law Review*, *Supreme Court Economic Review*, *University of Chicago Law Review*, *Virginia Tax Review*, *Yale Law Journal*, and *Yale Journal on Regulation*, as well as opinion essays in the *New York Times*, *Wall Street Journal*, and other business periodicals. I am the co-author of the chapter on remedies and the interface between antitrust and sector-specific regulation in the *Handbook of Telecommunications Economics*. I am ranked ninth among all legal authors posted on the Social Science Research Network (SSRN) in terms of number of downloads of scholarly papers. My writings have been translated into Japanese, Chinese, Korean, and Spanish.

13. See DAN MALDOOM, RICHARD MARSDEN, J. GREGORY SIDAK & HAL J. SINGER, *BROADBAND IN EUROPE: HOW BRUSSELS CAN WIRE THE INFORMATION SOCIETY* (Springer 2005); J. GREGORY SIDAK, *FOREIGN INVESTMENT IN AMERICAN TELECOMMUNICATIONS* (University of Chicago Press 1997); J. GREGORY SIDAK & DANIEL F. SPULBER, *DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT: THE COMPETITIVE TRANSFORMATION OF NETWORK INDUSTRIES IN THE UNITED STATES* (Cambridge University Press 1997); J. GREGORY SIDAK & DANIEL F. SPULBER, *PROTECTING COMPETITION FROM THE POSTAL MONOPOLY* (AEI Press 1996); WILLIAM J. BAUMOL & J. GREGORY SIDAK, *TOWARD COMPETITION IN LOCAL TELEPHONY* (MIT Press 1994); WILLIAM J. BAUMOL & J. GREGORY SIDAK, *TRANSMISSION PRICING AND STRANDED COSTS IN THE ELECTRIC POWER INDUSTRY* (AEI Press 1995).

17. I have testified before committees of the U.S. Senate and House of Representatives, and before the Federal Trade Commission and the Antitrust Division of the U.S. Department of Justice. My writings on antitrust and regulation have been cited by the Supreme Court of the United States, the lower federal and state supreme courts, state and federal regulatory commissions, the Supreme Court of Canada, and the European Commission.

18. I earned A.B. (1977) and A.M. (1981) degrees in economics and a J.D. (1981), all from Stanford University. I was a member of the *Stanford Law Review*. Following law school, I served as Judge Richard A. Posner's first law clerk on the U.S. Court of Appeals for the Seventh Circuit.

19. My curriculum vitae is provided in an appendix to this declaration.

I. CRA FAILS TO PROVE THAT OTHER AUDIO SERVICES CONSTRAIN THE PRICE OF SATELLITE RADIO SERVICES

20. The *Merger Guidelines* direct that demand-side evidence shall be used to define product markets.¹⁴ This approach was reaffirmed in the recent *Commentary on the Merger Guidelines* released by the Department of Justice and the Federal Trade Commission.¹⁵ Numerous courts have used the *Merger Guidelines* to define product markets in this manner, and

14. *Merger Guidelines*, *supra* note 3, § 1.0 (“Market definition focuses *solely* on demand substitution factors—i.e., possible consumer responses. Supply substitution factors—i.e., possible production responses—are considered elsewhere in the Guidelines in the identification of firms that participate in the relevant market and the analysis of entry.”) (emphasis added).

15. *Merger Guidelines Commentary*, *supra* note 10, at § 1 (“Product market definition depends critically upon demand-side substitution—i.e., consumers’ willingness to switch from one product to another in reaction to price changes. The Guidelines’ approach to market definition reflects the separation of demand substitutability from supply substitutability—i.e., the ability and willingness, given existing capacity, of firms to substitute from making one product to producing another in reaction to a price change. Under this approach, demand substitutability is the concern of market delineation, while supply substitutability and entry are concerned with current and future market participants.”).

in this sense one can confidently say that these statements of prosecutorial discretion have become part of the judicially created law interpreting section 7 of the Clayton Act.¹⁶

21. Although demand-side evidence is preferred to supply-side evidence under the *Merger Guidelines*, not all demand-side information is relevant. What matters most is evidence that buyers have altered (or would consider altering) their purchase decisions among products in response to relative changes in price.¹⁷ In the absence of direct evidence of buyer substitution, supply-side evidence may be used as a proxy for the preferences of buyers, but only to the extent that “sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables.”¹⁸ The term “other competitive variables” presumably connotes non-price factors that could induce buyer substitution outside the purported product market.¹⁹ Stated differently, the *Merger Guidelines* dictate that supply-side evidence shall be considered in market definition *only* if suppliers’ conduct is reflective of the reactions of consumers within the purported product market to a relative change in price or some “other competitive variables” as defined above. Thus, supplier decisions that are based on input costs or production technology are to be ignored. In addition,

16. See *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 120 (D.D.C. 2004); *United States v. Oracle Corp.*, 331 F. Supp. 2d 1098, 1108 (N.D. Cal. 2004); *United States v. Sungard Data Systems, Inc.*, 172 F. Supp. 2d 172, 182 (D.D.C. 2001); *FTC v. Swedish Match*, 131 F. Supp. 2d 151, 160 (D.D.C. 2000); *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 46 (D.D.C. 1998). See also *United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001); *CF Indus., Inc. v. Surface Transp. Bd.*, 255 F.3d 816, 823 n.13 (D.C. Cir. 2001); *United States v. Engelhard Corp.*, 126 F.3d 1302, 1304 (11th Cir. 1997); *United States v. VISA U.S.A., Inc.*, 163 F. Supp. 2d 322, 335 (S.D.N.Y. 2001).

17. *Merger Guidelines*, *supra* note 3, §1.11.

18. *Id.*

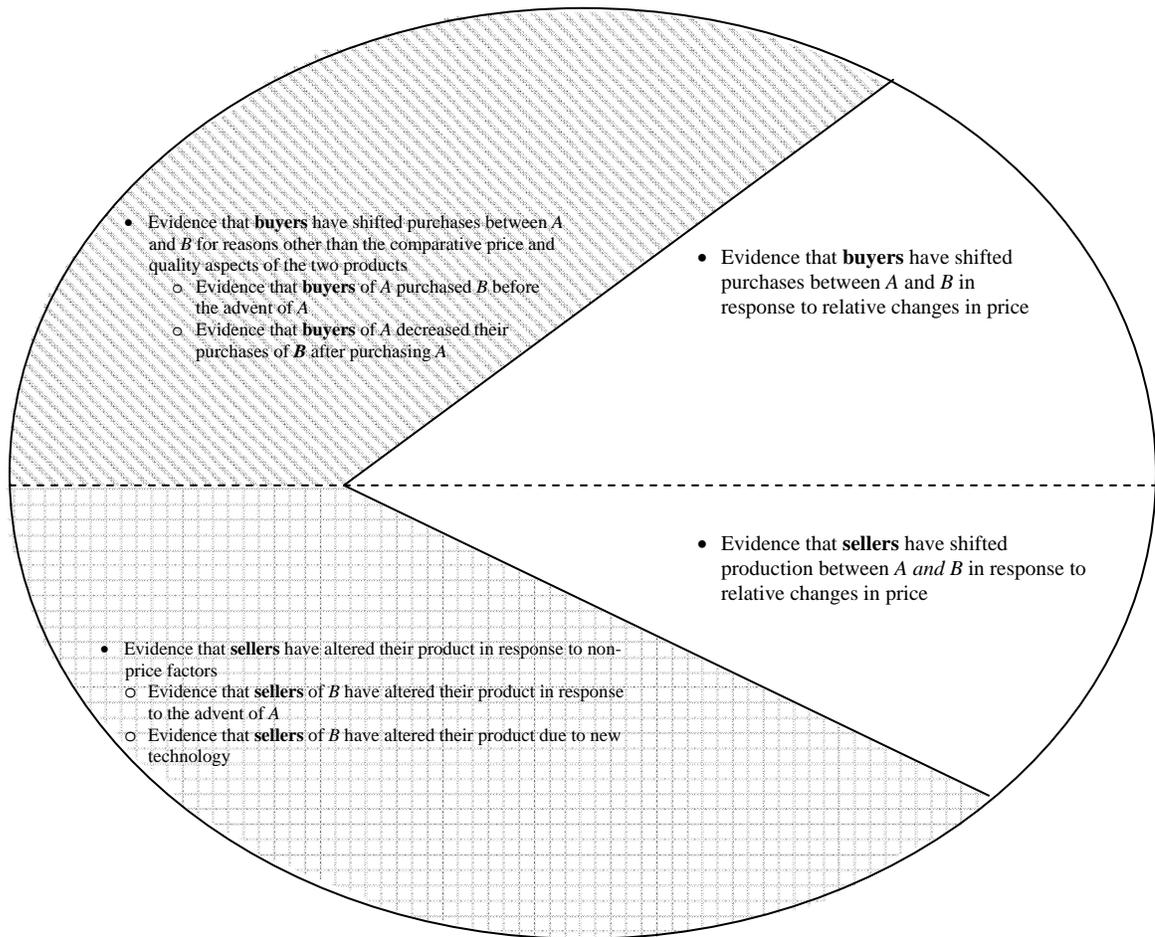
19. A Westlaw search produces no cases that contain the words “other competitive variables” and “Merger Guidelines.” There is no specific or extensive discussion of what that phrase means in any antitrust treatise. Therefore, as a practical matter, any attempt to invoke the phrase should immediately tip off the antitrust agencies that the parties cannot produce evidence of buyer substitution in response to a relative change in price.

supplier decisions based on the expected reaction of *buyers* outside the purported market are also to be ignored.²⁰

22. Moreover, the term “other competitive variables” must be interpreted narrowly to mean variables that reflect the demand for a product or collection of products, and not supply-side factors such as repositioning or entry. Otherwise, any supply-side information could be considered, which would undermine the broader purpose of section 1.0 to focus on demand-side responses for purposes of market definition. Figure 1 shows the kind of evidence that the *Merger Guidelines* will consider to define product markets.

20. It is not relevant to the market definition exercise to ask, for example, whether a teetotaler considers whiskey to be a substitute for water.

FIGURE 1: EVIDENCE CONSIDERED BY THE *MERGER GUIDELINES* TO DETERMINE WHETHER PRODUCT *B* SHOULD BE INCLUDED IN THE SAME MARKET AS PRODUCT *A*



Source: U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines §1.11 (1992, revised 1997).

Demand-side evidence, upon which the *Merger Guidelines* principally relies to define product markets, is shown above the horizontal dashed line. Supply-side evidence, upon which the *Merger Guidelines* generally relegates to different analyses,²¹ is shown below the horizontal

21. The definitive industrial organization textbook states that a “proper definition of the product market dimension of a market should include all those products that are close demand or supply substitutes.” See DENNIS W. CARLTON & JEFFREY M. PERLOFF, *MODERN INDUSTRIAL ORGANIZATION* 612 (Addison-Wesley 3rd ed. 2000). The authors define product *B* as a “supply substitute” for product *A* if and only if “firms producing *B* switch some of their production facilities to the production of *A*.” *Id.* Under this definition of supply substitution, none of the supply-side evidence produced by CRA would be admissible because no provider of an alternative audio device would or could switch some of its production facilities to the production of SDARS. The fact that the FCC has already assigned the only two licenses for SDARS forecloses such substitution.

dashed line. The shaded portion of the figure represents evidence that would be rejected under the evidentiary standard of the *Merger Guidelines*. Product *B* should be included in the same market as product *A* if product *B* significantly constrains the price of product *A*. Such discipline can occur if, in response to an increase in the price of *A*, there is (1) a significant decline in the demand for *A* as consumers switch from *A* to *B* (“demand substitution”), or (2) a significant increase in the supply of *A* as firms switch production from *B* to *A* (“supply substitution”). Because supply substitution is less likely to occur in a timely fashion, it is appropriate for the *Merger Guidelines* to place more emphasis on demand substitution, which has a better chance of disciplining prices. As I explain below, nearly all of the evidence put forward by CRA lies within the shaded portion of Figure 1, and should therefore be ignored by the FCC when defining the relevant product market here.

23. In an effort to support the proposition that SDARS customers would substitute to alternative audio sources in response to a price increase—that is, in an effort to expand the product market beyond SDARS—CRA largely relies on anecdotes of what suppliers of MP3 players, mobile telephones, terrestrial radio, and mobile Internet radio providers have been doing, allegedly in response to entry by SDARS providers.²² But these supply-side arguments say nothing about how consumers would react to a small but significant non-transitory increase in the price of SDARS. Moreover, for two alternative audio sources that CRA claims should be included in the product market—mobile Internet radio and mobile telephones—CRA offers no evidence whatsoever of demand substitution with respect to SDARS. Because XM and Sirius

22. It is conceivable, of course, that the conduct cited by the CRA Report had nothing at all to do with entry by SDARS providers. More important, there is little if anything in the CRA Report about what XM or Sirius has done in response to the supply-side activities of these other suppliers.

bear the burden of proof, their repeated failure to introduce relevant evidence on this point leads one to conclude that no such evidence exists.

24. With the well-established framework of the *Merger Guidelines* in mind, I analyze below both the demand-side and supply-side information offered by CRA to support the proposition that SDARS customers perceive alternative audio sources to be close substitutes to SDARS—that is, that alternative audio sources constrain the price of SDARS. There is no principled reason to abandon, on an *ad hoc* basis in this proceeding, the unambiguous prescription of the *Merger Guidelines* to focus solely on demand-side factors when defining the relevant product market. Doing so would invite obfuscation of the determinative economic issues in this proceeding and disserve consumers in a wider range of telecommunications markets by creating a precedent that would confound proper antitrust analysis in future mergers. Indeed, in the last six high-profile mergers reviewed by the Commission, supply-side evidence did not inform market definition.²³ As I explain below, CRA failed to provide an economic basis for its position that the FCC must deviate from the *Merger Guidelines* in such a *fundamental* way. This is not to say that supply-side evidence serves no purpose in merger analysis. Once the relevant market has been properly defined in accordance with the *Merger Guidelines* (based exclusively

23. Verizon Communications Inc. and MCI, Inc., Memorandum Opinion & Order, 20 F.C.C.R. 18,433, 18,463-64 ¶¶ 57-58 (2005) [hereinafter *Verizon-MCI MO&O*]; AT&T Inc. and BellSouth Corporation Application for Transfer of Control, Memorandum Opinion & Order, 22 F.C.C.R. 5662, 5711-14 ¶¶ 90-95 (2007) [hereinafter *AT&T-BellSouth MO&O*]; Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation, Memorandum Opinion & Order, 19 F.C.C.R. 21,522, 21,557 ¶ 71 (2004) [hereinafter *AT&T-Cingular MO&O*]; SBC Communications Inc. and AT&T Corp., Memorandum Opinion & Order, 20 F.C.C.R. 18,290, 18,341-46, 18,357 ¶¶ 90, 92, 94-96, 100, 125 (2005) [hereinafter *SBC-AT&T MO&O*]; Applications of Nextel Communications, Inc. and Sprint Corporation, Memorandum Opinion & Order, 20 F.C.C.R. 13,967, 13,984, 13,991 ¶¶ 39, 58 (2005) [hereinafter *Nextel-Sprint MO&O*]; Applications for Consent to the Assignment and/or Transfer of Control of Licenses Adelphia Communications Corporation (and Subsidiaries, Debtors-In-Possession), Assignors, to Time Warner Cable Inc. (Subsidiaries), Assignees; Adelphia Communications Corporation (and Subsidiaries, Debtors-In-Possession), Assignors and Transferors, to Comcast Corporation (Subsidiaries), Assignees and Transferees; Comcast Corporation, Transferor, to Time Warner Inc., Transferee; Time Warner Inc., Transferor, to Comcast Corporation, Transferee, Memorandum Opinion & Order, 21 F.C.C.R. 8203, 8234-35 ¶¶ 59, 62 (2006) [hereinafter *Comcast-Adelphia MO&O*].

on demand-side evidence), supply-side factors can be used to identify firms that participate in the relevant market (and their shares) and to evaluate the likelihood and extent of entry.

A. Terrestrial Radio Does Not Constrain the Price of SDARS

25. The merger parties' most highly touted candidate to be included in the same product market with satellite radio is terrestrial broadcast radio. This conjecture is not significantly different from the conjecture that over-the-air television constrains the price of cable television and thus belongs in the same product market. For reasons explained in my original declaration, several characteristics that are unique to satellite radio—(1) the commercial-free nature of its content, (2) exclusive content, (3) content that would be considered indecent as a matter of federal law if broadcast over terrestrial radio, (4) the wide breadth of channels, and (5) continuous nationwide service—imply that SDARS customers probably do not perceive terrestrial radio to be a close substitute. Instead of quantifying the importance of any of these distinguishing characteristics of SDARS, which is the clear burden of the merging parties, CRA offers four irrelevant demand-side analyses, reviewed below. In addition, CRA proffers irrelevant supply-side information, which is not a proxy for how SDARS customers would respond to price changes.

1. Demand-Side Evidence

26. A critical share analysis can be performed with knowledge of the own-price elasticity of demand for SDARS and the margins earned by SDARS providers. In the absence of data on the own-price elasticity of demand, it is possible to measure some portion of the sensitivity of demand for SDARS by focusing on the price-disciplining effect of a single

alternative, which is referred to as the cross-price elasticity of demand.²⁴ This type of evidence can be said to inform the cross-price elasticity of demand for SDARS with respect to a change in the price of the alternative,²⁵ or the cross-price elasticity of demand for the alternative with respect to a change in the price of SDARS.²⁶ According to the definitive industrial organization textbook by Dennis Carlton and Jeffrey Perloff, the second type of cross-price elasticity of demand (for an alternative audio device with respect to an increase in the price of SDARS) cannot inform the question of whether SDARS constitutes a standalone product market.²⁷ Because CRA's four pieces of demand-side evidence do not inform *either* cross-price elasticity of demand, the issue is academic. Both individually and collectively, CRA's four pieces of so-called evidence are unpersuasive.

27. CRA first cites to internal usage data from XM and Sirius, which show that when users activate an SDARS subscription, the share of their total minutes spent listening to terrestrial radio decreases.²⁸ The problem with this statistic is that it is not the correct experiment for measuring the elasticity of demand for SDARS with respect to a change in the price of

24. The larger a cross-elasticity of demand, the larger in absolute terms is the own-price elasticity of demand. Let ϵ_{AB} be the cross-price elasticity of demand for product *A* with respect to the price of product *B*, where $\epsilon_{AB} = (\partial Q_A / \partial p_B) (p_B / Q_A)$, Q_A is the (income-compensated) demand for *A*, and p_B is the price of *B*. The own-price elasticity of demand, ϵ_{AA} , equals the sum of ϵ_{AB} over all alternatives multiplied by -1. *See, e.g.*, JAMES J. HENDERSON & RICHARD E. QUANDT, MICROECONOMIC THEORY 31-33 (McGraw-Hill 1980).

25. For example, one could make a reasonable inference about the price-disciplining effect of terrestrial radio on SDARS based on evidence that the demand for SDARS increased in response to an increase in the price of terrestrial radio. Such evidence would suggest that SDARS providers would have to respond to a price decrease (perhaps in the form of fewer commercials) by providers of terrestrial radio with lower prices of their own.

26. For example, one could make a reasonable inference about the price-disciplining effect of terrestrial radio on SDARS based on evidence that the demand for terrestrial radio increased in response to an increase in the price of SDARS. To the extent that some portion of the increase in terrestrial radio listening could be attributed to former SDARS customers, then one could establish bounds on the own-price elasticity of demand for SDARS—the real focus of inquiry.

27. CARLTON & PERLOFF, *supra* note 21, at 615 (“To intelligently discuss a cross-elasticity, one must specify whether it is the cross-elasticity of Product *A* with respect to the price of Product *B* or vice versa. Although these two different cross-elasticities are usually not distinguished in court decisions, they are not equal in general. The relevant cross-elasticity of demand when the question is whether the market for Product *A* should include product *B* is the cross-elasticity of demand for Product *A* with respect to the price of product *B*.”) (citation omitted).

28. *CRA Report*, *supra* note 1, at 12, 13.

SDARS (the own-price elasticity) or a change in the price of some other product (the cross-price elasticity). Listeners do not activate an SDARS subscription in response to a relative change in the price of SDARS to terrestrial radio; rather, they subscribe because they find that the value of SDARS exceeds \$12.99 per month. Moreover, the fact that the *share* of minutes spent listening to terrestrial radio may decrease does not imply that the *amount* of minutes spent listening to terrestrial radio decreases significantly when a customer activates a subscription to SDARS. If someone starts the habit of eating a candy bar each day, his *share* of calories from fruit declines because the total number of calories consumed explodes; but the calories consumed from fruit need not decline in an absolute sense. Indeed, an Arbitron study, which the merging parties themselves cite in their Consolidated Application for Authority to Transfer Control, reveals that SDARS subscribers do not appear to reduce their consumption of terrestrial radio by a significant amount.²⁹

28. Next, CRA cites internal 2006 usage data from XM and Sirius to argue that when users *deactivate* an SDARS subscription, the share of their total minutes spent listening to terrestrial radio increases.³⁰ Again, the problem with this statistic is that it is not the experiment called for when measuring the elasticity of demand for SDARS with respect to a relative change in the price of SDARS to terrestrial radio. It is a certainty that listeners did not deactivate SDARS subscriptions in 2006 in response to an increase in the price of SDARS—because the price for SDARS has not changed since the second quarter of 2005 (and only then for XM). Nor did SDARS customers deactivate their subscriptions in response to a decrease in the price of an

29. See Phil Rosenthal, *Satellite Deal Foes Don't Hear Message*, CHI. TRIB., Feb. 28, 2007, at 3 (discussing Arbitron report) (cited in Consolidated Application for Authority to Transfer Control of XM Radio Inc. and Sirius Satellite Radio Inc., In the Matter of XM Satellite Radio Holdings Inc., Transferor and Sirius Satellite Radio Inc., Transferee, MB Dkt. No. 07-57, filed Mar. 20, 2007, at 22).

30. *CRA Report, supra* note 1, at 12.

alternative. Instead, the consumers who deactivated their SDARS subscriptions in 2006 presumably did so because they discovered from experience that they value SDARS less than the subscription price of \$12.99 per month. According to Bernstein Research, the churn rate for Sirius was 1.4 percent in 2006, while the churn rate for XM's self-paying customers was the same.³¹ The most likely candidate for churn is a subscriber who reaches the end of her promotional period; her termination of SDARS service at that moment says nothing about the elasticity of demand for SDARS with respect to a change in relative price of SDARS to terrestrial radio for *self-paying* SDARS customers.

29. The third category of evidence that CRA offers concerning demand-side characteristics of the relevant product market consists of data from BIA Research, showing that the SDARS penetration is higher in markets with fewer terrestrial radio stations.³² To estimate the cross-price elasticity of demand for SDARS—presumably the statistic that CRA seeks to inform with this analysis—the experiment needs to measure the reaction of SDARS subscribers *to a change in the price of terrestrial radio*. But the price of terrestrial radio does not vary across localities. Thus, the elasticity that CRA finds is not the cross-price elasticity of demand for SDARS with respect to a change in the price of terrestrial radio, but instead the elasticity of demand for SDARS with respect to changes in the number of terrestrial radio stations.

31. Craig Moffett & Amelia Wong, *Sirius (SIRI) and XM (XMSR): Back to First Principles . . . Lowering SIRI Target Price, but Reiterate Outperform*, BERNSTEIN RESEARCH, Feb. 21, 2006. Bernstein explains that the aggregate churn rate for XM is a composite of self-paid churn and the churn of subscribers coming off original equipment manufacturers' promotional periods, which is not comparable to Sirius's churn rate. Thus, a customer who receives three months of free SDARS is more likely to cancel her subscription than is a customer who consciously initiated the service.

32. *CRA Report*, *supra* note 1, at 14. CRA argues that, because the American Antitrust Institute (AAI)—an independent organization that has concluded that the merger is anticompetitive—proposed a related test for market definition, this type of evidence proves that terrestrial radio significantly constrains the price of SDARS. However, the AAI's empirical exercise is ultimately uninformative because it does not capture buyer substitution between terrestrial radio and SDARS in response to a relative change in price. The fact that the AAI opposes the merger does not imply that every statement in its comments rests on sound economic analysis.

30. At best, CRA could claim that their SDARS penetration regression demonstrates buyer substitution in response to a change in the ratio of the *quality-adjusted prices* of terrestrial radio and SDARS. But their regression is not even informative of that elasticity. First, the regression specification used by CRA failed to control for the size of the market (which one would expect to be positively related to the number of terrestrial stations), the growth of the market (which one would expect to be positively related to the number of terrestrial stations), and the demographic heterogeneity of the population (which one would expect to be positively related to the number of terrestrial stations). The coefficient on the number of terrestrial signals might no longer be significant after controlling for those variables. Second, CRA failed to control for other factors that vary across geographic markets, such as the amount of commercial time, which could affect the quality of the terrestrial radio experience. Third, CRA failed to demonstrate that the number of terrestrial radio stations is a reasonable proxy for the quality of listening to terrestrial radio in a given locality. For example, the addition of a third country-western station in a given locality does not necessarily increase the quality of the terrestrial radio experience.

31. For its fourth piece of demand-side evidence, CRA makes much of the obvious but inconsequential fact that all SDARS subscribers were former terrestrial radio subscribers.³³ The fact that all SDARS subscribers once listened exclusively to terrestrial radio—what else could they have listened to before the advent of SDARS?—does not imply that a critical share of SDARS subscribers would substitute to terrestrial radio in response to an increase in the price of SDARS. All connoisseurs of single-malt scotch whiskey were former consumers of water, but no one would argue that water and single-malt scotch whiskey belong to the same product market.

33. *Id.* at 17.

2. Supply-Side Evidence

32. After failing to provide any remotely persuasive demand-side evidence of cross-price elasticity of demand for SDARS and terrestrial radio, CRA proceeds to offer even weaker supply-side information that purports to show that consumers perceive terrestrial radio to be a close substitute for SDARS. As explained above, unless such evidence can serve as a proxy for demand-side responses *to changes in relative prices*, supply-side evidence is deemed by the *Merger Guidelines* to be uninformative for purposes of defining the relevant product market. Even under the economic definition of a supply substitute, which involves producers of product *B* shifting a portion of their supply to product *A* in response to an increase in the price of *A*, CRA's supply-side information misses the mark. With these caveats in mind, it becomes clear that CRA's proffer of supply-side information is tantamount to an assault on the *Merger Guidelines* by arguing that entry by XM and Sirius was a competitive response to terrestrial radio.³⁴ This argument is disingenuous. CRA is surely sophisticated enough about antitrust law to know that reactions by suppliers in different industries that are provoked by non-price factors cannot inform definition of the relevant product market.

33. CRA proceeds to argue that some terrestrial radio stations have reduced the number of commercials, repackaged their music, and introduced HD radio allegedly to compete with SDARS.³⁵ Again, reactions by suppliers cannot inform market definition unless those reactions can serve as a proxy for likely demand responses to a change in prices—in this case, the price of SDARS or HD radio—or a change in non-price factors that could induce buyer

34. *Id.*

35. *Id.* at 18.

substitution.³⁶ But the advent of HD radio or the reduction in commercials on terrestrial radio cannot be said to anticipate the response of *SDARS consumers* to changes in the price (or quality-adjusted price) of SDARS or HD radio. In any event, it is debatable whether these efforts by terrestrial radio providers are aimed at converting SDARS customers back to terrestrial, as opposed to preventing churn among current terrestrial radio listeners. The simpler explanation is that terrestrial broadcasters compete against other terrestrial broadcasters in a given geographic market. It deserves repeating that XM and Sirius bear the burden of proof to resolve this debatable question in their favor. They have failed to do so. Thus, the Commission has been given no factual basis to conclude that these supply-side reactions by terrestrial broadcasters inform the perceptions of current *SDARS* customers, which is the critical way in which the *Merger Guidelines* narrowly permit the use of supply-side evidence when estimating the cross-price elasticity of demand for terrestrial radio with respect to a change in the price of SDARS.

B. iPods and MP3s Do Not Constrain the Price of SDARS

34. CRA also offers demand-side and supply-side information of the alleged price-constraining effect of iPods and MP3 players. This evidence is unpersuasive.

1. Demand-Side Evidence

35. According to survey data, when XM customers deactivate their subscriptions, they switch their listening to other audio entertainment modes, not Sirius.³⁷ CRA makes much of the fact that a larger percentage of former XM subscribers now listen “most often” to iPod or

36. Indeed, these reactions by terrestrial radio providers do not appear to be competitive responses to SDARS. See David Koenig, *Profits up Slightly at Radio Station Owner Clear Channel*, AP NEWSWIRE, July 23, 2004 (“Company executives said they expect to boost radio stations ratings and advertising rates next year by cutting the amount of commercials by one-fifth. The ‘less is more’ strategy is designed to increase advertising demand by creating scarcity.”); Sarah McBride, *Clear Channel Scales Back Ad Time—Radio Industry Leader Aims to Raise Spots’ Value; Other Could Follow Suit*, WALL ST. J., July 19, 2004, at B4 (“In an effort to revive flagging radio advertising sales, Clear Channel Communications Inc. plans to cut the number of available spots in many markets in hopes of eventually getting a higher price for the remaining inventory.”).

37. *CRA Report*, *supra* note 1, at 13.

MP3 players rather than Sirius.³⁸ Again, this observation is not informative of the experiment that needs to be run under the *Merger Guidelines*. The proper experiment for measuring cross-price elasticity of demand begins with a price increase in SDARS, not the arrival or exit of a SDARS customer. For example, the cause of the cancellation of an XM subscription could be that a free promotion has expired. The fact that a listener to both iPods and XM listens to iPods “most often” after his free subscription to XM terminates does not inform the calculation of the cross-price elasticity of demand. At best, it demonstrates a consumer reaction when price increases from \$0 to \$12.99 per month. A price increase of that magnitude is not the “small” increase (presumptively 5 percent) that the *Merger Guidelines* envision for defining the relevant product market under the small-but-significant-and-nontransitory increase in price (SSNIP) test.³⁹ It is well known in antitrust law that the scope of consumer substitutes increases as one uses a gross rather than marginal deviation from the competitive price. This insight is the broader implication of the famous “*Cellophane* fallacy”—the error of including other products in the market definition because they did not likely constrain the price of the product in question to *competitive levels* when extant prices significantly exceed marginal cost—long recognized by antitrust scholars.⁴⁰

36. Borrowing a page from Professor Hazlett, CRA argues that SDARS sales projections are decreasing *at the same time* that sales of iPods and MP3 players are increasing:

38. *Id.*

39. *See, e.g.*, Thomas G. Krattenmaker, Robert Lande & Steven Salop, *Monopoly Power and Market Power in Antitrust Law*, 76 GEO. L. J. 241, 256 (1987).

40. The Supreme Court made this error in the *Cellophane* antitrust case, *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956). For subsequent criticism, see IIA PHILIP E. AREEDA & HERBERT HOVENKAMP, *ANTITRUST LAW* ¶ 539 (2004) (criticizing market definition in *Cable Holdings of Ga. v. Home Video*, 825 F.2d 1559, 1563 (11th Cir. 1987); *United States v. Syfy Enters.*, 712 F. Supp. 1386 (N.D. Cal. 1989)); RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 304–05 (6th ed. 2003); RICHARD A. POSNER, *ANTITRUST LAW* 150-51 (2d ed. 2001).

Increased competition from other forms of audio entertainment also has led several analysts to make significant downward revisions in their projections for 2010, with figures as much as 20% lower. Over the same period, growth of iPods and MP3 portable players has greatly exceeded expectations.⁴¹

According to XM's economists, these two phenomena (assuming that they are even true) cannot be mere coincidence—that is, sales of iPods and SDARS allegedly are causally linked. Of course, the demand for many new products and services, including GPS mapping services and LCD televisions, is growing *at the same time* that SDARS projections allegedly are being revised downward. That observation does not imply that GPS mapping services and LCD televisions belong to the same product market as SDARS. Again, CRA presents a disingenuous argument. At a basic level, CRA's argument confuses correlation with causation. At a more advanced level, CRA's argument fails to grasp that the relevant experiment involves a hypothetical increase in the price of SDARS—otherwise, no inferences on the cross-price elasticity demand for iPods with respect to SDARS can be made. It strains credulity to suppose that CRA lacks the sophistication in antitrust analysis to discern these logical fallacies. In federal district court, it is doubtful that this kind of expert testimony could survive a *Daubert* motion.⁴²

37. Moreover, a careful review of analyst reports suggests that CRA cherry-picked two analyst reports to suggest incorrectly that the demand for SDARS sales is declining. Although the merging parties cannot openly rely on the failing-firm argument, they evidently will intimate impending doom to anyone who will listen, including editorial boards⁴³ and third-

41. *CRA Report*, *supra* note 1, at 29-30 (citing Goldman Sachs and J.P. Morgan).

42. By way of comparison, a distinguished Stanford economics professor's reliance on the Cournot model of oligopoly—presented in any undergraduate industrial organization textbook—was found to be too lacking in factual support in a specific antitrust case to survive a *Daubert* motion. *See Concord Boat Corp. v. Brunswick Corp.*, 207 F.3d 1039, 1057 (8th Cir. 2000).

43. *See, e.g., Approve the XM-Sirius Merger*, WASH. TIMES, July 28, 2007, available at <http://www.washingtontimes.com/article/20070726/EDITORIAL/107260014/1013> (“Sirius and XM continue to hemorrhage cash and generate losses at rates that raise serious concerns about their long-term viability.”).

party organizations that rarely if ever participate in Commission proceedings.⁴⁴ This negative outlook for SDARS is inconsistent with almost every analyst report on record. For example, Bear Stearns expects that by the end of 2007 XM will enjoy a 70 percent increase in subscribers relative to March 2006.⁴⁵ In 2005, *The Economist* magazine reported that the number of satellite radio customers was expected to double each year.⁴⁶ In the same year, Lehman Brothers projected nearly 35 million SDARS subscribers by 2010.⁴⁷ In 2006, Bernstein predicted a market of 44 million satellite subscribers by 2010, divided more or less equally between XM and Sirius.⁴⁸ Bernstein also estimated that satellite radio penetration of automobile manufacturers would increase to between 70 and 80 percent by 2010, an increase from only 21 percent in 2005.⁴⁹ Indeed, XM itself has forecast significant increases in penetration. XM expects to add more than 3.1 million subscribers in 2007, and 5.0 million cars will be sold annually by 2008 that have XM receivers factory-installed.⁵⁰ Indeed, XM's Chairman, Gary Parsons, recently confirmed this positive outlook. In a September 2007 interview in the *New York Times*, Mr. Parsons said: "Prior to the merger, we were clearly on a continuing growth path and a path that would turn us cash flow positive and earnings positive in the out years. That is still expected to

44. See, e.g., Comments of the Women Involved in Farm Economics, May 14, 2007, available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519431731; Comments of the Hispanic Federation, June 5, 2007, available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519527761.

45. Eric Savitz, *Satellite Radio: Bear Stearns Trims Subscriber Forecast; Sees Big Upside In Merger Scenario*, BARRON'S ONLINE, Jan. 23, 2007.

46. *Why radio is worth watching*, THE ECONOMIST, June 11, 2005.

47. Heather Green & Tom Lowry, *Media The New Radio Revolution; From satellite to podcasts, programming is exploding—but the fight for profits will be ferocious*, BUS. WK., Mar. 14, 2005, at 32.

48. *Howard's way—Satellite radio*, THE ECONOMIST, Jan. 14, 2006.

49. Craig Moffett & Amelia Wong, *Satellite Radio: Upgrading Sirius to Outperform; We Expect SIRI to Beat Consensus and Guidance*, BERNSTEIN RESEARCH CALL, Feb. 8, 2006 (citing Sanford C. Bernstein projections).

50. Craig Moffett & Amelia Wong, *XMSR: Analyst Day Highlights Bullish Longer-Term OEM Trends and Stronger Product Line-Up*, BERNSTEIN RESEARCH CALL, Jan. 9, 2006.

be the case.”⁵¹ In summary, the proposition that SDARS and iPods belong to the same product market because iPod sales allegedly cannibalize SDARS subscriptions does not withstand even casual scrutiny.

2. Supply-Side Evidence

38. Unable to identify any convincing demand-side evidence that iPods constrain the price of SDARS, CRA turns to irrelevant supply-side information. CRA notes that content and service providers for iPods and MP3s make available a wide variety of audio content, including “Internet radio” programs.⁵² To reiterate, the *Merger Guidelines* specify that reactions by suppliers cannot inform definition of the relevant product market unless they serve as a proxy for consumer responses to changes in prices. Even if they could inform market definition, these efforts by content providers are likely aimed at selling high-margin, complementary services to iPod users. Thus, those marketing efforts say nothing about how SDARS customers perceive iPod offerings.

39. Moreover, the competitive responses cited by CRA, such as Yahoo!’s Music Unlimited to Go, cannot be relied upon to constrain the price of SDARS for several reasons. First, these services require a Wi-Fi-compatible device. Thus, an owner of any iPod would need to replace her SDARS receiver with, for example, the SanDisk Sansa Connect MP3 Player, which sold for roughly \$150 as of September 2007.⁵³ Indeed, Yahoo! prominently disclaims at the bottom of its music website: “A NOTE ABOUT IPODS: iPods do not accept Y! Music

51. Eric A. Taub, *The Future for XM, With or Without a Sirius Merger*, N.Y. TIMES, Sept. 15, 2007, available at http://www.nytimes.com/2007/09/15/business/15interview.html?_r=1&th=&adxnnl=1&oref=slogin&emc=th&adxnlnx=1190225257-qM/4M4oiIM3g0n07ac8VFg.

52. *CRA Report*, *supra* note 1, at 26.

53. SanDisk Website, SanDisk 4GB MP3 Sansa Connect Player, available at [http://www.esend.com/sandisk/Products.aspx?Catalog=Sandisk&ProductID=SDMX8N4096KEA70\(Esend\)](http://www.esend.com/sandisk/Products.aspx?Catalog=Sandisk&ProductID=SDMX8N4096KEA70(Esend)), (accessed Sept. 29, 2007).

Unlimited To Go subscription tracks.”⁵⁴ This equipment charge would be added to the monthly subscription fee of \$14.99, which would further limit substitution by SDARS subscribers (who are accustomed to a lower price). Second, these services require an Internet connection through a Wi-Fi antenna, thereby limiting the user’s ability to download new content in a car. Third, even if downloads could occur in a car (which they cannot) or outside the range of a Wi-Fi hotspot (which they cannot), downloading a program and then listening to it is obviously a very different experience from hearing a program in real-time.

40. Finally, CRA cites a product called “Slacker”, which had yet to be introduced as of August 2007, as evidence of supply substitution.⁵⁵ The fact that the merging parties must rely on services that do not yet exist highlights their desperation to identify a reasonably interchangeable product for SDARS. When it does eventually come into existence, Slacker will allegedly offer wider coverage because it will be distributed via Ku band satellite, which allegedly has a larger reach than Wi-Fi hotspots.⁵⁶ But Slacker will still require the customer to buy a compatible device and pay a monthly subscription fee, both of which will significantly limit substitution by SDARS subscribers. According to the *Wall Street Journal*, Slacker “will offer a choice of a free ad-supported service or a paid ad-free service at \$7.50 monthly, with other perks such as the ability to save songs.”⁵⁷ It is debatable whether SDARS subscribers, who selected into satellite radio to avoid commercials, would tolerate advertisements on Slacker. It is also debatable whether SDARS subscribers would be willing to incur the cost of a new device,

54. Downloaded at <http://music.yahoo.com/ymu/?tab=togo> (last visited Aug. 16, 2007).

55. *CRA Report*, *supra* note 1, at 26.

56. Sarah McBride, *Going Wireless: Internet Radio Races To Break Free of the PC Pushing Portability In Cars, Music Players; Static Over WiFi*, WALL ST. J., June 18, 2007, at A1.

57. *Id.*

which the *Wall Street Journal* says will begin at roughly \$150.⁵⁸ The FCC's case law makes clear that XM and Sirius bear the burden of proving that debatable propositions such as these are more likely than not to be true.⁵⁹ CRA has failed to produce the necessary economic evidence to satisfy that burden. Instead, CRA is effectively asking the FCC to trust in the prospect that an untested and potentially inferior substitute will—in theory—constrain the price of SDARS *as soon as it eventually hits the market*. If Slacker is really the closest substitute for SDARS, then one alternative for the merging parties to consider is to withdraw their application until the FCC can observe whether this substitution actually takes hold.

C. Wireless Telephones Do Not Constrain the Price of SDARS

41. In this section, I review the supply-side information put forward by CRA that purports to show that wireless telephones constrain the price of SDARS.

1. Demand-Side Evidence

42. CRA fails to offer *any* demand-side evidence that wireless telephones constrain the price of SDARS.

2. Supply-Side Evidence

43. With no demand-side evidence of substitution in response to prices, CRA is forced to hunt for supply-side evidence. CRA notes that most cellular carriers offer audio content-enabled phones.⁶⁰ CRA offers the iPhone as an example of a device that could constrain the price of SDARS.⁶¹ But such evidence is irrelevant. To reiterate, reactions by suppliers cannot inform the definition of the relevant product market according to the *Merger Guidelines* unless they serve as a proxy for likely consumer responses to changes in prices. Rather than responding

58. *Id.*

59. *See* note 2 *supra*.

60. *CRA Report, supra* note 1, at 21.

61. *Id.*

to a change in the price of SDARS, the collaboration between AT&T and Apple over the iPhone was more likely aimed at selling high-margin, complementary services (primarily music downloads from iTunes) *to existing wireless subscribers*.⁶² Their efforts say nothing about whether SDARS customers perceive wireless phones to be a substitute for XM and Sirius satellite radio. The genius of the iPhone, after all, is that it consolidates two popular consumer devices—completely unrelated to SDARS receivers—into one: a wireless telephone and an iPod. Finally, unlike a satellite radio device, the iPhone cannot be easily played through the speakers of one’s car.⁶³ The alternative—listening to music in one’s car by holding the iPhone next to one’s head or by wearing headphones—is too technologically retrograde (and in some localities unlawful) to be taken seriously.

44. After celebrating the advent of the iPhone, CRA proceeds to recount the latest offers by other mobile telephone providers, including AT&T, Sprint-Nextel, Verizon, and Alltel.⁶⁴ However, SDARS customers are not likely to perceive these offerings to be close substitutes to SDARS.⁶⁵ To borrow one obvious example, it is not clear how a sports program downloaded onto a Verizon VCast mobile phone could be played over the speaker in one’s car. CRA fails to link Verizon’s VCast or any of these offerings to anticipated demand-side substitution among SDARS subscribers in response to price changes. Stated differently, CRA cannot reject the hypothesis that these offerings came about completely independently of how the wireless carriers perceive the demand response of SDARS customers. Instead, it seems far

62. See, e.g. *MacWorld, San Francisco 2007: Cingular Has Exclusive Access to Apple iPhone*, MARKETRESEARCH.COM, Jan. 11, 2007 (“Beyond device sales, Cingular needs to develop iPhone-specific services and content to up-sell the base.”).

63. Despite heroic efforts, an economist at Criterion Economics could not get an iPhone to play through the USB connection in his car that supposedly supports all iPods. Further, FM transmitters receive considerable static from the iPhone internal antenna.

64. *CRA Report, supra* note 1, at 21-25.

65. *Original Sidak Declaration, supra* note 2, at 30-32.

more likely that these carriers were motivated by a desire to capture ancillary revenues in the upstream content markets, primarily music downloads. In other words, Verizon's VCast is a closer substitute to the iPod than it is to SDARS.

45. Moreover, at the current prices sought by wireless carriers for audio content, it is highly doubtful that SDARS customers perceive these mobile telephone offerings to be close substitutes. In two footnotes, CRA buries the inconvenient fact that a mobile voice subscriber to Sprint⁶⁶ or AT&T⁶⁷ must subscribe to an unlimited data package—priced between \$20 and \$50 per month, depending on the carrier—to avoid paying for data usage charges while listening to audio content over his mobile telephone. Setting aside the nontrivial incremental price for an unlimited data plan, Sprint offers 10 commercial-free stations for \$15 per month or 40 commercial-free stations for \$20.⁶⁸ By comparison, XM and Sirius each offer over 120 commercial-free stations for \$12.99. A Sprint subscriber paying \$20 per month for audio content would need to incur an additional \$6.95 (a total of \$26.95) to receive 20 Sirius channels. Because a Sirius subscriber already receives these channels and more in his satellite radio subscription, he would never be willing to substitute to Sprint's audio entertainment service for a *higher* price (\$26.95 plus the unlimited data charge versus \$12.95). Similarly, setting aside the price for an unlimited data plan, an AT&T customer must pay \$8.99 per month to receive a small subset (25) of XM's channels. It is not credible that an XM customer would pay significantly more than \$12.99 per month to forgo over 100 XM channels and the ability to listen to XM radio in his car. CRA obviously knows that demand curves slope downward. But, evidently in a momentary lapse

66. *CRA Report*, *supra* note 1, at 22 n.61.

67. *Id.* at 24 n.74.

68. *Id.* at 22.

of reason, CRA makes an argument that would require demand curves to slope upward, and thus probably not survive a *Daubert* motion.

46. Although Verizon offers MLB games (at \$6.95 per month) and music downloads (at \$1 per download) through its VCast service, Verizon does not offer a package of commercial-free stations for a monthly fee. Again, an XM subscriber, who receives MLB games under his current subscription for \$12.99 per month, would not be willing to switch to Verizon VCast only to pay for an unlimited data plan (\$50 per month) plus \$6.95 per month for MLB and forgo over 120 channels.

47. Table 1 summarizes these alternative audio entertainment offerings provided by mobile wireless operators.

TABLE 1: AUDIO CONTENT PROVIDED BY MOBILE WIRELESS OPERATORS

<i>Wireless Provider</i>	<i>Price of Unlimited Data Plan</i> (A)	<i>Price of Audio Content Plan (Number of Channels)</i> (B)	<i>Incremental Price of XM or Sirius Plan (Number of Channels/Provider)</i> (C)	<i>Total Price of Mobile Telephone Package (A + B + C)</i>	<i>Price of XM or Sirius for an SDARS Customer</i>
AT&T	\$19.99 ^A	\$8.99 (50) ^B	\$8.99 ^C (25 of XM)	\$28.98 – \$37.97	\$12.99
T-Mobile	\$29.99 ^D	NA	NA	NA	\$12.99
Alltel	\$10.00 ^E	\$6.99 (40) ^E	\$7.99 (20 of XM) ^F	\$16.99 – \$24.98	\$12.99
Sprint-Nextel	\$0.00	\$20.00 (50) ^G	\$6.95 (20 of Sirius) ^G	\$26.95	\$12.99
Verizon	\$44.99 ^H	NA	NA	NA	\$12.99

^A Sources: AT&T Website (referring to MediaMax 200 Plan); available at <http://www.wireless.att.com/cell-phone-service/services/>;

^B AT&T Media Mall, available at <http://mediamall.wireless.att.com/sf/storefront/endUserHTML.GetPhoneNumberAndCoupon.jsp?st=jt&dc=CF88&prodId=CF25577&refcode=&SKU=CF25577a36077v24>;

^C Andrew D. Smith, *Apple iPhone's Rivals: Do They Measure Up?*, SEATTLE TIMES, Jun. 9, 2007 at E6.

^D T-Mobile Website, available at <http://www.t-mobile.com/shop/plans/Default.aspx?plancategory=7#Internet+Only>;

^E Alltel Website: Access TV & Radio, available at http://www.alltel.com/access/tv_radio.html;

^F Sprint Website: Services, ^G Sprint Website: Digital Lounge, available at <https://manage.sprintpcs.com>.

^H Verizon Wireless Website (equal to the cost of cheapest voice plus data plan, \$79.99, minus the cost of the cheapest voice only plan, 39.99), available at <http://www.verizonwireless.com/b2c/store/>.

As Table 1 shows, the monthly price differential between an SDARS subscription and any of the audio content offerings from mobile telephone operators is substantial, ranging from \$4 (Alltel) to \$24.98 (AT&T). It bears emphasis that two of the largest mobile telephone operators, Verizon

and T-Mobile, do not even offer a base plan with a fixed number of audio channels. If these are the best options facing SDARS customers, then the unilateral price effects of the proposed merger would be severe indeed.

D. Mobile “Internet Radio” Does Not Constrain the Price of SDARS

48. Finally, CRA fails to show that mobile Internet radio constrains the price of SDARS today or will do so in the future. As was the case for mobile telephones, CRA relies entirely on irrelevant supply-side information that does not inform the cross-price elasticity of demand of mobile Internet service with respect to SDARS.

1. Demand-Side Evidence

49. CRA fails to offer *any* demand-side evidence that mobile Internet radio constrains the price of SDARS.

2. Supply-Side Evidence

50. With no demand-side evidence whatsoever, CRA is forced to offer more irrelevant supply-side information of substitution. CRA’s economists note that Internet offerings for the car are “becoming more robust.”⁶⁹ They note that the monthly service price for such features—when they eventually reach the market—will be \$50.⁷⁰ Finally, CRA notes that, “[b]y 2009, cars *may have* IP addresses to communicate information over broadband networks.”⁷¹ This conjecture is remarkable. CRA is again asking the FCC to trust its judgment: a product that may or may not exist by 2009 is held out as the last line of defense for SDARS customers if a merged XM-Sirius were to raise prices.

69. *CRA Report*, *supra* note 1, at 29.

70. *Id.*

71. *Id.* (emphasis added).

51. CRA tries to pass off this *potential* supply-side response as a proxy for *potential* demand responses among SDARS subscribers to price changes. CRA's proffer of such speculative "evidence" is akin to stacking two cloudy lenses on top of each other and promising the viewer that, if he squints his eyes, he will be able to see clearly through to the other side. The *Merger Guidelines* repudiate such speculation by explicitly dictating that reactions by suppliers to non-price factors cannot inform definition of the relevant product market. Even if they could, these offerings say nothing about the perceptions of SDARS customers vis-à-vis mobile Internet radio. The significant price differential alone (\$12.99 versus \$50 per month) would undoubtedly cause many SDARS customers to reject the mobile Internet radio alternative.

E. Summary

52. The FCC could not possibly find that the proposed merger would serve the public interest unless—to start—XM and Sirius supplied hard demand-side evidence that SDARS consumers perceive something—anything other than SDARS—to be a close substitute to their existing satellite radio service. XM and Sirius have failed to supply such evidence, and absent such evidence, any Commission decision to approve the merger would be deemed by a reviewing court to be arbitrary and capricious. In its effort to expand the relevant product market beyond SDARS, CRA has failed to offer any compelling evidence of significant cross-price elasticity of demand between SDARS and other forms of audio entertainment. Table 2 summarizes CRA's erroneous "evidence" on this critical aspect of merger analysis.

TABLE 2: CRA’S ERRONEOUS “EVIDENCE” OF THE PRICE-DISCIPLINING EFFECT OF ALTERNATIVE AUDIO DEVICES ON SDARS

<i>Alleged Source of Price Constraint for SDARS</i>	<i>Demand-Side Evidence</i>	<i>Does the Evidence Capture Actual Buyer Substitution in Response to a Relative Change in Prices or Quality-Adjusted Prices?*</i>	<i>Supply-Side Evidence</i>	<i>Does the Evidence Capture Potential Buyer Substitution in Response to a Relative Change in Prices or Quality-Adjusted Prices?*</i>
Terrestrial Radio	<ul style="list-style-type: none"> • When users <i>activate</i> an SDARS subscription, the <i>share</i> of their total minutes listening to terrestrial radio decreases • When users <i>deactivate</i> an SDARS subscription, the <i>share</i> of their total minutes listening to terrestrial radio increases • SDARS penetration is higher in markets with fewer terrestrial radio stations • All SDARS subscribers were former terrestrial radio subscribers 	<ul style="list-style-type: none"> • No • No • No • No 	<ul style="list-style-type: none"> • Terrestrial radio stations have reduced the number of commercials, repackaged their music, and introduced HD radio 	<ul style="list-style-type: none"> • No
iPods and MP3 Players	<ul style="list-style-type: none"> • More former XM subscribers listen to iPods or MP3 players than to Sirius • SDARS sales projections are decreasing at the same time that sales of iPods and MP3 players are increasing 	<ul style="list-style-type: none"> • No • No 	<ul style="list-style-type: none"> • Content and service providers for iPods and MP3 players make available a wide variety of audio content, including Internet radio programs 	<ul style="list-style-type: none"> • No
Mobile Telephones	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Most mobile telephone carriers offer audio content-enabled phones 	<ul style="list-style-type: none"> • No
Mobile Internet	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • NA 	<ul style="list-style-type: none"> • Internet offerings for the car are becoming more robust 	<ul style="list-style-type: none"> • No

Note: * This sort of evidence could include data on (1) the own-price elasticity of demand for SDARS, (2) the cross-price elasticity of demand for SDARS with respect to an increase in the price of some alternative audio device, or (3) the cross-price elasticity of demand for some alternative audio device with respect to an increase in the price of SDARS.

CRA is one of the world’s premier economic consulting firms on antitrust matters. It produced a report exceeding 100 pages, yet could not produce an iota of persuasive evidence to substantiate significant own-price elasticity of demand for SDARS or cross-price elasticity of demand between SDARS and alternative forms of audio entertainment. Evidently, no such evidence exists.

II. CRA'S CRITIQUE OF THE SIDAK DECLARATIONS IS NOT PERSUASIVE

53. In this section, I respond to CRA's major criticisms of my analysis. Those criticisms range from erroneous to irrelevant. They do not undercut the correctness of my assessment that the proposed merger would harm consumers. After reviewing CRA's critique, it is not necessary to revise any of my previous conclusions. The relevant product market is SDARS, and the proposed merger represents a merger to monopoly. XM and Sirius still bear the burden of proving that the merger would not be anticompetitive, and they have not done that.

A. CRA Incorrectly Claims That Supply Responses Were Ignored When Defining Product Markets

54. CRA argues that I was wrong to disregard competitive responses to non-price factors when defining the relevant product market for this proceeding:

Sidak suggests that this type of competitive response evidence is not relevant for market definition because market definition involves consumer perceptions, not the perspective of competitors. Sidak is wrong to discard competitive response evidence in defining markets for three reasons. First, as is widely understood, the conduct of industry participants provides information about buyer substitution because it shows how buyer substitution is understood by sellers, who are experts on their buyers. . . . Second, in order to understand whether buyer substitution would make unprofitable a price increase, the market definition question in the Merger Guidelines, it is necessary to identify the competing products to which consumers could substitute in the event of a price increase. The competitive responses of competitors to satellite radio services are relevant to this issue. Third, in a mature market, those alternatives would be available now. But in a market with dynamic demand like this one, the products that will be introduced in the future also are relevant to understanding longer-term demand substitution, and thus to applying the market definition test in the Merger Guidelines.⁷²

CRA is incorrect. As I explained above, the *Merger Guidelines* provide explicit instructions on what can and cannot be used to define product markets. Regarding the first point, CRA would have the FCC believe that mobile *telephone* and mobile *Internet* providers are "experts" on the preferences of SDARS subscribers. Although it is conceivable that mobile Internet providers are

72. *CRA Report*, *supra* note 1, at 16 n.30 (citations omitted).

experts on their own customers (to the extent such customers exist) or experts on the technology of their services, it is a stretch to believe that they are experts on SDARS customers.

55. Regarding CRA's second point, although it is necessary to identify the competing products to which consumers of SDARS *could* substitute in the event of a price increase, the analysis cannot end there. Instead, one must prove that SDARS consumers have actually substituted to those alternatives in response to a price increase or, at a minimum, would consider substituting to those alternatives in response to a price increase. Moreover, the competitive responses of other firms to satellite radio services are generally not relevant to this issue according to the *Merger Guidelines*. Those supplier responses are relevant only to the extent that they serve as a proxy for how current SDARS subscribers would respond to a relative change in price. CRA has made no effort to prove that these competitive responses satisfy that criterion.

56. Regarding CRA's third point, although the products that other suppliers will introduce in the future might be relevant to "understanding longer-term demand substitution," they are *not* relevant to market definition. According to section 1.11 of the *Merger Guidelines*, the relevant data should consist of seller decisions based on expectations that buyers "would consider shifting purchases between products in response to relative changes in price or other competitive price or other competitive variables."⁷³ The phrase "between products" presumably connotes products that *exist in the marketplace today*. Buyers cannot be expected to contemplate shifting their purchases in response to (1) a hypothetical change in the price of a product that (2) does not yet exist. Such an exercise would be too speculative to inform market definition.

73. *Merger Guidelines*, *supra* note 3, §1.11.

57. To support the proposition that supply-side evidence should inform market definition, CRA cites an article by Professor Jonathan Baker in the *Antitrust Law Journal*.⁷⁴ A closer inspection of that article, however, reveals that Professor Baker's analysis would likely reject CRA's use of supply-side evidence to define the relevant product market in this proceeding. Indeed, Professor Baker argues that the *Merger Guidelines*' approach to market definition, which largely ignores supply-side evidence, is "preferable" to the methods employed by "some U.S. courts" that consider supply substitution:

Since the mid-1970s, some U.S. courts have also employed market definition to account for a second economic force, supply substitution. These courts expand markets even though a group of products and locations would appear to form a valuable monopoly after accounting for buyer substitution to outside alternatives, when the monopoly would likely not be profitable after also accounting for the incentive of outside sellers to begin producing and selling within the candidate market. The Merger Guidelines instead account for supply substitution in steps of merger analysis that take place after market definition, either in the identification of market participants or the evaluation of entry conditions. Accordingly, the argument as to whether to incorporate supply substitution in market definition is not about whether to recognize this economic force in antitrust analysis; it is over what stage of the analytical process at which to do so. *The approach taken by the Merger Guidelines is preferable because it can be both difficult and confusing to ask one analytical step, market definition, to account for two economic forces, demand and supply substitution.*⁷⁵

Professor Baker provides an example of how supply substitution could inform market definition, but he warns that "a number of conceptual and practical pitfalls must be avoided" when doing so.⁷⁶ His example involves producers of insulated aluminum conductor quickly and inexpensively switching a portion of their production capacity to the production of copper conductor. In other words, Professor Baker's example involves entry into the same product by producers in related industries. CRA has not argued that terrestrial radio broadcasters, or any

74. See Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129, 141 (2007) (cited in *CRA Report*, *supra* note 1, at 16). Professor Baker, an eminent antitrust scholar who served in both the FTC and the Antitrust Division, is a Senior Consultant to CRA. See CRA Website Biography, available at <http://www.crai.com/bio.asp?profid=26834>.

75. Baker, *supra* note 74, at 133-34 (emphasis added).

76. *Id.* at 135.

alternative audio providers for that matter, are contemplating acquiring spectrum and offering satellite radio services. Thus, CRA's supply-side evidence would not be consistent with Professor Baker's interpretation of the *Merger Guidelines*.

58. In his antitrust casebook with FTC Commissioner William Kovacic and Professor Andrew Gavil, Professor Baker has stressed the importance of buyer substitution in reaction to *small* price changes to define the relevant product market. For example, in his explanation of the *Cellophane* Fallacy, Professor Baker writes:

The fact of substitution by itself tells us relatively little about the effectiveness of the substitute products in curbing the [alleged monopolist's] power to control prices. At some price, virtually all products confront substitutes. If prices for trans-Atlantic airline tickets rose enough, larger numbers of travelers would begin crossing the ocean by ship. An increase in purchases of steamship tickets would not negate the possibility that the airlines had market power. It would merely show that the airlines' power over price is not infinite and that there is a price at some level at which prospective passengers seek alternative means of transit.⁷⁷

He observes that, "when the allegations concern likely *future* exercise of market power, as they generally do when mergers are proposed before consummation, it is typically appropriate to define markets by asking whether buyer substitution would make it unprofitable for firms to raise price from the *current* price level."⁷⁸ Thus, as Professor Baker puts it, "[t]he market definition approach of the Horizontal Merger Guidelines generally begins with the prevailing prices *of the products of the merging firms* and possible substitutes for those products."⁷⁹ Professor Baker emphasizes that, under the SSNIP test in the *Merger Guidelines*, "potential substitutes that would not become available in time to prevent a hypothetical monopolist from raising price profitably in the short run would be excluded from the market."⁸⁰ That interpretation of the *Merger*

77. ANDREW I. GAVIL, WILLIAM E. KOVACIC & JONATHAN B. BAKER, ANTITRUST LAW IN PERSPECTIVE: CASES, CONCEPTS AND PROBLEMS IN COMPETITION POLICY 472 (2002).

78. *Id.* at 473 (emphasis in original).

79. *Id.* at 474 (emphasis added).

80. *Id.* (emphasis added).

Guidelines is consistent with the market definition approach that the courts employ—as exemplified by the D.C. Circuit’s *Microsoft* decision, which Professor Baker quotes for the proposition that “market definition requires that a court ‘consider only substitutes that constrain pricing in the reasonably foreseeable future, and only products that can enter the market in a relatively short time can perform this function.’”⁸¹

59. In summary, the single source of authority that CRA’s economists cite for their assertion that supply-side evidence should inform market definition is more likely to undermine than support their argument. “In practice,” Professor Baker notes, “courts rarely employ supply substitution to help define markets in the context of merger analysis.”⁸²

B. CRA Incorrectly Claims That Market Definition Was Based on the Different Business Models Used by Terrestrial Radio Providers and Satellite Digital Radio Providers

60. CRA asserts that I concluded that SDARS is the relevant product market based on the fact that the business models employed by terrestrial radio broadcasters differ from those employed by SDARS providers:

Some Comments suggest that satellite radio and terrestrial radio are in separate markets because satellite radio depends predominately on subscription revenue, whereas terrestrial radio earns advertising revenue. However, the use of different ‘business models’ does not imply the absence of listener substitution between terrestrial radio and satellite radio or that such substitution to terrestrial radio would fail to deter the exercise of market power by a merged XM and Sirius. Listeners are not concerned about ‘business models’ and they do substitute between satellite radio and AM/FM, as discussed earlier. *If Sirius and XM were to raise their subscription prices, fewer people would choose to subscribe because of the variety of other alternatives available.*⁸³

CRA evidently misunderstands my reason for emphasizing that the respective business models of SDARS and terrestrial radio broadcasting are different. Such evidence *cannot* serve as the basis

81. *Id.* (quoting *United States v. Microsoft Corp.*, 253 F.3d 34, 53-53 (D.C. Cir. 2001)).

82. *Id.* at 138.

83. *CRA Report*, *supra* note 1, at 34 (citing *Sidak Original Declaration* at 26) (emphasis added).

for market definition. Thus, I agree with CRA's first point. I also agree that consumers are not concerned about "business models" so long as they perceive two services to be close substitutes.

61. According to the *Merger Guidelines*, the relevant evidence must be related to how buyers in the purported market have reacted (or would react) to changes in relative prices. My conclusion that SDARS was a relevant product market was based not on recognition of the different business models, but instead on actual empirical and anecdotal evidence of demand-side characteristics, including but not limited to (1) how XM subscribers reacted to a price increase in 2005,⁸⁴ (2) the low churn rate for SDARS customers, (3) the high switching costs faced by SDARS customers who seek audio alternatives such as iPods and audio content delivered over mobile telephones, and (4) survey evidence showing that the very attributes that drew customers to satellite radio (absence of commercials, access to exclusive content, nationwide service) were not exhibited by other audio entertainment sources. For CRA to suggest that my conclusion regarding market definition was based on different business models is to set up a straw man that CRA can knock down. It is a mischaracterization of my testimony.

62. Another area over which CRA and I appear to disagree is CRA's evidence that allegedly supports the italicized line in the previous block quote, suggesting that a hypothetical monopoly provider of SDARS could not profitably raise prices above competitive levels without controlling the supply of terrestrial radio. Simply put, CRA has failed to show how SDARS subscribers have reacted (or would react) to a relative change in prices for SDARS and terrestrial radio. As explained above, CRA's SDARS penetration regression does not establish that SDARS subscribers have altered their purchases in response to a relative change in price of SDARS and terrestrial radio service. Similarly, CRA's activation/deactivation surveys do not establish that

84. Seth Sutel, *XM raises satellite radio prices*, USA TODAY, Feb. 28, 2005, available at http://www.usatoday.com/money/media/2005-02-28-xm_x.htm.

SDARS subscribers have altered their purchases in response to a relative change in price of SDARS and terrestrial radio service. Because the remaining information put forward by CRA is supply-side information (and therefore irrelevant), it is impossible for CRA to now claim, “If Sirius and XM were to raise their subscription prices, fewer people would choose to subscribe because of the variety of other alternatives available.” The evidentiary foundation for that assertion of fact cannot be found anywhere in CRA’s lengthy economic report. The “variety of other alternatives” exists merely as a theoretical abstraction lacking empirical substantiation. Evidently, the evidence needed to support that claim does not exist.

C. CRA Incorrectly Claims That Switching Costs Faced by Potential SDARS Customers Were Ignored

63. CRA refuses to posit the correct hypothetical when defining the relevant product market. Instead of asking whether *existing SDARS customers* would substitute to an “audio entertainment” alternative, CRA focuses on the irrelevant question of how a *potential SDARS customer* would react to a price increase:

Sidak suggests that there are switching costs from satellite radio to HD radio because of the need to purchase an HD radio. That switching cost would only apply only [sic] if the consumer already has satellite radio. There would be no switching cost for a potential satellite radio subscriber who was deciding whether to subscribe to satellite radio versus whether to purchase an HD radio instead.⁸⁵

Given CRA’s collective experience in merger reviews, it is surprising that they could misunderstand a concept that is so fundamental to product market definition. Beginning with the services provided by the merging parties (SDARS), one must determine whether those existing customers—not potential customers—would be willing to substitute to alternatives in response to a small but significant an increase in the price of those services. If the switching costs faced by existing SDARS customers are sufficiently large to deter substitution in response to a price

85. *CRA Report*, *supra* note 1, at 17 n.33.

increase, then one must conclude that SDARS constitute the relevant product market. It makes no sense to analyze the switching costs of potential SDARS customers; by definition, those customers are not switching from one service to another. There can be no doubt that the cross-price elasticity of demand of *potential* SDARS customers (between SDARS and HD radio) is more sensitive than that of *existing* SDARS customers. But the only class of customers whose elasticity matters for defining the relevant product market under the *Merger Guidelines* is the latter.

D. CRA Incorrectly Claims That the Commercial-Free Nature of Satellite Radio Was Given Too Much Emphasis

64. CRA seeks to downplay the importance of the commercial-free nature of SDARS. To the extent that customers select SDARS because of dislike for commercials, SDARS customers do not perceive terrestrial (commercial-infused) radio to be a close substitute for SDARS. CRA assesses the importance of the commercial-free nature of SDARS as follows:

Some Comments argue that satellite radio is a separate market because satellite radio offers commercial-free music channels and listeners dislike ads. Surveys indicate that commercial-free programming is a relevant attribute for many satellite radio subscribers. However, while many subscribers may value commercial-free programming, *many more consumers have not valued it enough to pay for satellite radio*, and many who have subscribed likely do not value it enough to pay significantly more than they do now.⁸⁶

As the quote indicates, CRA acknowledges that SDARS customers generally have a strong distaste for commercials. In a footnote, however, CRA attempts to discredit the magnitude (but not the direction) of the results of the survey of satellite radio customers commissioned by the National Association of Broadcasters, which revealed that a significant portion of SDARS customers cited the absence of commercials as an important reason for subscribing to SDARS.⁸⁷

As a preliminary matter, CRA's implication that the Wilson survey should be discounted because

86. *Id.* at 36 (citations omitted) (emphasis added).

87. *Id.* at 36 n.132.

it was conducted pursuant to this proceeding (while XM's and Sirius's surveys allegedly were not) is obtuse, especially in light of the fact the merger parties only released and filed their own survey on September 28, 2007.⁸⁸ CRA intimates that the Wilson survey should be discounted. Of course, CRA does not acknowledge the obvious fact that, as the parties proposing the merger, XM and Sirius had the luxury to conduct their own survey before—but in anticipation of—this proceeding. The most disingenuous part of CRA's attempt to discredit the role of commercials in market definition is the phrase that appears in italics: "many more consumers have not valued [the absence of commercials] enough to pay for satellite radio." Once again, CRA conflates the preferences of non-SDARS customers with those of SDARS customers. The fact that many terrestrial customers do not value the absence of commercials (or any other attribute of SDARS) more than \$12.99 per month has absolutely no bearing on the relevant antitrust inquiry here—namely, whether SDARS customers have a sufficiently strong distaste for commercials such that a hypothetical monopoly provider of SDARS could raise the price of SDARS above the competitive rate and earn a profit. CRA repeats the same error one page earlier, when, in an effort to downplay the importance of the nationwide feature of SDARS, CRA suggests that "very few *potential satellite radio subscribers* actually travel around the country enough to justify paying \$13 per month for radio service."⁸⁹ CRA's argument is incorrect and irrelevant as a matter of merger law, and it would flunk the *Daubert* standard for expert testimony.

65. Regarding CRA's final point—that many SDARS customers likely do not value the absence of commercials enough to pay significantly more than they do now—CRA still does not posit the correct counterfactual. The question is not whether XM's customers would tolerate

88. Sirius Merger Website: Public Opinion Strategies National Voter Survey Executive Summary, available at http://www.siriusmerger.com/uploads/Sum_Memo_8_22.pdf (accessed Sept. 28, 2007).

89. *CRA Report*, *supra* note 1, at 35 (emphasis added).

a price increase to avoid commercials holding constant the prices and quantity of commercials offered by Sirius. Nor is it whether Sirius's customers would tolerate a price increase to avoid commercials, holding constant the prices and quantity of commercials offered by XM. Instead, the relevant question under the *Merger Guidelines* is whether a sufficient number of SDARS customers would tolerate a price increase by a hypothetical monopoly provider of SDARS. The answers to these three questions could be significantly different. Although I applaud CRA's focusing (albeit temporarily) on the relevant set of customers (that is, SDARS customers as opposed to non-SDARS customers), CRA still cannot seem to pose—let alone answer—the relevant question required by the *Merger Guidelines*.

E. CRA Incorrectly Claims That the Relative Sound Quality for Satellite Radio Customers Was Exaggerated

66. In my original declaration, I explained that the relevant switching costs for an SDARS customer considering an iPod as a potential substitute was the cost of connecting the iPod to the car stereo through a USB connection, and not the cost of connecting through an FM modulator plugged into a cigarette lighter. Although the cost of an FM modulator is significantly less than a USB installation by a professional technician, the quality of the iPod listening experience when using an FM modulator is so degraded that the two services (iPod and SDARS) are incomparable. In response to my analysis on the relevant switching costs, CRA offers the following argument:

Gregory Sidak claims that iPods belong in a separate market for the same reason, arguing that the iPod gives relatively poor sound quality when attached through the FM transmitter or cassette attachment. Sidak ignores the fact that *many* satellite radios also are attached with FM transmitters. As a result, satellite radio lacks a distinct advantage in this regard for many subscribers.⁹⁰

90. *Id.* at 66 (emphasis added).

XM and Sirius could have easily supplied CRA with the *exact* percentage of SDARS customers who connect their satellite radio receivers to their cars with an FM transmitter. In the absence of that data, CRA is left to assert that “many” satellite radios are installed that way.

67. For several reasons, I suspect that the percentage of satellite radios that are installed with an FM transmitter is, for purposes of XM’s and Sirius’s antitrust analysis of this proposed merger, embarrassingly low. First, by CRA’s own admission, about half of SDARS customers use satellite radios that were factory-installed.⁹¹ For those customers, an iPod installed with an FM modulator would represent a significant degradation in quality. Second, only a subset of those SDARS customers who acquired a satellite receiver in the aftermarket would likely have done so “on the cheap” by purchasing an FM transmitter. Given that these customers have revealed themselves to be music aficionados, it is reasonable to infer that the vast majority of SDARS customers who purchase a satellite radio receiver in the aftermarket would have those receivers professionally installed by Circuit City, Best Buy, MyerEmco, or some other reputable retailer. But there is no reason for the Commission to speculate on this point. XM and Sirius bear the burden of proof. Given the fact that CRA either has the requisite data or has not been permitted by XM’s and Sirius’s legal team to examine the data, one must infer that the answer does not favor XM and Sirius.

F. CRA Incorrectly Claims That MP3 Players and Terrestrial Radio Are Substitutes

68. CRA claims that SDARS subscribers do not perceive terrestrial radio and SDARS to be complements, as I asserted in my original declaration:

Some Comments claim that satellite radio and terrestrial radio are complements because certain data has [sic] suggested that satellite radio subscribers listen to more terrestrial radio than do non-subscribers. *Such results are not evidence on how individuals would respond to a price change.* Instead, they compare the listening to terrestrial radio by

91. *Id.* at 65.

different groups of individuals who likely differ in their overall interest in audio entertainment, with the high interest people listening to more of everything. The high-interest people, who listen the most, also tend to subscribe to satellite radio. When they subscribe, they cut back on their AM/FM listening, as suggested by the survey results of listening patterns already discussed, but they may not cut back AM/FM listening on a one-to-one basis. Thus, their total listening may be higher. This fact pattern would not make listening on satellite radio and terrestrial radio or MP3 players into economic complements.⁹²

CRA is similarly unwilling to consider data on MP3 use by SDARS subscribers as evidence of complementary, arguing that two products can only be deemed complements if “an increase in the subscription price of satellite radio would lead to a decrease in the demand to listen on the other products (e.g., terrestrial radio or MP3 players).”⁹³

69. These statements are remarkably ironic: CRA is willing to cling to the precise definition of economic substitutes and complements to reject anecdotal evidence of complementarity,⁹⁴ but CRA is not willing to subject its own evidence to the same rigorous standards—especially when it comes to defining the relevant product market. Instead of citing to evidence of buyer substitution in response to a change in relative prices, CRA once again cites the SDARS activation survey (“When they subscribe, they cut back on their AM/FM listening”) as evidence of substitutability between terrestrial radio and SDARS.⁹⁵ But the buyer decisions recorded by the SDARS activation survey were not prompted *by a change in relative prices*. If the anecdotal evidence that I cited in my original declaration should be excluded because it does not constitute “evidence on how individuals would respond to a price change,”⁹⁶ then intellectual consistency demands that CRA’s survey-based evidence be excluded on the same grounds. CRA’s economists are trying to have their cake and eat it too.

92. *Id.* at 41-42 (citations omitted) (emphasis added).

93. *Id.* at 41.

94. *See, e.g.*, Craig Moffett, Satellite Radio 1Q Preview: All Eyes are on Conversion Rates, SAC, and iPods, Bernstein Research, Apr. 25, 2006, at 5 (concluding that MP3 players and SDARS are complements).

95. *See CRA Report, supra* note 1, at 42.

96. *Id.* at 41-42.

G. CRA Incorrectly Claims That Additional Commercials on Satellite Radio Would Not Be Profitable

70. CRA disputes the assumptions used in my illustrative model that shows how an increase in commercial time would harm SDARS customers. In particular, CRA argues that given my “*ad hoc*” assumptions relating to (1) the elasticity of demand for SDARS and (2) the fraction of a subscriber’s willingness to pay for SDARS that can be attributable to the avoidance of commercials, over one-third of SDARS subscribers would substitute away from SDARS (the “marginal customers”) in response to an increase of five minutes of commercials per hour spent listening to SDARS. CRA argues that such a large share of marginal subscribers would likely render the posited five-minute increase in commercials per hour unprofitable.⁹⁷ Based on this analysis, CRA concludes that my “welfare estimate makes no sense.”⁹⁸

71. Although I concede that the implied reduction in SDARS subscriptions may appear to some to be unreasonably large, the basic tools that I used to estimate the consumer welfare loss are methodologically sound. Presumably, there exists some combination of increased advertising revenues per subscriber (from more commercials) and decreased SDARS subscribers such that the increase in commercial time would be profitable for the merged XM-Sirius. Let Q be the number of SDARS subscribers, P be the monthly subscription price, C be the costs of operating the SDARS network, and A be the monthly advertising revenues per subscriber, and $k(t)$ be the percentage of SDARS customers who retain their subscription in spite of an increase of t commercials per minute. One can regard $k(t)$ as the share of the “inframarginal customers”. Profits with more commercials will exceed profits without commercials whenever

[1]
$$[A + P] Q k(t) - C > P Q - C.$$

97. *CRA Report, supra* note 1, at 76.

98. *Id.*

Simplifying [1] yields

$$[2] \quad k(t) > P / [A + P].$$

Equation [2] says that so long as the ratio of subscription revenue per subscriber to total revenue per subscriber is less than the share of inframarginal subscribers, the injection of t commercials per hour will increase profits. According to CRA, injecting more commercials will be profitable only when the share of marginal customers—that is, $1 - k(t)$ —is small. As equation [2] shows, however, CRA’s proposed test is *ad hoc*.⁹⁹ The proper test is that a combined SDARS provider will increase commercials by t minutes whenever the share of inframarginal customers exceeds the ratio of subscription revenue per subscriber to total revenue per subscriber.

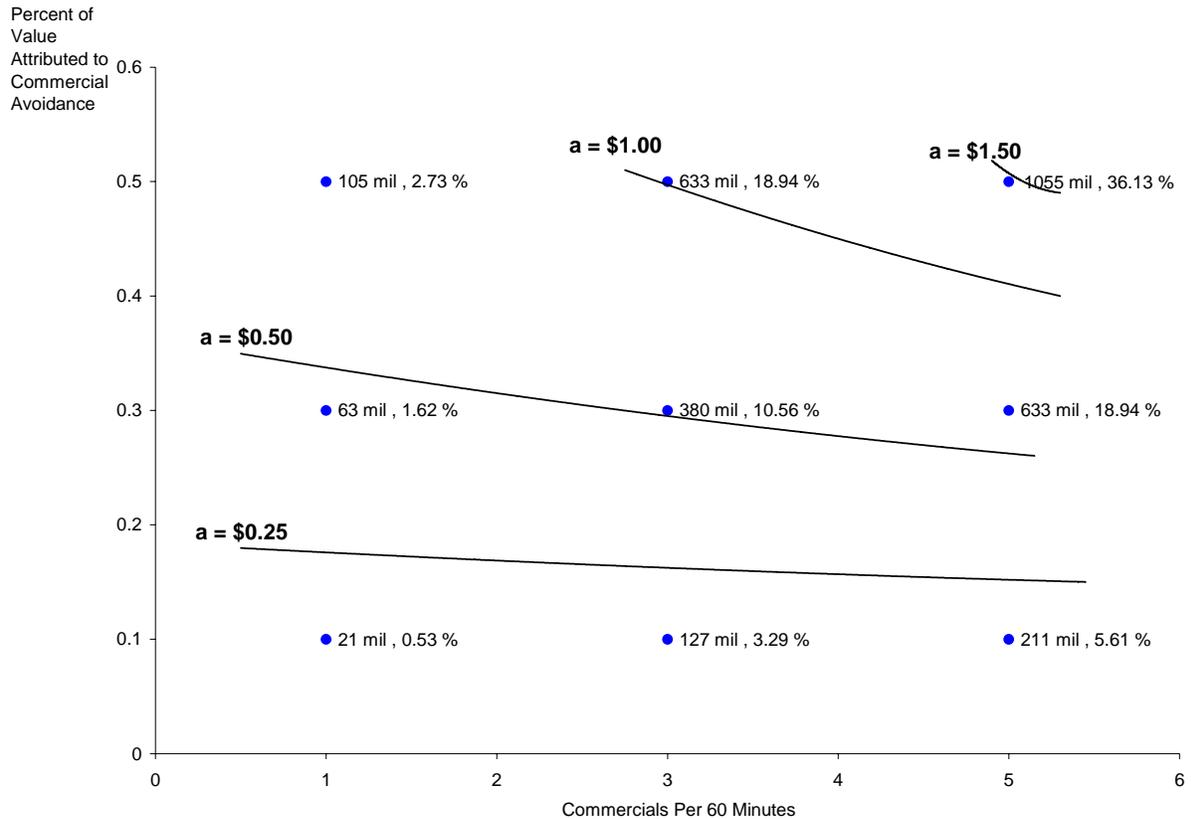
72. The key “inputs” that I used in my illustrative model (five minutes of commercial time, and 50 percent of value attributed to commercial avoidance) can be easily changed to produce different combinations of welfare loss and share of marginal customers (“outputs”). To generate other outputs, I varied (1) the fraction of a subscriber’s willingness to pay for SDARS that can be attributable to commercial avoidance and (2) the increase in commercial time for every hour spent listening to SDARS. For example, I estimate that when (1) 30 percent of a subscriber’s willingness to pay for SDARS can be attributable to avoidance of commercials and (2) commercial time is increased by five minutes per hour, then the share of marginal subscribers is 18.9 percent and the annual welfare loss exceeds \$633 million. Alternatively, I estimate that when (1) 10 percent of a subscriber’s willingness to pay for SDARS can be attributable to avoidance of commercials and (2) commercial time is increased by five minutes per hour, then the share of marginal subscribers is 5.6 percent and the annual welfare loss exceeds \$211

99. Ironically, CRA’s characterizes my approach as being *ad hoc* because my assumptions were not supported. *CRA Report, supra* note 1, at 75 (“Sidak’s calculation is *ad hoc*, relies on unsupported and unreasonable assumptions, and ignores the unprofitability of the assumed behavior.”).

million. These two inputs and corresponding outputs (“input-output pairs”), along with several other pairs, are depicted graphically in Figure 2 below.

73. As CRA correctly points out, however, any particular input-output pair must be subjected to a profitability test—that is, one must determine whether a combined SDARS provider would have the incentive to increase commercials by t minutes. To depict the profitability of a given input-output pair in the space of commercial time and percent of value attributed to commercial avoidance, I assume that the advertising revenue per subscriber, A , is equal to the product of a and t , where a is the monthly advertising revenue per customer expressed on a per minute per hour basis. For example, if advertising revenues were to account for one-third of total revenues per subscriber (A equals \$6.50, P equals \$12.99), and if t were equal to five minutes of commercials per hour, then a would equal \$1.30 (equal to \$6.50 divided by 5 minutes per hour). It is now possible to portray an “isoprofit curve”—that is, input pairs such that a combined SDARS provider would be indifferent between increasing and not increasing commercials by t minutes per hour. Figure 2 shows these isoprofit curves for several different values of a , ranging from \$0.25 to \$1.50.

FIGURE 2: PROFITABLE INCREASES IN COMMERCIAL TIME FOR AN SDARS PROVIDER



As Figure 2 shows, when a is \$0.50, the SDARS provider is roughly indifferent between adding and not adding three minutes of commercials when subscribers attribute 30 percent of the value of SDARS to commercial avoidance (that is, that input-output pair sits on the isoprofit line). Holding the percent of value attributed to commercial avoidance constant at 30 percent (that is, moving horizontally from the same input-output pair), an increase of two minutes of commercials per hour is profitable (that is, that input-output pair is *below* the same isoprofit line), whereas an increase of four minutes of commercials per hour is not profitable (that is, that input-output pair is *above* the same isoprofit line). Indeed, when a is \$1.50, the SDARS provider would be indifferent between adding and not adding five minutes of commercials to its lineup when subscribers attribute 50 percent of the value of SDARS to commercial avoidance—despite

the fact that 36 percent of its customers would terminate their subscription. Thus, CRA's economists are wrong to imply that there does not exist an advertising price such that a profit-maximizing SDARS provider would tolerate a 36 percent loss of its subscribers in response to adding five minutes of commercials per hour to its lineup. The point of this exercise is not to estimate with precision the amount of the welfare loss and the share of marginal subscribers associated with any given increase in commercial time. Instead, it is to demonstrate that a combined XM-Sirius could calibrate its commercial time in such a way as to increase profits at the expense of consumer welfare. CRA's criticisms of my original declaration do not refute that proposition.

74. The prospect that a merged XM and Sirius would increase commercial time on satellite channels is not a matter of conjecture. In a September 17, 2007 investor conference, Mel Karmazin, CEO of Sirius, stated that he "would like to see advertising revenue eventually make up about 10% of Sirius' total revenue, up from the current 4% to 5%."¹⁰⁰ Mr. Karmazin noted, however, that Sirius would *not* increase commercial time on its music channels.¹⁰¹ Given that SDARS subscriptions are expected to grow rapidly, Mr. Karmazin's stated objective would require a significant increase in total revenue from advertising. Thus, the increase in commercial time posited above—from one minute per hour to five minutes per hour—is not unreasonable. Moreover, Sirius's commitment not to increase commercials on music channels does not change the consumer welfare analysis. An increase in commercials on channels like Howard Stern, Playboy Radio, and Sirius Comedy would still constitute a quality-adjusted price increase being imposed on current SDARS consumers. By stating that Sirius will not impose commercials

100. Louis Hau, *Sirius CEO Discusses The Biz*, FORBES.COM, Sept. 17, 2007, available at http://www.forbes.com/business/2007/09/17/sirius-xmradio-advertising-biz-media-cx_lh_0917karmazin.html.

101. *Id.*

(impose a quality-adjusted price increase) on consumers of music channels, Mr. Karmazin reveals that a substantial, implicit quality-adjusted price increase *is* feasible—*so long as it is done in a coordinated fashion with XM*—for consumers of those non-music channels. This selective increase in the number of minutes of commercials per hour is consistent with my original assessment that the own-price elasticity of demand of indecent and exclusive content is inelastic.¹⁰²

75. In the final analysis, CRA acknowledges that a combined XM-Sirius would increase commercials relative to the status quo, but it argues that consumers would be no worse off due to advertiser-subsidized subscription fees:

As discussed already, the merger will increase the value to advertisers of those advertiser-supported channels now offered by Sirius and XM. *An increase in advertising revenue per subscriber* would increase the value to the merged firm of obtaining additional subscribers. This higher value would give the merged firm the incentive to reduce the subscription price. Of course, both of these effects are procompetitive. These lower prices would benefit consumers and advertisers.¹⁰³

CRA's conclusion that additional commercials could increase social welfare on net is implausible. Even if XM-Sirius were to use higher advertising revenues to subsidize the price of SDARS subscriptions, as CRA asserts, it is not clear that SDARS subscribers, given their strong distaste for commercials, would prefer more commercials with lower prices to no commercials with current prices. It is also not clear that the increase in advertiser welfare (due to SDARS entry into the national advertising market) would exceed the decrease in consumer welfare associated with more commercials on satellite radio. Finally, even if the gain to advertisers exceeded the loss to SDARS consumers, there is no direct mechanism by which SDARS subscribers could be compensated for their losses. In particular, there is no reason why a

102. See *Original Sidak Declaration*, *supra* note 2, at 11-14.

103. *CRA Report*, *supra* note 1, at 75 (emphasis added).

combined XM-Sirius would transfer 100 percent of their newly found advertising revenue to SDARS customers in the form of lower monthly subscription fees. Competition among SDARS providers *already* ensures that cost decreases—or in this case, ancillary revenues—get passed along to subscribers. By eliminating competition between the two SDARS providers, there is no guarantee that the transfer would be made. In short, there is no need for SDARS subscribers to endure more commercials in return for lower subscription prices. All that is required is that (1) the merger of XM and Sirius be prohibited and (2) the two competing SDARS providers do not thereafter collude to prevent a price war from erupting.

III. CRA’S ARGUMENTS RELATING TO “DYNAMIC DEMAND” SHOULD BE IGNORED

76. CRA introduces a novel and wholly theoretical concept called “dynamic demand” that is intended to obscure the market definition analysis. “Dynamic demand” is also introduced to salvage an unprecedented efficiency defense that is not cognizable under the *Merger Guidelines*.

A. CRA Claims That the Universally Accepted SSNIP Test Is Inappropriate Because SDARS Providers Face “Dynamic Demand”

77. CRA claims that the traditional SSNIP test used for market definition is inappropriate here because it ignores the long-term profitability considerations faced by SDARS providers:

We will explain why the “small but significant and nontransitory increase in price” (*ssnip*) test for market definition from the antitrust agencies’ Horizontal Merger Guidelines must take into account the dynamic nature of demand and the important role of longer-term profit-maximization for Sirius and XM.¹⁰⁴

104. *CRA Report*, *supra* note 1, at 10.

Presumably, CRA would alter the traditional SSNIP calculus—namely, a comparison of short-term profits before and after a price increase—by including additional terms for the hypothetical monopolist’s long-term profits. Despite its extensive experience in merger cases, CRA fails to cite a single instance in which a court or an agency altered the SSNIP test in this way. Indeed, in the last six high-profile mergers reviewed by the Commission, the SSNIP test was applied without any alterations.¹⁰⁵ As I explain below, CRA failed to provide an economic basis for its recommendation that the FCC deviate from the *Merger Guidelines* in such a fundamental way.¹⁰⁶

78. CRA’s novel “dynamic demand” analysis is wholly theoretical. Nowhere does CRA articulate the conditions that would have to exist for the analysis to be applicable, let alone whether such conditions are in fact present here. Furthermore, assuming for the sake of argument that “dynamic demand” does apply, one would expect that XM and Sirius have already been engaging in “penetration pricing” as they compete against each other for subscribers. Thus, CRA’s “dynamic demand” concept—as presented in vague and wholly theoretical terms—provides no basis to claim that the post-merger dynamically optimal price will not be higher. It is incumbent on CRA to do more than simply say that “dynamic demand” exists, but that is all they have done. There is no precedent for deviating from the *Merger Guidelines* by incorporating a concept that, if applied as articulated by CRA, would vitiate the traditional SSNIP test.¹⁰⁷ The

105. *Verizon-MCI MO&O*, *supra* note 23, at 18,449, 18,465-66, 18,494; *AT&T-BellSouth MO&O*, *supra* note 23, at 5678, 5700, 5729-31; *AT&T-Cingular MO&O*, *supra* note 23, at 21,558, 21,561; *SBC-AT&T MO&O*, *supra* note 23, at 18,307, 18,322, 18,324, 18,352-53; *Nextel-Sprint MO&O*, *supra* note 23, at 13,989-90; *Comcast-Adelphia MO&O*, *supra* note 23, at 8269 (2006).

106. *See* note 21, *supra*.

107. There is no mention of the phrase “dynamic demand” in the Federal Trade Commission’s and Department of Justice’s *Commentary on the Merger Guidelines*, released in May 2006. No witness (including Professor Salop) relied on the phrase “dynamic demand” in his or her testimony before the Antitrust Modernization Committee. Moreover, the AMC did not mention the phrase, let alone endorse the concept of altering the SSNIP test when evaluating mergers in dynamic industries.

Commission should ignore CRA's radical argument that "dynamic demand" supplants the SSNIP test.

B. There Is No "Dynamic-Demand-Spillover" Problem

79. Perhaps recognizing that their "dynamic demand" argument is not merger-specific, CRA further postulates that competition between XM and Sirius creates a significant impediment (a "dynamic demand spillover") to lower prices and better quality that would be eliminated by this merger. According to CRA, this "dynamic demand spillover" encourages free riding by XM and Sirius, which allegedly undermines each provider's incentive to engage in "demand-enhancing investments, such as mounting advertising campaigns, improving the quality of its products and services, and investing in low penetration prices."¹⁰⁸ When boiled down, the argument is that competition is a bad thing. Such a bold justification for a merger of this magnitude requires a much more detailed and fact-specific articulation. But CRA offers nothing. CRA fails to provide an analysis of how many resources (if any) are being held back by XM and Sirius due to this hypothesized free-rider problem. CRA also fails to provide an analysis of how much consumers would benefit from the continued rivalry between XM and Sirius.

80. Moreover, CRA's "dynamic demand spillover" conjecture is inconsistent with its market definition position. CRA cannot argue on the one hand that the other types of audio

108. *CRA Report, supra* note 1, at 62. In addition to efficiency defenses relating to product quality, CRA offers efficiency arguments relating to (1) reduced content acquisition costs (Part IV.F.), (2) reduced automobile OEM distribution costs (Part IV.G.), and (3) reduced retail distribution costs (Part IV.H.). Setting aside the issue of deadweight welfare loss from monopsony power, all of these claimed efficiencies represent at best a transfer of surplus from equipment and content suppliers to XM and Sirius. Thus, they would not even increase the inappropriate total welfare standard. Moreover, because they would not reduce the merged firm's marginal costs, none of these claimed efficiencies would redound to the benefit of consumers in the form of lower SDARS prices or expanded output. In fact, one would expect that these so-called "savings" would result in the combined XM-Sirius becoming *less* aggressive in signing-up incremental subscribers, because these savings would allow the combined firm to maintain its profitability with fewer subscriptions. In other words, the combined company will likely sell fewer subscriptions than XM and Sirius would sell absent the merger. For this reason, none of the claimed efficiencies can be counted on to offset a reduction in consumer welfare caused by an increase in SDARS prices or more commercials or both.

entertainment compete with SDARS, but on the other that the merger solves the problem of “dynamic demand spillover.”¹⁰⁹ CRA neglects to consider that after the merger, the alternative audio entertainment devices that allegedly compete with SDARS will still be able to free ride on the “demand-enhancing” investments made by a combined XM-Sirius. Alternatively, if the “dynamic demand spillover” is truly specific to the two SDARS providers (such that there is no spillover to other audio entertainment service), then one must conclude that those alternatives are not in the same product market. Stated differently, if there is a newly created incentive after the merger to engage in penetration pricing and promotions, then it must be the case that iPods and HD radio do not compete with SDARS; otherwise the “demand-enhancing” investments that occurred after the merger would still generate demand for iPods and HD radio.

81. CRA also relies on free-rider arguments to support the erroneous claim that the proposed merger would accelerate the introduction of interoperable radios:

The merger will increase the introduction and promotion of interoperable radios, leading to product quality improvements. Because satellite radio companies subsidize the cost of receivers, their business models are premised on the subscriber purchasing service for a period of time in order to recoup the equipment subsidy. That type of product promotion for interoperable radios generates classic free-rider problems. For example, if XM were to subsidize or promote an interoperable radio, Sirius would gain some of the benefits when some of the new subscribers chose Sirius instead of XM, and vice versa. Thus, Sirius and XM today have limited incentives to subsidize or advertise the sale of interoperable radios. The merger resolves these free-rider problems.¹¹⁰

CRA explains in a footnote that XM and Sirius would incur “monitoring costs” if they were to coordinate their efforts in the design and promotion of an interoperable radio.¹¹¹ This argument is unpersuasive. The reason why XM and Sirius have failed to coordinate on an interoperable radio to date is that by doing so, they would decrease the costs of SDARS customers to switch between XM and Sirius. Stated differently, the absence of an interoperable radio permits XM and Sirius

109. *Id.* at 61-62.

110. *Id.* at 65-66.

111. *Id.* at 66 n.234.

to charge higher prices for SDARS because SDARS subscribers are less sensitive to prices as a result of higher switching costs. Although it is true that an interoperable radio would make it easier for a customer to switch from XM to Sirius (or vice versa), there is no reason to believe that such switching would occur *asymmetrically*. For example, if an interoperable radio increased churn from Sirius to XM by 10 percent, and increased churn from XM to Sirius by 10 percent, then there would be no free-rider problem whenever both firms shared the costs of development and marketing the interoperable device equally. Thus, CRA's claim that interoperability will come sooner due to the elimination of the free-rider problem is not credible.

82. In summary, the "externality" to which the CRA speaks is properly described as product differentiation, and it is precisely the force that is constraining the price of SDARS today. The proposed merger can be counted on to "solve" this "competition problem" between XM and Sirius. But the result would be higher SDARS prices (in the absence of a price-freeze concession). For that reason, CRA's externality problem should be ignored.

IV. CRA'S APPROACH TO DEFENDING THE XM-SIRIUS MERGER CONFLICTS WITH PROFESSOR SALOP'S OPINIONS IN PREVIOUS ANTITRUST PROCEEDINGS

83. Professor Salop's belief in the "true" consumer welfare standard contradicts (1) his position on the welfare effects of the proposed merger and (2) Professor Hazlett's previous report in this proceeding. Moreover, Professor Salop's position on behavioral remedies is inconsistent with the pricing and content commitments being offered by XM and Sirius.

A. Professor Salop's Previous Endorsement of the "True" Consumer Welfare Standard Contradicts His Position on the Welfare Effects of the Proposed Merger

84. A critical issue in the analysis of the competitive effects of the proposed merger of XM and Sirius is the immediate impact on current SDARS consumers. What matters is the effect of the merger on price and, in particular, consumer surplus. Professor Salop himself

testified before the Antitrust Modernization Commission that the exclusive metric by which mergers should be analyzed is consumer surplus.¹¹² In a paper entitled *Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard*, Professor Salop argues that a merger review standard that depends on benefits to producers (as part of an aggregate welfare standard, rather than an exclusive focus on the immediate impact on consumers) is flawed and should not be used in the merger review process.¹¹³ Professor Salop describes the “true” consumer welfare standard as one that exclusively examines consumer surplus and “explains why the true consumer welfare standard is the better standard for achieving the goals of the antitrust laws.”¹¹⁴ One focus of his paper is that antitrust enforcement agencies cannot rely on “diffusion” of efficiencies—the notion that benefits to producers eventually will trickle down to consumers—in assessing the competitive effects of a merger.¹¹⁵ In this regard, Professor Salop’s testimony before the AMC is entirely consistent with recent FCC precedent. In the last six high-profile mergers reviewed by the Commission, the review standard was to maximize consumer welfare, not total welfare.¹¹⁶

85. Professor Salop’s support for the proposed XM-Sirius merger is hard to reconcile with his view of the proper standard by which to evaluate the welfare effects of mergers. For example, Professor Salop’s first line of defense in the analysis of the proposed merger of XM and Sirius is to refer to its procompetitive efficiencies and quality improvements:

112. Steven C. Salop, *Question: What is the Real and Proper Antitrust Welfare Standard? Answer: The True Consumer Welfare Standard*, Paper submitted as Comment on Merger Enforcement to the Antitrust Modernization Commission, Nov. 4, 2005, available at: http://www.amc.gov/public_studies_fr28902/exclus_conduct_pdf/051104_Salop_Mergers.pdf.

113. *Id.* at 1.

114. *Id.* at 2.

115. *Id.* at 14-16.

116. *Verizon-MCI MO&O*, *supra* note 23, at 18,525-36 ¶¶ 183-214; *AT&T-BellSouth MO&O*, *supra* note 23, at 5761 ¶¶ 202; *AT&T-Cingular MO&O*, *supra* note 23, at 21,599-600 ¶ 205; *SBC-AT&T MO&O*, *supra* note 23, at 18,384-91 ¶¶ 182-204; *Nextel-Sprint MO&O*, *supra* note 23, at 14,013 ¶ 129; *Comcast-Adelphia MO&O*, *supra* note 23, at 8307-08 ¶ 244.

Competition also will increase because the merger will lead to a variety of procompetitive efficiencies, including cost-reductions, product quality improvements, and increased incentives for low penetration pricing as well as for demand-enhancing and cost-reducing investments. These efficiency benefits likely also will spur more investment and innovation by other competitors in the market.¹¹⁷

Previously, however, Professor Salop has doubted that cost reductions, quality improvements, and incentives to innovate will trickle down to benefit consumers. He wrote in his November 2005 submission to the Antitrust Modernization Commission:

In fact, if diffusion of merger-specific cost decreases were instantaneously and totally diffused to every competitor, so that costs fell equally for all competitors, then maximization of static aggregate welfare would roughly approximate maximization of long run consumer welfare. However, for two important practical reasons, this analysis does not support use of the aggregate welfare standard. First, the diffusion of innovations through imitation and emulation is neither instantaneous nor complete. *Even in the best circumstances*, there are substantial delays and innovations generally are only partially matched. Indeed, if a firm expected that its costly innovations would be matched instantly and completely, this competition might so reduce the expected profitability of the investments that the firm would not choose to undertake the investments.¹¹⁸

The point of Professor Salop's submission to the AMC is that consumer welfare and the merger's immediate impact on consumers should be the primary concern of antitrust enforcers and courts. This position is dissonant with CRA's tune in this proceeding that the proposed XM-Sirius merger should be approved because of resulting efficiencies that may eventually "spur more investment and innovation," which in turn may eventually, at some even more distant and undefined point in the future, benefit consumers.¹¹⁹ As explained in my original declaration, these asserted merger efficiencies—assuming for the sake of argument that they would even arise and legitimately qualify as merger-specific benefits—will not likely be passed on to consumers.¹²⁰

117. *CRA Report*, *supra* note 1, at ¶ 2.

118. Salop, *supra* note 112, at 16 (emphasis added).

119. *CRA Report*, *supra* note 1, at ¶ 2.

120. *See Original Sidak Declaration*, *supra* note 2, at 50.

86. Professor Salop's submission to the AMC provides another argument why the alleged cost savings and investment incentives of this proposed merger will not benefit consumers: the presence of any entry barriers means that these efficiencies will not result in lower prices for consumers. In Professor Salop's own words, "rapid and complete diffusion that leads to increased price competition obviously is even less likely in markets in which there are barriers to entry."¹²¹ In fairness, the CRA Report does argue that there are no entry barriers in the market, as they define it. However, Professor Salop's argument to the AMC, quoted here, refers to entry by competitors using the same type of technology and with the same cost structure as the incumbent merging firms.¹²² The CRA Report relies on entry by *alternative* technologies, fundamentally different from satellite radio technology, as evidence that there will be entry into the market.¹²³ Even the CRA Report must concede there will be no entry by competing SDARS providers to challenge the position of XM and Sirius.¹²⁴ When coupled with this fact, it is not clear how Professor Salop and his CRA colleagues can argue that diffusion of cost savings and investment incentives from the proposed merger of XM and Sirius will benefit consumers. As Professor Salop concludes in his AMC testimony:

Thus, in these markets, society cannot count on the diffusion process to cause cost reductions to be rapidly passed-through to consumers in the form of lower prices and sufficiently higher product quality. As a result, analysis of innovation and dynamic markets does not justify adoption of the aggregate welfare standard.¹²⁵

121. Salop, *supra* note 112, at 16.

122. *See id.* at 15–16. This point is not explicit in the discussion but may be fairly inferred from it.

123. *See CRA Report, supra* note 1, at ¶ 111.

124. *See Original Sidak Declaration, supra* note 2, at 35.

125. Salop, *supra* note 112, at 16.

In sum, the procompetitive benefits that the CRA Report promises will flow to consumers as a result of the proposed merger depend on the use of an aggregate welfare standard—a standard that Professor Salop successfully persuaded the AMC to reject.¹²⁶

B. Professor Salop’s Previous Endorsement of the “True” Consumer Welfare Standard Contradicts Professor Hazlett’s Previous Declaration in This Proceeding

87. In an earlier submission to the FCC on behalf of XM and Sirius, Professor Hazlett implicitly argued that an aggregate welfare standard should guide analysis of the proposed merger. In particular, Professor Hazlett discussed the “social gains” from the merger, as well as benefits to “both consumers and producers.”¹²⁷ He even begins his analysis not with any description of the proposed merger’s asserted benefits to consumers, but with its asserted benefits to producers.¹²⁸ Insofar as Professor Hazlett discusses benefits to either consumers or consumer welfare,¹²⁹ those benefits are of precisely the type that Professor Salop says should be ignored.¹³⁰ Professor Hazlett’s predictions of consumer benefits from the proposed merger depend entirely on its spurring cost savings and investment incentives that will eventually trickle down to consumers.¹³¹ Professor Salop told the AMC that “society cannot count on” this trickle-down process to benefit consumers in the future.¹³² Professor Hazlett describes how the

. . . [C]onsumer benefits of the merger can be summarized as flowing from two broad sources. The first stems from economically strengthening upstart competitors The second category of consumer gains is associated with the direct benefits of lower cost products and wider consumer choice.¹³³

126. ANTITRUST MODERNIZATION COMMISSION, *Report and Recommendations*, Apr. 2007, at 9, available at http://www.amc.gov/report_recommendation/amc_final_report.pdf.

127. *Hazlett Report*, *supra* note 4, at 5.

128. *Id.* at 13.

129. For example, Professor Hazlett’s report has a section entitled, “direct gains for consumers.” *Id.* at 17.

130. *See* Salop, *supra* note 112, at 15–16.

131. *See Hazlett Report*, *supra* note 4, at 21 (discussing “synergies” from the merger).

132. Salop, *supra* note 112, at 16.

133. *Hazlett Report*, *supra* note 4, at 13.

However, neither asserted benefit is a cognizable ground for merger approval under a consumer welfare standard. The reason is that neither directly implicates consumer surplus—the value that consumers receive from consumption of SDARS in excess of the price paid for it. Professor Hazlett essentially concedes this point by citing support for the total welfare standard.¹³⁴

88. Professor Salop’s general arguments why cost savings and investment incentives from a merger do not increase consumer surplus apply equally well to Professor Hazlett’s reasoning in this specific case. The “benefits” to consumers claimed by Professor Hazlett are speculative, will not occur soon after the merger, and may in fact never occur given the absolute barriers to entry (due to unavailability of additional SDARS licenses) facing any firm wishing to operate a competing satellite radio service.¹³⁵

C. Professor Salop’s Previous Position on Behavioral Remedies Is Inconsistent with the Pricing and Content Promises Offered by XM and Sirius

89. To gain support for merger approval, XM and Sirius have made a series of non-binding¹³⁶ pricing and content promises.¹³⁷ These include promises not to raise price for some period of time,¹³⁸ promises to offer particular tiers of service as a condition of the merger,¹³⁹ and

134. See *id.* at 13 n.31 & n.32 (citing Kenneth Heyer, *Welfare Standards and Merger Analysis: Why Not the Best?*, 2 COMPETITION POL’Y INT’L 29 (2006)).

135. See *id.* at 14–16.

136. It bears emphasis that XM and Sirius have not proposed specific binding commitments. Rather, they have suggested non-binding promises that the merger firm could modify at any time. For ease of exposition, I assume that those non-binding promises are turned into long-term, binding conditions by the Commission.

137. Joint Opposition to Petitions to Deny and Reply filed by Sirius Satellite Radio, XM Satellite Radio Holdings Inc., MB Dkt. No. 07-57, filed July 24, 2007, at 11-14 [hereinafter *Joint Opposition*].

138. Consolidated Application for Authority to Transfer Control of XM Radio Inc. and Sirius Satellite Radio Inc., In the Matter of XM Satellite Radio Holdings Inc., Transferor and Sirius Satellite Radio Inc., Transferee, MB Dkt. No. 07-57, filed Mar. 20, 2007, at 11.

139. *Id.* (“The proposed merger will generate significant synergies that will allow the combined company to offer consumers programming choices on a more à-la-carte basis at lower prices. Customers may, if they elect, continue to enjoy programming substantially similar to that which they currently receive after the merger at the existing monthly price of \$12.95; the combined company will also offer consumers the options of receiving either fewer channels at a lower price or more channels, including the ‘best of both’ networks, at a modest premium to the existing \$12.95 per month price.”).

promises to expand foreign-language and minority programming.¹⁴⁰ The promises are effectively “voluntary” behavioral remedies intended to tie the hands of the merged firm, preventing it from engaging in conduct that would otherwise be profit-maximizing, yet competition-reducing and welfare-reducing.

90. Although Professor Salop and his CRA colleagues fail to mention these promises in their substantive analysis of the proposed merger, Professor Salop, in his analysis of the various remedies in the *Microsoft* case, staunchly opposed behavioral remedies, even stating that “conduct remedies are highly intrusive and would require ongoing, intensive regulation”¹⁴¹ Indeed, Professor Salop supported the structural remedy in that case, which would have broken Microsoft into pieces, both vertically and horizontally.¹⁴² Such a structural remedy, Professor Salop noted, would “lead to vigorous price and quality competition in operating systems.”¹⁴³ In the *Microsoft* case, Professor Salop advocated the breakup of Microsoft because he believed that behavioral remedies alone would not allay competitive concerns and would require challenging enforcement oversight of any decree.

91. In this matter, however, XM and Sirius have continuously expressed their promises to certain *ad hoc* regulations on prices and content. Again, these promises are behavioral remedies. The CRA Report is conspicuously silent on the administrative burden of rendering efficacious the pricing and content commitments offered to allay the estimable competitive concerns that would flow from this proposed merger. In the one fleeting passage of

140. *Id.* at 13 (“[Offering] expanded non-English language programming . . . and additional programming aimed at minority and other underserved populations.”).

141. Steven C. Salop, Robert J. Levinson & R. Craig Romaine, *The Flawed Fragmentation Critique of Structural Remedies in the Microsoft Case*, 46 ANTITRUST BULL. 135, 136 (2001), available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=204874.

142. *Id.* at 2.

143. *Id.*

the CRA Report that does acknowledge the pricing promises, Professor Salop and his colleagues essentially dismiss them as unimportant to the economic analysis at hand.¹⁴⁴

92. Insofar as the CRA Report attempts to gain mileage from the promises to price and quality made by XM and Sirius, those arguments do not comport with Professor Salop's well-established position that behavioral remedies should be eschewed when structural remedies are available.¹⁴⁵ In a proposed merger of direct competitors, the ultimate structural remedy is simply to preserve the two firms as fully independent rivals. That remedy is called competition. In contrast, the baroque promises dangled by XM and Sirius, if accepted and made binding by the Commission, will carry with them the heavy cost of oversight and enforcement, and that burden is the very reason that the antitrust enforcement agencies expressly prefer structural remedies to behavioral remedies.¹⁴⁶ Professor Salop has summarized this view in his analysis of the *Microsoft* case: "Conduct remedies may also be more disruptive over the longer term because they may require ongoing, intrusive regulation for a long period of time."¹⁴⁷

93. XM and Sirius have attempted to use behavioral remedies (disguised as merger-specific benefits) to allay the understandable concerns that the merging parties expect to arouse in the Commission and the Antitrust Division. Professor Salop's eloquent opposition to such behavioral remedies, expressed over many years, deserves the Commission's due consideration. Professor Salop's writings show why the Commission should not rely on these promises from XM and Sirius as a substitute for SDARS competition. If anything, these promises prove the

144. See *CRA Report*, *supra* note 1, at 83 ¶¶ 166–67.

145. Cf. Salop, Levinson & Romaine, *supra* note 141, at 1–2.

146. See, e.g., *Antitrust Division Policy Guide to Merger Remedies*, U.S. Dep't of Justice, Antitrust Division (Oct. 2004), at <http://www.usdoj.gov/atr/public/guidelines/205108.htm> (noting "structural remedies are preferred.").

147. R. Craig Romaine & Steven C. Salop, *Alternative Remedies for Monopolization in the Microsoft Case*, 13 ANTITRUST, No. 3 (Summer 1999), at 23.

desperation of two firms to achieve merger approval, when sound economic analysis shows there is both an incentive and ability for the merged XM-Sirius to raise prices and harm consumers.

V. XM'S AND SIRIUS'S COMMITMENT TO OFFER Á-LA-CARTE CONTENT ONLY IN THE EVENT OF A MERGER LACKS ANY ECONOMIC BASIS AS AN EFFICIENCY DEFENSE AND, TO THE CONTRARY, REVEALS A HORIZONTAL PRICE-FIXING AGREEMENT THAT IS *PER SE* UNLAWFUL UNDER SECTION 1 OF THE SHERMAN ACT

94. CRA does not defend the erroneous claim that the á la carte offerings are merger-specific efficiencies. CRA likely recognizes that XM and Sirius could offer their respective satellite radio channels on an á la carte basis in the absence of a merger. CRA does not mention the á la carte “commitments” until the last two paragraphs of its 167-paragraph report:

Our economic analysis does not rely on these commitments, and demonstrates that such commitments are not necessary to ensure that consumers are benefited from the merger. Competition and consumer welfare will increase from the lower costs, increased quality and enhanced procompetitive incentives created by the merger. However, these commitments suggest consumer benefits, absent evidence that prices would have fallen without the merger. Certain groups of consumers will opt for a reduced cost package. Others will opt for a more expensive package instead of the status quo. Even if subscribers choose a more expensive package with an expanded set of programming, the voluntary choice suggests that they are made better off. The two a-la-carte options similarly will increase choice.¹⁴⁸

One passing reference to XM's and Sirius's “commitments” in the conclusion of the CRA Report is hardly equivalent to supplying the actual economic evidence needed to support the claim that the á la carte offerings are merger-specific. So long as they are not merger-specific, any alleged benefits associated with á la carte offerings cannot offset the demonstrated welfare losses from higher prices or more commercials or both. As the following quote from Mr. Karmazin reveals, the causal link between the merger and á la carte pricing is tenuous:

The reason we've not offered [á la carte pricing] in the past is that it's very simple—is that last year, Sirius lost \$1 billion. Our company has not made a profit in the years since it started. So that the idea of offering this a la carte service is made possible by the

148. *CRA Report, supra* note 1, at 83-84.

synergies connected with the merger, and it would be a very risky proposition for us with no sort of way of covering the cost of this thing so that we would not have made it available.¹⁴⁹

Mr. Karmazin's explanation for why the risk associated with á la carte pricing disappears after the merger is not persuasive. It is not clear what Mr. Karmazin means by the "cost of this thing," nor is it clear how those costs would be reduced *by the merger*. If á la carte pricing is "good for our shareholders" because it will "build the subscription business base of satellite radio to strengthen our business and better leverage our high fixed costs,"¹⁵⁰ as Mr. Karmazin explained in the same conference, then why does he not introduce such pricing now, without regard to the merger? The more plausible explanation for the reduced risk that Mr. Karmazin foresees is that the merger will eliminate the current threat of a price war erupting between Sirius and XM. In particular, if XM and Sirius each were to offer á la carte pricing of music channels on a unilateral basis, the existing product differentiation between the two SDARS lineups would be eliminated, and prices for the music-only packages would likely fall to marginal cost.

95. Even if they were merger-specific, the magnitude of the alleged benefits of á la carte offerings is debatable. If SDARS customers actually demanded such offerings, the two SDARS providers would already have made their channels available on an á la carte basis. If, on the other hand, SDARS customers do actually demand á la carte offerings that are priced on a reduced basis, an alternative interpretation emerges that has significant antitrust implications: XM and Sirius have until now maintained a duopolistic equilibrium in which both firms have refrained from initiating a price war in the form of á la carte pricing of unbundled content (or smaller bundles of content). As a merged firm, they could engage in a monopolist's profitable

149. National Press Club Luncheon Speech, Mel Karmazin, CEO, Sirius Satellite Radio, Potential Merger Of Sirius Satellite Radio and XM Satellite Radio, National Press Club, Washington, D.C., July 23, 2007, at 10.

150. *Id.* at 4.

strategy of third-degree price discrimination, without fear of triggering a price war—since no alternative SDARS provider would remain. However, if their proposed merger is not approved, XM and Sirius face the prospect of a price war, which will be increasingly likely because their profit margins (in the absence of a price war) are projected by analysts to rise substantially over the next several years.

96. In a July 23, 2007 speech at the National Press Club, Mr. Karmazin said that the company would not offer *à la carte* pricing unless the merger is approved:

I can speak for Sirius that if in fact the merger was not going to happen, we would have no plans of offering a *la carte*—that the probable scenario is that the merger is approved, there are eight packages, including the ability to block and credit, you know, adult content so that we would have eight different packages available, starting price at \$6.99. No consumer would pay more for what they're getting if the merger's approved. If the merger is not approved, I—the assumption should be that we're going to go back to one offering, \$12.95.¹⁵¹

In the same speech, Mr. Karmazin implied the existence of an agreement with his competitor: “Gary [Parsons] and I are excited to bring this unprecedented benefit [*à la carte* pricing] to American consumers.”¹⁵² XM has made similar commitments not to offer *à la carte* pricing in the absence of the merger. During a conference call with securities analysts three days later after Mr. Karmazin's speech, Gary Parsons, chairman of XM, also stated that the company would *not* offer *à la carte* pricing if the merger is not approved:

GARY PARSONS: So we think overall [that the *à la carte* offering] is a positive thing, but I also think the final question you ask on that front, the synergies associated with the merger is what gives us this opportunity to put forward some of these discount packages and then clearly the synergies on programming with the merger is what allows us to put a best of both combination type package together. So it really is pretty well tied to the ability to get the merger completed.

JONATHAN JACOBY: Just to be clear, if there's no merger, these packages are not going to be offered?

151. *Id.* at 11.

152. *Id.* at 3.

GARY PARSONS: No, that's clear.¹⁵³

It is clear that the offer of post-merger *á la carte* pricing is a coordinated act of XM and Sirius. It could not plausibly be characterized for purposes of section 1 of the Sherman Act as the coincidental, unilateral action of two competitors. The offer is, after all, part and parcel of the *combined* efforts of these two competitors to convince regulators and antitrust enforcers to approve the *joint* application of XM and Sirius for merger approval.

97. XM's and Sirius' publicly stated commitment *not* to provide channels on *á la carte* basis unless the Commission approves the merger is properly viewed as an illegal agreement between XM and Sirius not to compete on price. Stated differently, XM's and Sirius's joint "commitment" that neither firm individually will offer *á la carte* channels is a horizontal conspiracy in restraint of trade in violation of section 1 of the Sherman Act. The two competitors collectively refuse to offer something on competitive terms—that is a horizontal conspiracy not to compete on price in the form of an *á la carte* price reduction. The merger approval process before the FCC provides XM and Sirius the forum in which to publicly, and perfectly, collude over their future pricing strategies if the merger is rejected. And, of course, if the merger is actually approved, XM and Sirius will have succeeded in substituting a stable monopoly for an unstable duopoly. Heads, XM and Sirius win; tails, consumers lose. This cunning use of the regulatory process to facilitate a horizontal price-fixing conspiracy deserves the attention of the Antitrust Division. The serious antitrust issue that it raises under section 1 of the Sherman Act is independent of the evaluation of the proposed merger under section 7 of the Clayton Act.

153. Q2 2007 XM Satellite Radio Earnings Conference Call, VOXANT FD WIRE, July 26, 2007.

CONCLUSION

98. The *Merger Guidelines* define a standard under which the relevant product market is defined. That standard is grounded in sound economic reasoning, as it seeks to determine whether one product significantly constrains the pricing of another product. Because their merger cannot prevail under the standard established by the *Merger Guidelines*, XM and Sirius seek to apply a different standard. The extent to which CRA advocates deviating from the *Merger Guidelines* here—from admitting supply-side evidence in a different industry to altering the SSNIP test due to “dynamic demand” considerations—would be unprecedented in Commission history, would violate economic principles, would harm the public interest, and would bind merger reviews to an *ad hoc* standard from this point forward.

99. Despite having commissioned three separate economic studies, XM and Sirius have failed to put forward one scintilla of evidence showing that some alternative audio entertainment source constrains the pricing of SDARS. Stated differently, they have failed to provide direct or indirect evidence of the elasticity of demand for SDARS with respect to a relative change in the price of SDARS to the price of some audio alternative. Without significant sensitivity to a change in price, the SDARS monopoly provider would be free to raise SDARS prices to monopoly levels.

100. To mitigate that predictable harm, XM and Sirius have offered to subject themselves to price regulation in the form of non-binding promises regarding prices for an uncertain duration entirely within the merged entity’s discretion. Because the two SDARS providers compete along multiple dimensions—including programming choices, amount of commercials, equipment, and equipment prices—temporarily promising to refrain from increasing subscription prices to monopoly levels will not protect SDARS customers from a change in any of the other dimensions over which the two SDARS providers currently compete.

To completely protect against the SDARS monopoly provider's extracting all consumer surplus, the Commission would have to secure, in addition to a subscription price freeze, concessions relating to (1) the amount of commercial time, (2) the price charged for hardware, (3) the quality of programming. Alternatively, the Commission can rely on the market to determine these attributes of the SDARS market by denying the consolidated application for authority to transfer control of XM and Sirius.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on October 1, 2007.

J. Gregory Sidak

APPENDIX: CURRICULUM VITAE OF J. GREGORY SIDAK

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AUTHORED BOOKS

Broadband in Europe: How Can Brussels Wire the Information Society, co-authored with Dan Maldoom, Richard Marsden, and Hal J. Singer (Springer 2005).

Deregulatory Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States (Cambridge University Press 1997), co-authored with Daniel F. Spulber. Chinese translation: Horizon Media Co. Ltd. forthcoming 2007.

Foreign Investment in American Telecommunications (University of Chicago Press 1997).

Protecting Competition from the Postal Monopoly (AEI Press 1996), co-authored with Daniel F. Spulber.

Transmission Pricing and Stranded Costs in the Electric Power Industry (AEI Press 1995), co-authored with William J. Baumol.

Toward Competition in Local Telephony (MIT Press & AEI Press 1994), co-authored with William J. Baumol. Korean translation: Korea Information Society Development Institute 1996.

EDITED BOOKS

Competition and Regulation in Telecommunications: Examining Germany and America (J. Gregory Sidak, Christoph Engel & Günter Knieps, editors, Kluwer Academic Press 2000).

Is the Telecommunications Act of 1996 Broken? If So, How Can We Fix It? (J. Gregory Sidak, editor, AEI Press 1999).

Governing the Postal Service (J. Gregory Sidak, editor, AEI Press 1994).

JOURNAL ARTICLES

Holdup, Royalty Stacking, and the Presumption of Injunctive Relief for Patent Infringement: A Reply to Lemley and Shapiro, 92 MINNESOTA LAW REVIEW (forthcoming 2008).

Should Antitrust Consent Decrees Regulate Post-Merger Pricing?, 3 JOURNAL OF COMPETITION LAW & ECONOMICS 471 (2007), co-authored with Farrell Malone.

Evaluating Market Power Using Competitive Benchmark Prices Instead of the Hirschman-Herfindahl Index, 74 ANTITRUST LAW JOURNAL 387 (2007), co-authored with Jerry A. Hausman.

Vertical Foreclosure in Video Programming Markets: Implications for Cable Operators, 6 REVIEW OF NETWORK ECONOMICS 348 (2007), co-authored with Hal J. Singer, available at <http://www.rnejournal.com/index.html>.

What Is the Network Neutrality Debate Really About?, 1 INTERNATIONAL JOURNAL OF COMMUNICATION 377 (2007).

Patent Damages and Real Options: How Judicial Characterization of Non-Infringing Alternatives Reduces Incentives to Innovate, 22 BERKELEY TECHNOLOGY LAW JOURNAL 825 (2007), co-authored with Jerry A. Hausman and Gregory K. Leonard.

Does Video Delivered Over a Telephone Network Require a Cable Franchise?, 59 FEDERAL COMMUNICATIONS LAW JOURNAL 251 (2007), co-authored with Robert W. Crandall and Hal J. Singer.

A Consumer-Welfare Approach to Network Neutrality Regulation of the Internet, 2 JOURNAL OF COMPETITION LAW & ECONOMICS 349 (2006).

When Does an Optional Tariff Not Lead to a Pareto Improvement? The Ambiguous Effects of Self-Selecting Nonlinear Pricing When Demand Is Interdependent or Firms Do Not Maximize Profit, 2 JOURNAL OF COMPETITION LAW & ECONOMICS 285 (2006), co-authored with John C. Panzar.

The Quasi War Cases—and Their Relevance to Whether “Letters of Marque and Reprisal” Constrain Presidential War Powers, 27 HARVARD JOURNAL OF LAW & PUBLIC POLICY 465 (2005).

The Future of the Postal Monopoly: American and European Perspectives After the Presidential Commission and Flamingo Industries, 28 WORLD COMPETITION 163 (2005), co-authored with Damien Geradin.

Did Mandatory Unbundling Achieve Its Purpose? Empirical Evidence from Five Countries, 1 JOURNAL OF COMPETITION LAW & ECONOMICS 173 (2005), co-authored with Jerry A. Hausman.

Überregulation without Economics: The World Trade Organization’s Decision in the U.S.-Mexico Arbitration on Telecommunications Services, 57 FEDERAL COMMUNICATIONS LAW JOURNAL 1 (2004), co-authored with Hal J. Singer.

Do States Tax Wireless Services Inefficiently? Evidence on the Price Elasticity of Demand, 24 VIRGINIA TAX REVIEW 249 (2004), co-authored with Allan T. Ingraham.

Why Do the Poor and the Less-Educated Pay More for Long-Distance Calls?, CONTRIBUTIONS IN ECONOMIC AND POLICY RESEARCH, vol. 3, issue 1, article 3 (2004), co-authored with Jerry A. Hausman, available at <http://www.bepress.com/bejeap/contributions/vol3/iss1/art3/>.

Should Regulators Set Rates to Terminate Calls on Mobile Networks?, 21 YALE JOURNAL ON REGULATION 261 (2004), co-authored with Robert W. Crandall.

Competition Law for State-Owned Enterprises, 71 ANTITRUST LAW JOURNAL 479 (2003), co-authored with David E. M. Sappington.

An Economic Theory of Censorship, 11 SUPREME COURT ECONOMIC REVIEW 81 (2003).

Remedies and the Institutional Design of Regulation in Network Industries, 2003 MICHIGAN STATE DCL LAW REVIEW 741 (2003).

Interim Pricing of Local Loop Unbundling in Ireland: Epilogue, 4 JOURNAL OF NETWORK INDUSTRIES 119 (2003), co-authored with Hal J. Singer.

The Failure of Good Intentions: The WorldCom Fraud and the Collapse of American Telecommunications After Deregulation, 20 YALE JOURNAL ON REGULATION 207 (2003).

Mandatory Unbundling, UNE-P, and the Cost of Equity: Does TELRIC Pricing Increase Risk for Incumbent Local Exchange Carriers?, 20 YALE JOURNAL ON REGULATION 389 (2003), co-authored with Allan T. Ingraham.

Incentives for Anticompetitive Behavior by Public Enterprises, 22 REVIEW OF INDUSTRIAL ORGANIZATION 183 (2003), co-authored with David E. M. Sappington.

The Price of Experience: The Constitution After September 11, 2001, 19 CONSTITUTIONAL COMMENTARY 37 (2002).

Does Bell Company Entry into Long-Distance Telecommunications Benefit Consumers?, 70 ANTITRUST LAW JOURNAL 463 (2002), co-authored with Jerry A. Hausman and Gregory K. Leonard.

The Empirical Case Against Asymmetric Regulation of Broadband Internet Access, 17 BERKELEY TECHNOLOGY LAW JOURNAL 953 (2002), co-authored with Robert W. Crandall and Hal J. Singer.

The Pig in the Python: Is Lumpy Capacity Investment Used and Useful?, 23 ENERGY LAW JOURNAL 383 (2002), co-authored with William J. Baumol.

Exporting Telecommunications Regulation: The U.S.-Japan Negotiations on Interconnection Pricing, 43 HARVARD INTERNATIONAL LAW JOURNAL 317 (2002), co-authored with Jeffrey H. Rohlfs.

Is Structural Separation of Incumbent Local Exchange Carriers Necessary for Competition?, 19 YALE JOURNAL ON REGULATION 335 (2002), co-authored with Robert W. Crandall.

How Can Regulators Set Nonarbitrary Interim Rates? The Case of Local Loop Unbundling in Ireland, 3 JOURNAL OF NETWORK INDUSTRIES 273 (2002), co-authored with Hal J. Singer.

The Legislator-in-Chief, 44 WILLIAM & MARY LAW REVIEW 1 (2002), co-authored with Vasan Kesavan.

Capital Subsidies, Profit Maximization, and Acquisitions by Partially Privatized Telecommunications Carriers, 26 TELECOMMUNICATIONS POLICY 287 (2002).

Why Did the U.S. Telecommunications Industry Collapse?, 28 INFOCOM REVIEW 17 (2002) (in Japanese).

The Efficient Allocation of Proceeds from a Utility's Sale of Assets, 22 ENERGY LAW JOURNAL 233 (2001), co-authored with Paul W. MacAvoy.

Acquisitions by Partially Privatized Firms: The Case of Deutsche Telekom and VoiceStream, 54 FEDERAL COMMUNICATIONS LAW JOURNAL 1 (2001).

Antitrust Divestiture in Network Industries, 68 UNIVERSITY OF CHICAGO LAW REVIEW 1 (2001), co-authored with Howard A. Shelanski.

Mr. Justice Nemo's Social Statics, 79 TEXAS LAW REVIEW 737 (2001).

An Antitrust Rule for Software Integration, 18 YALE JOURNAL ON REGULATION 1 (2001).

Cable Modems and DSL: Broadband Internet Access for Residential Customers, 91 AMERICAN ECONOMIC ASSOCIATION PAPERS AND PROCEEDINGS 302 (2001), co-authored with Jerry A. Hausman and Hal J. Singer.

True God of the Next Justice, 18 CONSTITUTIONAL COMMENTARY 9 (2001).

Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers, 18 YALE JOURNAL ON REGULATION 129 (2001), co-authored with Jerry A. Hausman and Hal J. Singer.

Are Public Enterprises the Only Credible Predators?, 67 UNIVERSITY OF CHICAGO LAW REVIEW 271 (2000), co-authored with David E. M. Sappington.

Innovation, Investment, and Unbundling, 17 YALE JOURNAL ON REGULATION 1 (2000), co-authored with Thomas M. Jorde and David J. Teece.

A Consumer-Welfare Approach to Mandatory Unbundling of Telecommunications Networks, 109 YALE LAW JOURNAL 417 (1999), co-authored with Jerry A. Hausman.

What Is Wrong with American Telecommunications?, MULTIMEDIA UND RECHT, Mar. 1999, at 15, co-authored with Paul W. MacAvoy, reprinted in COMPETITION AND REGULATION IN TELECOMMUNICATIONS: EXAMINING GERMANY AND AMERICA (J. Gregory Sidak, Christoph Engel & Günter Knieps, editors, Kluwer Academic Press 2000).

A General Framework for Competitive Analysis in Wireless Telecommunications, 50 HASTINGS LAW JOURNAL 1639 (1999), co-authored with David J. Teece and Hal J. Singer.

Essential Facilities, 51 STANFORD LAW REVIEW 1185 (1999), co-authored with Abbott B. Lipsky, Jr. Spanish translation republished as *Facilidades esenciales*, 27 IUS ET VERITAS 126 (2004).

The Petty Larceny of the Police Power, 86 CALIFORNIA LAW REVIEW 655 (1998) (review essay).

Deregulation and Managed Competition in Network Industries, 15 YALE JOURNAL ON REGULATION 117 (1998), co-authored with Daniel F. Spulber.

Cyberjam: The Law and Economics of Internet Congestion of the Telephone Network, 21 HARVARD JOURNAL OF LAW & PUBLIC POLICY 337 (1998), co-authored with Daniel F. Spulber.

Network Access Pricing and Deregulation, 6 INDUSTRIAL AND CORPORATE CHANGE 757 (1997), co-authored with Daniel F. Spulber.

Givings, Takings, and the Fallacy of Forward-Looking Costs, 72 NEW YORK UNIVERSITY LAW REVIEW 1068 (1997), co-authored with Daniel F. Spulber.

The Tragedy of the Telecommons: Government Pricing of Unbundled Network Elements Under the Telecommunications Act of 1996, 97 COLUMBIA LAW REVIEW 1081 (1997), co-authored with Daniel F. Spulber.

Monopoly and the Mandate of Canada Post, 14 YALE JOURNAL ON REGULATION 1 (1997), co-authored with Daniel F. Spulber.

Deregulatory Takings and Breach of the Regulatory Contract, 71 NEW YORK UNIVERSITY LAW REVIEW 851 (1996), co-authored with Daniel F. Spulber.

Pricing of Services Provided to Competitors by the Regulated Firm, 3 HUME PAPERS ON PUBLIC POLICY, No. 3, at 15 (1995), co-authored with William J. Baumol.

Stranded Costs, 18 HARVARD JOURNAL OF LAW & PUBLIC POLICY 835 (1995), co-authored with William J. Baumol.

The Line-Item Veto Amendment, 80 CORNELL LAW REVIEW 1498 (1995).

Competition and Regulatory Policies for Interactive Broadband Networks, 68 SOUTHERN CALIFORNIA LAW REVIEW 1203 (1995), co-authored with Robert W. Crandall.

The Pricing of Inputs Sold to Competitors: Rejoinder and Epilogue, 12 YALE JOURNAL ON REGULATION 177 (1995), co-authored with William J. Baumol.

The Pricing of Inputs Sold to Competitors, 11 YALE JOURNAL ON REGULATION 171 (1994), co-authored with William J. Baumol.

Telecommunications in Jericho, 81 CALIFORNIA LAW REVIEW 1209 (1993) (review essay).

War, Liberty, and Enemy Aliens, 67 NEW YORK UNIVERSITY LAW REVIEW 1402 (1992).

Why Did President Bush Repudiate the "Inherent" Line-Item Veto?, 9 JOURNAL OF LAW & POLITICS 39 (1992), co-authored with Thomas A. Smith.

The Inverse Coase Theorem and Declarations of War, 41 DUKE LAW JOURNAL 325 (1991).

To Declare War, 41 DUKE LAW JOURNAL 27 (1991).

Takeover Premiums, Appraisal Rights, and the Price Elasticity of a Firm's Publicly Traded Stock, 25 GEORGIA LAW REVIEW 783 (1991), co-authored with Susan E. Woodward.

Corporate Takeovers, the Commerce Clause, and the Efficient Anonymity of Shareholders, 84 NORTHWESTERN UNIVERSITY LAW REVIEW 1092 (1990), co-authored with Susan E. Woodward.

Four Faces of the Item Veto: A Reply to Tribe and Kurland, 84 NORTHWESTERN UNIVERSITY LAW REVIEW 437 (1990), co-authored with Thomas A. Smith.

The President's Power of the Purse, 1989 DUKE LAW JOURNAL 1162.

The Recommendation Clause, 77 GEORGETOWN LAW JOURNAL 2079 (1989).

The "New Payola" and the American Record Industry: Transactions Costs and Precautionary Ignorance in Contracts for Illicit Services, 10 HARVARD JOURNAL OF LAW & PUBLIC POLICY 521 (1987), co-authored with David E. Kronemyer.

Debunking Predatory Innovation, 83 COLUMBIA LAW REVIEW 1121 (1983).

A Framework for Administering the 1916 Antidumping Act: Lessons from Antitrust Economics, 18 STANFORD JOURNAL OF INTERNATIONAL LAW 377 (1982).

Antitrust Preliminary Injunctions in Hostile Tender Offers, 30 KANSAS LAW REVIEW 491 (1982).

The Deterrent Effect of Antitrust Enforcement, 89 JOURNAL OF POLITICAL ECONOMY 429 (1981), co-authored with Michael K. Block and Frederick C. Nold.

Rethinking Antitrust Damages, 33 STANFORD LAW REVIEW 329 (1981) (student note).

The Cost of Antitrust Deterrence: Why Not Hang a Price Fixer Now and Then?, 68 GEORGETOWN LAW JOURNAL 1131 (1980), co-authored with Michael K. Block.

CHAPTERS IN BOOKS

Telecommunications Regulation: Current Approaches with the End in Sight, in ECONOMIC REGULATION AND ITS REFORM: WHAT HAVE WE LEARNED? (Nancy L. Rose, ed., National Bureau of Economic Research & University of Chicago Press, forthcoming 2008), co-authored with Jerry A. Hausman.

An Antitrust Analysis of the World Trade Organization's Decision in the U.S.-Mexico Arbitration on Telecommunications Services, in HANDBOOK OF TRANS-ATLANTIC ANTITRUST 679 (Philip Marsden ed. Edward Elgar 2006), co-authored with Hal J. Singer.

European and American Approaches to Antitrust Remedies and the Institutional Design of Regulation in Telecommunications, in THE HANDBOOK OF TELECOMMUNICATIONS ECONOMICS, volume 2 (Martin Cave, Sumit Kumar Majumdar & Ingo Vogelsang, eds. North-Holland 2006), co-authored with Damien Geradin.

Remedies in Network Industries—A View from the United States, in REMEDIES IN NETWORK INDUSTRIES: EC COMPETITION LAW VS. SECTOR-SPECIFIC REGULATION 255 (Damien Geradin ed., Intersentia 2004).

Competition Law for State-Owned Enterprises, in COMPETING WITH THE GOVERNMENT: ANTICOMPETITIVE BEHAVIOR AND PUBLIC ENTERPRISES (Rick Geddes ed., Hoover Institution Press 2004), co-authored with David E. M. Sappington.

The Failure of Good Intentions: The Collapse of American Telecommunications After Six Years of Deregulation, in SUCCESS AND FAILURES IN REGULATING AND DEREGULATING UTILITIES: EVIDENCE FROM THE UK, EUROPE AND THE USA 1 (Colin Robinson ed., Edward Elgar 2004).

What Is Wrong with American Telecommunications?, in COMPETITION AND REGULATION IN TELECOMMUNICATIONS: EXAMINING GERMANY AND AMERICA (J. Gregory Sidak, Christoph Engel & Günter Knieps, editors, Kluwer Academic Press 2000), co-authored with Paul W. MacAvoy.

The Dismal Science of Law, 1992 PUBLIC INTEREST LAW REVIEW 121 (book review of DANIEL A. FARBER & PHILIP P. FRICKEY, LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION (1991)).

The Economic Perspective on Broadcasting Regulation, in THE NATIONAL ECONOMISTS CLUB READER 15 (Richard T. Gill ed. 1991).

Two Factors That Reduce Record Company Profitability, 1987 ENTERTAINMENT, PUBLISHING AND THE ARTS HANDBOOK 371, co-authored with David E. Kronemyer.

Risk and Responsibility, in 1987 ECONOMIC REPORT OF THE PRESIDENT 179, co-authored with Stephen J. DeCanio, Arlene S. Holen, and Susan E. Woodward.

The Structure and Performance of the U.S. Record Industry, 1986 ENTERTAINMENT, PUBLISHING AND THE ARTS HANDBOOK 263, co-authored with David E. Kronemyer.

NEWSPAPER AND MAGAZINE ARTICLES

Misunderstanding the XM/Sirius Merger, WASHINGTON TIMES, Aug. 24, 2007, co-authored with Hal J. Singer.

Network Neutrality: Should Congress Require Broadband Providers to Treat Similar Types of Internet Traffic Equally?, CONGRESSIONAL DIGEST, vol. 86, no. 2, at 57 (Feb. 2007).

The F.C.C.'s Duty, NEW YORK TIMES, Oct. 8, 2002, at A31.

Should Consumers Pay the "Stranded Costs" of Utility Companies?, INSIGHT, Nov. 9, 1998, at 24.

Voters Should Back State's Besieged Law on Retail Competition, BOSTON SUNDAY HERALD, May 24, 1998, at 25.

Avoiding America's Regulatory Mistakes in Hong Kong's Telecoms Market, HONG KONG ECONOMIC JOURNAL, Aug. 29, 1997 (in Cantonese).

Telecommunications: America's Investment Xenophobia, JOURNAL OF COMMERCE, Aug. 22 1997, at 8A

The line-item veto: two views; Next stop: Supreme Court, JOURNAL OF COMMERCE, Aug. 20, 1997, at 9A.

Antitrust and the Federal Software Commission, JOBS & CAPITAL, vol. 6, at 18 (winter 1997).

Stranded Cost Recovery Benefits Consumers, REGULATION, 1996 no. 2, at 12 (1996), co-authored with William J. Baumol.

Let Utilities Recover Stranded Costs, WALL STREET JOURNAL, June 17, 1996, at A15, co-authored with William J. Baumol.

Competition and the Postal Service, THE AMERICAN ENTERPRISE, vol. 7, no. 3, at 74 (May/June 1996).

When Competition Amounts to Taking, NATIONAL LAW JOURNAL, Apr. 1, 1996, at A19.

Post Office Monopoly: Unfair Market Practice, NATIONAL LAW JOURNAL, Oct. 23, 1995, at A23.

The Unregulated Infobahn, JOBS & CAPITAL, vol. 4, at 28 (summer 1995), co-authored with Robert W. Crandall, reprinted in Australia in POLICY, vol. 11, no. 2, at 9 (winter 1995).

Stranded Cost Recovery: Fair and Reasonable, PUBLIC UTILITIES FORTNIGHTLY, May 15, 1995, at 20, co-authored with William J. Baumol.

Telecommunications: Unleashing the Industry, THE AMERICAN ENTERPRISE, vol. 5, no. 5, at 42 (Sept./Oct. 1994).

Don't Stifle Global Merger Mania, WALL STREET JOURNAL, July 6, 1994, at A18.

Telecommunications: The Big Picture, ROLL CALL, June 27, 1994, at 4 (supp.).

Broadcast News, THE AMERICAN ENTERPRISE, vol. 3, no. 2, at 70 (Mar./Apr. 1992).

The Veto Power: How Free Is the President's Hand?, THE AMERICAN ENTERPRISE 58, vol. 2, no. 2 (Mar./Apr. 1991), co-authored with Thomas A. Smith.

Spending Riders Would Unhobble the Executive, WALL STREET JOURNAL, November 2, 1989, at A18, col. 3.

How Congress Erodes the Power of the Presidency: The Appropriations Muzzle, WALL STREET JOURNAL, Feb. 6, 1989, at A8, col. 3.

Marketplace Solution to Midair Collisions, WALL STREET JOURNAL, Mar. 2, 1987, at 20, col. 3.

MISCELLANEOUS PUBLICATIONS

The Economics of Mail Delivery: A Comment, in GOVERNING THE POSTAL SERVICE 14 (J. Gregory Sidak, ed., AEI Press 1994).

The Appropriations Power and the Necessary and Proper Clause, 68 WASHINGTON UNIVERSITY LAW QUARTERLY 651 (1990) (questioner for symposium panel discussion).

WORKING PAPERS

The Optimal Price Floor for a Multiproduct State-Owned Enterprise (Mar. 2005).

TESTIMONY, REPORTS, AND BRIEFS AMICUS CURIAE

Declaration of J. Gregory Sidak on behalf of United Parcel Service, United States Postal Service Study, Project No. P071200, Federal Trade Commission (filed Aug. 6, 2007).

Second Supplemental Declaration of J. Gregory Sidak on behalf of the Consumer Coalition for Competition in Satellite Radio Concerning the Competitive Consequences of the Proposed Merger of Sirius Satellite Radio, Inc. and XM Satellite Radio, Inc., Federal Communications Commission, MB Dkt. 07-57 (July 24, 2007).

Supplemental Declaration of J. Gregory Sidak on behalf of the Consumer Coalition for Competition in Satellite Radio Concerning the Competitive Consequences of the Proposed Merger of Sirius Satellite Radio, Inc. and XM Satellite Radio, Inc., Federal Communications Commission, MB Dkt. 07-57 (July 9, 2007).

U.S. Federal Trade Commission & U.S. Department of Justice, Sherman Act Section 2 Joint Hearing Understanding Single-Firm Behavior: Conduct as Related to Competition (May 8, 2007) (Deborah Platt Majoras & Thomas Barnett, moderators) (panel discussion among Susan Creighton, Jeffrey Eisenach, Timothy Muris, Robert Pitofsky, Douglas Melamed, James Rill, Charles F. (Rick) Rule, and J. Gregory Sidak), available at <http://www.ftc.gov/os/sectiontwohearings/docs/070508trans.pdf>.

Direct and Cross Examination Testimony of J. Gregory Sidak, *RLH Industries, Inc. v. SBC Communications, Inc.*, Case No. 02 CC 16869, Superior Court of California for the County of Orange, California (Mar. 19, 2007) (expert testimony for SBC Communications in antitrust litigation).

Expert Declaration of J. Gregory Sidak on behalf of the Consumer Coalition for Competition in Satellite Radio Concerning the Competitive Consequences of the Proposed Merger of Sirius Satellite Radio, Inc. and XM Satellite Radio, Inc., Federal Communications Commission, MB Dkt. 07-57 (Mar. 16, 2007).

The Economic Effect of Granting the Alberta Energy and Utilities Board Authority to Direct the Disposition of Proceeds When a Public Utility Divests Assets (Mar. 2007) (prepared for ATCO Gas), co-authored with Paul W. MacAvoy.

Cross Examination Testimony of J. Gregory Sidak on behalf of the Newspaper Association of America, Postal Rate Commission, Postal Rate and Fee Change, 2006, Dkt. No. R2006-1 (Nov. 29, 2006).

Rebuttal Testimony of J. Gregory Sidak on behalf of the Newspaper Association of America, Postal Rate Commission, Postal Rate and Fee Change, 2006, Dkt. No. R2006-1 (filed Nov. 20, 2006).

Direct Testimony of J. Gregory Sidak on behalf of the Newspaper Association of America, Postal Rate Commission, Postal Rate and Fee Change, 2006, Dkt. No. R2006-1 (filed Sept. 5, 2006).

VIDEO GAMES: SERIOUS BUSINESS FOR AMERICA'S ECONOMY, co-authored with Robert W. Crandall (2006) (commissioned by the Entertainment Software Association).

Testimony of J. Gregory Sidak on Net Neutrality, Committee on Commerce, Science, and Transportation, United States Senate, Feb. 7, 2006.

Cross Examination Testimony of J. Gregory Sidak on behalf of Public Service Electric and Gas Company on the Appropriation of Non-Regulated, Generation-Related Merger Synergies and Asset Transfer Proceeds to Fund Rate Reductions, In the Matter of the Joint Petition of Public Service Electric and Gas Company and Exelon Corporation for Approval of a Change in Control of Public Service Electric and Gas Company, and Related Authorizations, New Jersey Board of Public Utilities, BPU Dkt. No. EM05020106, OAL Dkt. No. PUC-1874-05, JP-36 (Jan. 11, 2006).

Rebuttal Testimony of J. Gregory Sidak on behalf of Public Service Electric and Gas Company on the Appropriation of Non-Regulated, Generation-Related Merger Synergies and Asset Transfer Proceeds to Fund Rate Reductions, In the Matter of the Joint Petition of Public Service Electric and Gas Company and Exelon Corporation for Approval of a Change in Control of Public Service Electric and Gas Company, and Related Authorizations, New Jersey Board of Public Utilities, BPU Dkt. No. EM05020106, OAL Dkt. No. PUC-1874-05, JP-36 (filed Dec. 12, 2005).

Cross Examination Testimony of J. Gregory Sidak on behalf of Videsh Sanchar Nigam Limited, In the Matter of Flag Telecom Group Limited, Claimant, Videsh Sanchar Nigam Limited, Respondent, Case No. 13 638/JNK/EBS, International Court of Arbitration, International Chamber of Commerce, The Hague (Nov. 18, 2005).

Reply Declaration of J. Gregory Sidak and Hal J. Singer on behalf of TCR Sports Broadcasting Holding, L.L.P., In the Matter of Applications for Consent to the Assignment and/or Transfer of Control of Licenses Adelpia Communications Corporation, (and subsidiaries, debtors-in-possession), Assignors, to Time Warner Cable Inc. (subsidiaries), Assignees; Adelpia Communications Corporation, (and subsidiaries, debtors-in-possession), Assignors and Transferors, to Comcast Corporation (subsidiaries), Assignees and Transferees; Comcast Corporation, Transferor, to Time Warner Inc., Transferee; Time Warner Inc., Transferor to Comcast Corporation, Transferee, Federal Communications Commission, MB Dkt. No. 05-192 (filed Nov. 14, 2005) (filed on behalf of the holding company for the Baltimore Orioles baseball team).

Expert Report of J. Gregory Sidak on behalf of eircom P.L.C., in Market Requirements Document: Local Loop Unbundling: High Level Statement of Requirements Document, ComReg: 05/04, Commission for Communications Regulation, Republic of Ireland (filed Oct. 24, 2005).

Declaration of J. Gregory Sidak and Hal J. Singer on behalf of the Power Mobility Coalition in *Power Mobility Coalition v. Leavitt*, Case No. 1:05CV02027 (filed D.D.C. Oct. 13, 2005) (in support of plaintiff's motion for preliminary injunction concerning proposed changes in Medicare rules concerning patient reimbursement for power mobility devices).

Expert Report of J. Gregory Sidak on behalf of Telstra Corporation Ltd., In the Matter of Assessment of Telstra's Unconditioned Local Loop Service and Line Sharing Service Monthly Charge Undertakings, Australian Competition and Consumer Commission (filed Sept. 23, 2005).

Expert Report of J. Gregory Sidak on behalf of Videsh Sanchar Nigam Limited, In the Matter of Flag Telecom Group Limited, Claimant, Videsh Sanchar Nigam Limited, Respondent, Case No. 13 638/JNK/EBS, International Court of Arbitration, International Chamber of Commerce, The Hague (filed Sept. 16, 2005).

Supplemental Testimony of J. Gregory Sidak on behalf of PECO Energy Company, Joint Application of PECO Energy Company and Public Service Electric and Gas Company for Approval of the Merger of Public Service Enterprise Group Incorporated with and into Exelon Corporation, Pennsylvania Public Utility Commission, Dkt. No. A-110550F0160 (filed Aug. 26, 2005).

Rebuttal Testimony of J. Gregory Sidak on behalf of PECO Energy Company, Concerning the Appropriation of Non-Regulated, Generation-Related Merger Synergies and Asset Sale Proceeds to Fund Rate Reductions by PECO Energy Company, Joint Application of PECO Energy Company and Public Service Electric and Gas Company for Approval of the Merger of Public Service Enterprise Group Incorporated with and into Exelon Corporation, Pennsylvania Public Utility Commission, Dkt. No. A-110550F0160 (filed July 29, 2005).

Declaration of J. Gregory Sidak and Hal J. Singer on behalf of TCR Sports Broadcasting Holding, L.L.P., In the Matter of Applications for Consent to the Assignment and/or Transfer of Control of Licenses Adelphia Communications Corporation, (and subsidiaries, debtors-in-possession), Assignors, to Time Warner Cable Inc. (subsidiaries), Assignees; Adelphia Communications Corporation, (and subsidiaries, debtors-in-possession), Assignors and Transferors, to Comcast Corporation (subsidiaries), Assignees and Transferees; Comcast Corporation, Transferor, to Time Warner Inc., Transferee; Time Warner Inc., Transferor to Comcast Corporation, Transferee, Federal Communications Commission, MB Dkt. No. 05-192 (filed July 21, 2005) (filed on behalf of the holding company for the Baltimore Orioles baseball team).

Deposition of J. Gregory Sidak, *RLH Industries, Inc. v. SBC Communications, Inc.*, Case No. 02 CC 16869, Superior Court of California for the County of Orange, California (Sept. 2, 2004) (expert testimony for SBC Communications in antitrust litigation).

A Critical Review of Europe Economics' Proposed Model for Estimating Operating Costs for a Hypothetically Efficient Irish Telecommunications Carrier (prepared for eircom P.L.C. for submission to the Commission for Communications Regulation, Republic of Ireland, Mar. 2004), co-authored with Jerry A. Hausman.

Competition in Broadband Provision and Its Implications for Regulatory Policy (prepared on behalf of the Brussels Round Table (Alcatel, BT, Deutsche Telekom, Ericsson, France Telecom, Siemens, Telefónica de España, and Telecom Italia) for submission to the European Commission, Oct. 15, 2003), co-authored with Dan Maldoom, Richard Marsden, and Hal J. Singer.

Expert Report of J. Gregory Sidak, Arbitration Between Levicom International Holdings BV, Levicom Investments Curaçao NV, Claimants, and Tele2 Sverige AB, Tele2 AB, Respondents, Arbitration No: 2392, London Court of International Arbitration (filed July 25, 2003).

Declaration of J. Gregory Sidak on behalf of the National Association of Broadcasters, Application of General Motors Corporation, Hughes Electronics Corporation, Transferors, and The News Corporation Limited, Transferee, For Authority to Transfer Control, Federal Communications Commission, MB Dkt. No. 03-124 (filed June 20, 2003).

Is State Taxation of the Wireless Industry Counterproductive? (prepared for Verizon Wireless Apr. 2, 2003).

Improving the U.S. Postal Service as a Public Service Government Agency (prepared for the Newspaper Association of America for submission to the Presidential Commission on the United States Postal Service, Apr. 2003).

An Economic Assessment of the Industry Advisory Group's Final Report to the Commission for Communications Regulation on Interim Pricing for Local Loop Unbundling in Ireland (prepared for eircom P.L.C. for submission to the Commission for Communications Regulation, Republic of Ireland, Feb. 14, 2003).

Declaration of J. Gregory Sidak on behalf of Qwest Corporation, In the Matter of the Complaint of the Minnesota Department of Commerce Against Qwest Corporation Regarding Unfiled Agreements, Minnesota Public Utilities Commission, Dkt. No. P-421/C-02-197 (filed Nov. 8, 2002).

Telecommunications and Trade Promotion Authority: Meaningful Market Access Goals for Telecommunications Services in International Trade Agreements: Hearing before the Subcommittee on Commerce, Trade, and Consumer Protection of the Committee on Energy and Commerce, U.S. House of Representatives, 107th Cong., 2d Sess. (Oct. 9, 2002).

The Economic Benefits of Permitting Winning Bidders to Opt Out of Auction 35 (prepared for Verizon Communications, Aug. 26, 2002).

Letter Concerning Spectrum Auction 35 to the Honorable Michael K. Powell, Chairman, Federal Communications Commission, from Peter C. Cramton, Robert W. Crandall, Robert W. Hahn, Robert G. Harris, Jerry A. Hausman, Thomas W. Hazlett, Douglas G. Lichtman, Paul W. MacAvoy, Paul R. Milgrom, Richard Schmalensee, J. Gregory Sidak, Hal J. Singer, Vernon L. Smith, William Taylor, and David J. Teece (Aug. 16, 2002).

Reply Declaration of J. Gregory Sidak on behalf of the National Association of Broadcasters, Application of EchoStar Communications Corporation, General Motors Corporation, Hughes Electronics Corporation, Transferors, and EchoStar Communications Corporation, Transferee, For Authority to Transfer Control, Federal Communications Commission, CS Dkt. No. 01-348 (filed Apr. 24, 2002).

Declaration of J. Gregory Sidak on behalf of the National Association of Broadcasters, Application of EchoStar Communications Corporation, General Motors Corporation, Hughes Electronics Corporation, Transferors, and EchoStar Communications Corporation, Transferee, For Authority to Transfer Control, Federal Communications Commission, CS Dkt. No. 01-348 (filed Feb. 4, 2002).

Replying Affidavit of J. Gregory Sidak, *eircom P.L.C. v. Director of Telecommunications Regulation*, No. 2001 No. 539 JR, High Court of the Republic of Ireland (filed on behalf of *eircom plc*, Dec. 12, 2001).

Declaration of Robert W. Crandall and J. Gregory Sidak on behalf of SBC Communications Inc., In the Matter of SBC Petition for Expedited Ruling that It Is Non-Dominant in Its Provision of Advanced Services and for Forbearance from Dominant Carrier Regulation of Those Services, Federal Communications Commission (filed Oct. 1, 2001).

Declaration of J. Gregory Sidak and Hal J. Singer on behalf of The Walt Disney Company, *et al.*, In the Matter of Nondiscrimination in the Distribution of Interactive Television Services over Cable, Notice of Inquiry, Federal Communications Commission, CS Dkt. No. 01-7 (filed May 11, 2001).

Expert Report of J. Gregory Sidak, *Arista Records, Inc. v. MP3Board, Inc.*, No. 00 Civ. 4660 (SAS) (S.D.N.Y. filed Mar. 28, 2001) (report on behalf of various record companies in copyright infringement litigation).

Declaration of J. Gregory Sidak on behalf of Deutsche Telekom AG, In the Matter of VoiceStream Wireless Corporation and Powertel, Inc., Transferors, and Deutsche Telekom AG, Transferee, Federal Communications Commission, IB Dkt. No. 00-187 (filed Jan. 8, 2001).

Foreign Government Ownership of American Telecommunications Companies, Hearings before the Subcommittee on Telecommunications, Trade, and Consumer Protection of the Committee on Commerce, U.S. House of Representatives, 106th Cong., 2d Sess. 101 (Sept. 7, 2000) (testimony on behalf of Deutsche Telekom AG).

Declaration of J. Gregory Sidak on behalf of U S WEST Communications, Inc., *U S WEST Communications, Inc. v. United States*, No. 00-43, U.S. Court of Federal Claims (filed May 17, 2000).

Declaration of J. Gregory Sidak on behalf of United Parcel Service, In the Matter of Predatory Pricing Complaint Against Deutsche Post AG, Commission of the European Communities Directorate-General, Competition, Bruxelles (filed Feb. 11, 2000).

Ex Parte Reply Declaration of Jerry A. Hausman and J. Gregory Sidak on behalf of GTE Corporation, In the Matter of Applications for Consent to the Transfer of Control of Licenses, MediaOne Group, Inc., Transferor, To AT&T Corp., Transferee, Federal Communications Commission, CS Dkt. No. 99-251 (filed Nov. 1, 1999).

Declaration of Daniel L. Rubinfeld and J. Gregory Sidak on behalf of GTE Corporation, In the Matter of Applications for Consent to the Transfer of Control of Licenses, MediaOne Group, Inc., Transferor, To AT&T Corp., Transferee, Federal Communications Commission, CS Dkt. No. 99-251 (filed Aug. 23, 1999).

Reply Affidavit of Jerry A. Hausman and J. Gregory Sidak, appended to Comments of BellSouth Corporation *in* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Second Further Notice of Proposed Rulemaking, Federal Communications Commission, CC Dkt. No. 96-98 (filed June 10, 1999).

Declaration of J. Gregory Sidak on behalf of Telecom Eireann, In the Matter of Local Loop Unbundling, Consultation Paper, Document No. ODTR 99/21, Office of the Director of Telecommunications Regulation, Republic of Ireland (filed June 8, 1999).

Affidavit of Jerry A. Hausman and J. Gregory Sidak, appended to Comments of the United States Telephone Association *in* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Second Further Notice of Proposed Rulemaking, Federal Communications Commission, CC Dkt. No. 96-98 (filed May 26, 1999).

Affidavit of Thomas M. Jorde, J. Gregory Sidak, and David J. Teece, appended to Comments of the United States Telephone Association *in* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Second Further Notice of Proposed Rulemaking, Federal Communications Commission, CC Dkt. No. 96-98 (filed May 26, 1999).

Prepared Statement of J. Gregory Sidak, Local Broadcast Ownership: An En Banc Hearing, Federal Communications Commission (Feb. 12, 1999).

Opinion of Law Concerning Initial Comments of Various Parties in *Direct Access to the INTELSAT System*, filed on behalf of Comsat Corporation in Direct Access to the INTELSAT System, Notice of Proposed Rulemaking, Federal Communications Commission, IB Dkt. No. 98-192 (filed Jan. 29, 1999).

Declaration of J. Gregory Sidak and David J. Teece on behalf of GTE Corporation in 1998 Biennial Regulatory Review of Spectrum Aggregation Limits for Wireless Telecommunications Carriers, Cellular Telecommunications Industry Association's Petition for Forbearance From the 45 MHz CMRS Spectrum Cap, Amendment of Parts 20 and 24 of the Commission's Rules of Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap Implementation of Sections 3(n) and 332 of the Communications Act Regulatory Treatment of Mobile Services, Notice of Proposed Rulemaking, Federal Communications Commission, WT Dkt. Nos. 98-205, 96-59, GN Dkt. No. 93-252 (filed Jan. 25, 1999).

Declaration of Robert W. Crandall and J. Gregory Sidak on behalf of Bell Atlantic Corporation and GTE Corporation, In the Matter of GTE Corporation, Transferor, and Bell Atlantic Corporation, Transferee, For Consent to Transfer of Control, Federal Communications Commission, CC Dkt. No. 98B184 (filed Dec. 23, 1998).

Opinion of Law Concerning the Constitutionality of the Commission's Proposal to Require Level 3 Direct Access to Space Segment Capacity on the INTELSAT System, filed on behalf of Comsat Corporation in Direct Access to the INTELSAT System, Notice of Proposed Rulemaking, Federal Communications Commission, IB Dkt. No. 98-192 (filed Dec. 22, 1998).

Direct Testimony and Cross Examination Testimony of J. Gregory Sidak on behalf of Public Service Company of New Mexico, Application of and Complaint by Residential Electric, Inc. *v.* Public Service Company of New

Mexico, Case No. 2867, Application of Residential Electric, Inc. for a Certificate of Public Convenience and Necessity, Case No. 2868, New Mexico Public Utility Commission (Nov. 17, 1998).

Affidavit of J. Gregory Sidak on behalf of Public Service Company of New Mexico, Application of and Complaint by Residential Electric, Inc. *v.* Public Service Company of New Mexico, Case No. 2867, Application of Residential Electric, Inc. for a Certificate of Public Convenience and Necessity, Case No. 2868, New Mexico Public Utility Commission (filed Nov. 9, 1998).

Affidavit of Joseph Gregory Sidak on behalf of Hong Kong Telephone Company Limited, *Hong Kong Telephone Company Limited v. Office of the Telecommunications Authority*, High Court of the Hong Kong Special Administrative Region, Court of First Instance (filed Sept. 22, 1998).

Cross Examination Testimony of J. Gregory Sidak on behalf of the Edison Electric Institute in *Public Service Company of New Hampshire v. New Hampshire Electric Cooperative, Inc.*, Federal Energy Regulatory Commission, Dkt. No. EL96-53-002 (Sept. 10, 1998).

Prefiled Direct Testimony of J. Gregory Sidak on behalf of the Edison Electric Institute in *Public Service Company of New Hampshire v. New Hampshire Electric Cooperative, Inc.*, Federal Energy Regulatory Commission, Dkt. No. EL96-53-002 (filed Aug. 27, 1998).

Affidavit of J. Gregory Sidak on behalf of PECO Energy Company, *Omnipoint Corporation v. PECO Energy Company*, Federal Communications Commission, No. PA 97B002 (filed Aug. 5, 1998).

Affidavit of J. Gregory Sidak, appended to comments of the Newspaper Association of America, *in* 1998 Biennial Regulatory Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, Notice of Inquiry, Federal Communications Commission, MM Docket No. 98-35 (filed July 21, 1998).

A Report to the Minister for Communications, the Information Economy, and the Arts on the State of Competition in Australian Telecommunications Services One Year after Deregulation (June 30, 1998) (prepared for Telstra Corporation Ltd.)

Affidavit of J. Gregory Sidak, appended to Comments of Telstra Corporation Ltd. *in* Declaration of Local Telecommunications Services, Australian Competition and Consumer Commission (May 21, 1998).

Opinion of Law Concerning the Commission's Authority to Permit the Acquisition by CanWest Global Communications Corporation of More Than 25 Percent of the Stock of an American Broadcast Licensee, Letter to William E. Kennard, Chairman, Federal Communications Commission (May 11, 1998).

Testimony of J. Gregory Sidak, *Bell Atlantic v. United States*, Case No. 96CV-8657 (E.D. Pa.) (Mar. 18, 1998) (investment tax credit refund litigation).

Deposition of J. Gregory Sidak, *Bell Atlantic v. United States*, Case No. 96CV-8657 (E.D. Pa.) (Mar. 3, 1998) (investment tax credit refund litigation).

Affidavit of J. Gregory Sidak, appended to Comments of the United States Telephone Association *in* Jurisdictional Separations Reform and Referral to the Federal-State Joint Board, Notice of Proposed Rulemaking, Federal Communications Commission, CC Docket No. 80-286 (filed Dec. 10, 1997), *and in* Amendment to Uniform System of Accounts for Interconnection, Notice of Proposed Rulemaking, Federal Communications Commission, CC Docket No. 97-212 (filed Dec. 10, 1997).

Cross Examination Testimony of J. Gregory Sidak on behalf of PECO Energy Company, Application of PECO Energy Company for Approval of Its Restructuring Plan Under Section 2806 of the Public Utility Code, Regarding the Enron Choice Plan, Pennsylvania Public Utility Commission, Dkt. Nos. R-00973953, P-00971265 (Nov. 17, 1997).

Prefiled Testimony of J. Gregory Sidak, Application of PECO Energy Company for Approval of Its Restructuring Plan Under Section 2806 of the Public Utility Code, Regarding the Enron Choice Plan, Pennsylvania Public Utility Commission, Dkt. Nos. R-00973953, P-00971265 (filed Nov. 7, 1997).

Prefiled Testimony of J. Gregory Sidak on behalf of El Paso Electric Company, City of Las Cruces, New Mexico, Federal Energy Regulatory Commission, Dkt. No. SC97-2-000 (filed Oct. 3, 1997).

Reply Comments of J. Gregory Sidak, Rules and Policies on Foreign Participation in the U.S. Telecommunications Market, Order and Notice of Proposed Rulemaking, Federal Communications Commission, IB Dkt. No. 97-142 (filed Aug. 11, 1997).

Prefiled Rebuttal Testimony of J. Gregory Sidak, Regarding an Economic Analysis of the Appropriate Standard of Conduct That Should Govern the Relationship Between PECO's Regulated Wire Business and Its Competitive, Unregulated Generation and Other Businesses and An Economic and Constitutional Analysis of the Justness and Reasonableness of PECO's Full Recovery of Its Stranded Costs, Application of PECO Energy Company for Approval of Its Restructuring Plan Under Section 2806 of the Public Utility Code, Dkt. No. R-00973953, Pennsylvania Public Utility Commission (filed July 18, 1997).

Statement of J. Gregory Sidak on behalf of Hong Kong Telephone Company Concerning Interconnect Access Charging Principles, Submission on the Hong Kong Local Interconnect Charging Regime, OFTA Review of Statement No. 7, Carrier-to-Carrier Charging, Office of Telecommunications Authority, Hong Kong (filed May 13, 1997).

Hearings on H.R. 22, The Postal Reform Act of 1997, Subcommittee on the Postal Service of the House Committee on Government Reform and Oversight, 105th Congress, 1st Session (Apr. 16, 1997).

Prefiled Testimony of J. Gregory Sidak, Regarding an Economic and Constitutional Analysis of the Justness and Reasonableness of PECO's Full Recovery of Its Stranded Costs, Application of PECO Energy Company for Approval of Its Restructuring Plan Under Section 2806 of the Public Utility Code, Dkt. No. R-00973953, Pennsylvania Public Utility Commission (filed Mar. 26, 1997).

Affidavit of J. Gregory Sidak and Daniel F. Spulber, appended to Comments of the United States Telephone Association *in* Usage of the Public Switched Network by Information Service and Internet Access Providers, Notice of Inquiry, Federal Communications Commission, CC Dkt. No. 96-263 (filed Mar. 24, 1997).

Reply Affidavit of J. Gregory Sidak and Daniel F. Spulber, appended to Reply Comments of the United States Telephone Association *in* Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing; Usage of the Public Switched Network by Information Service and Internet Access Providers, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, Federal Communications Commission, CC Dkt. Nos. 96-262, 94-1, 91-213, 96-263 (filed Feb. 14, 1997).

Affidavit of J. Gregory Sidak and Daniel F. Spulber, appended to Comments of the United States Telephone Association *in* Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Transport Rate Structure and Pricing; Usage of the Public Switched Network by Information Service and Internet Access Providers, Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, Federal Communications Commission, CC Dkt. Nos. 96-262, 94-1, 91-213, 96-263 (filed Jan. 29, 1997).

Testimony of J. Gregory Sidak on behalf of GTE South Inc., Petition of AT&T Communications of the South Central States, Inc., for Arbitration of Certain Terms and Conditions of a Proposed Agreement with GTE South Inc. Concerning Interconnection and Resale Under the Telecommunications Act of 1996, Case No. 96-478, Public Service Commission of Kentucky (Jan. 14, 1997).

Cross Examination Testimony of J. Gregory Sidak on behalf of GTE North Inc., In the Matter of Sprint Communications Company L.P.'s Petition for Arbitration of Interconnection Rates, Terms, Conditions and Related Arrangements with GTE North Inc., Case No. 96-10210-TP-ARB, Public Utilities Commission of Ohio (Nov. 21, 1996).

Testimony of J. Gregory Sidak on behalf of GTE South Inc., Petition of MCI, Public Service Commission of Kentucky (Nov. 12, 1996).

Direct Testimony of J. Gregory Sidak on behalf of GTE North Inc., Petition of Sprint, Public Utilities Commission of Pennsylvania (Nov. 7, 1996).

Direct Testimony of J. Gregory Sidak on behalf of GTE Midwest Inc., Petition of MCI, Public Utilities Commission of Indiana (Nov. 1, 1996).

Direct Testimony of J. Gregory Sidak on behalf of GTE Midwest Inc., *AT&T Communications of the Midwest Inc. v. GTE Midwest Inc.*, Iowa Utilities Board, Dkt. No. ARB-96-3 (Oct. 15, 1996).

Direct Testimony of J. Gregory Sidak on behalf of GTE North Inc., Petition of AT&T, Public Utilities Commission of Pennsylvania (filed Sept. 9, 1996).

Affidavit of J. Gregory Sidak, appended to Memorandum of Law in Support of Petition of the Energy Association of New York State in *Energy Association of New York State v. Public Service Commission of the State of New York*, Index No. 5830-96 (filed Supreme Ct. N.Y., County of Albany, Sept. 18, 1996).

Rebuttal Testimony of J. Gregory Sidak on behalf of Central Power and Light Company *in* Application of Central Power and Light Company for Authority to Change Rates, Competitive Issues Phase, Public Utility Commission of Texas, SOAH Dkt. No. 473-95-1563, PUCT Dkt No. 14965 (filed Aug. 1, 1996).

Reply Affidavit of J. Gregory Sidak, appended to Reply Comments of the United States Telephone Association *in* Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services, Federal Communications Commission, CC Dkt. No. 96-112 (filed June 12, 1996).

Affidavit of J. Gregory Sidak, appended to Comments of the United States Telephone Association *in* Allocation of Costs Associated with Local Exchange Carrier Provision of Video Programming Services, Federal Communications Commission, CC Dkt. No. 96-112 (filed May 31, 1996).

Affidavit of Michael J. Doane, J. Gregory Sidak, and Daniel F. Spulber, appended to Reply Comments of GTE Service Corporation *in* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Federal Communications Commission, CC Dkt. No. 96-98 (filed May 30, 1996).

An Empirical Analysis of the Efficient Component-Pricing Rule and Sections 251 and 252 of the Telecommunications Act of 1996, appended to Comments of GTE Service Corporation *in* Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Federal Communications Commission, CC Dkt. No. 96-98 (filed May 16, 1996), co-authored with Michael J. Doane and Daniel F. Spulber.

Technological, Environmental and Financial Issues Raised by Increasingly Competitive Electricity Markets, Hearings before the Subcommittee on Energy and Power of the House Committee on Commerce, 104th Congress, 2d Session (Mar. 28, 1996).
Monopoly and the Mandate of Canada Post, in Submission of the Director of Investigation and Research, Competition Bureau, to Canada Post Corporation Mandate Review Committee (Ottawa, Feb. 15, 1996).

Reply Comments of J. Gregory Sidak, Market Entry and Regulation of Foreign-affiliated Entities, Notice of Proposed Rulemaking, Federal Communications Commission, IB Dkt. No. 95-22 (filed May 12, 1995).

Comments of J. Gregory Sidak, Market Entry and Regulation of Foreign-affiliated Entities, Notice of Proposed Rulemaking, Federal Communications Commission, IB Dkt. No. 95-22 (filed Apr. 11, 1995).

The Line-Item Veto Amendment: Hearings before the Subcommittee on the Constitution of the Senate Judiciary Committee, 104th Congress, 1st Session (Jan. 24, 1995).

Competition and Regulatory Policies for Interactive Broadband Networks, in Competition Policy, Regulation and the Information Economy: Submission of the Director of Investigation and Research, Bureau of Competition Policy,

to the Canadian Radio-television and Telecommunications Commission, Public Notice CRTC 1994-130, Order in Council P.C. 1994-1689 (Ottawa, Jan. 16, 1995), co-authored with Robert W. Crandall.

Line Item Veto: The President's Constitutional Authority: Hearing before the Subcommittee on the Constitution of the Senate Judiciary Committee, 103d Congress, 2d Session (June 15, 1994).

Opinion of Law Concerning Legislation to Reform the Cost-Justification Defense to Discrimination in the Sale of Telecommunications Services, Letter to Ms. Deena Shiff, General Manager, Corporate Affairs, Telstra Corporation Limited, Sydney, New South Wales, Australia (Jan. 13, 1994) (distributed to the Australian Parliament).

Brief of *Amicus Curiae* J. Gregory Sidak, Association of American Physicians and Surgeons, Inc. *v.* Hillary Rodham Clinton, 997 F.2d 898 (D.C. Cir. 1993), filed Apr. 5, 1993.

B A R A D M I S S I O N S

California (1982); District of Columbia (1989); Supreme Court of the United States (1989).